THE INFLUENCE OF SCHOOL-RELATED FACTORS ON STUDENTS' CLASSROOM CONCENTRATION LEVELS IN PUBLIC SECONDARY SCHOOLS IN NGONG DIVISION, KAJIADO COUNTY-KENYA

MUCHIMA TAL ANTÓNIO KASOMBO

MATRIC NO: B.ED/512/18/19

A Research Proposal submitted to the Department of Education in Partial Fulfilment of the Requirement for the Award of Bachelor's Degree in Education

MARIST INTERNATIONAL UNIVERSITY COLLEGE (MIUC)

A CONSTITUENT COLLEGE OF THE CATHOLIC UNIVERSITY OF EASTERN AFRICA (CUEA).

NAIROBI-KENYA

APRIL, 2022

DECLARATION

I hereby declare that this academic research is my original work and that it has not been presented for an award of a degree in any other University.

Sign……………………………….

Date………………………

Muchima Tal António Kasombo

B.ED/512/18/19

This thesis has been submitted for examination with my recommendation as a University Supervisor.

<u>SUPERVISOR</u>

Sign……………………………….

Date………………………

Mrs. Mercy Wangui

<u>HEAD OF EDUCATION DEPARTMENT</u>

This research project has been accepted by the Head of the Department of Education

Signature…………………………….

Date………………………

Mr. John Paul Warambo

DEDICATION

I dedicate this work to all the scholars who are inspired to upgrade their knowledge.

ACKNOWLEDGEMENTS

ABSTRACT

Concentration level is one of the vital factors that affect the academic achievement of students in schools. It's defined as the ability to psychologically focus in a particular direction for a specified length of time. The aim of this study was to investigate the influence of school-related factors on students' classroom concentration levels in Public Secondary Schools in Ngong Division, Kajiado County, Kenya. This study was guided by the following objectives: To investigate the effect of teaching methodologies on students' concentration levels in Public Secondary Schools in Ngong Division, Kajiado; To determine the effects of the school's physical environment on students' concentration levels in Public Secondary Schools, Ngong division, Kajiado-county; To find out the effect of the school timetable on students' concentration levels in public secondary schools, Ngong division, Kajiado-county. The study was based on Abraham's hierarchy of needs and the humanistic learning theory that was developed by Carl Rogers and James Bugental in the early 1990s. The study adopted a descriptive survey design. The target population was all the 27 Secondary schools from which a sample of 3 Public Secondary Schools were chosen. There were 12 teachers and 120 students, making a total of 132 respondents. For the students, the study used stratified sampling, and for the teachers, the study used purposive methods. Data was collected using questionnaires. The study used the Statistical Package for Social Science (SPSS) version 21 to analyze the data, in which frequencies and percentages were used. Tables and charts were used to present the results. The study came to the following conclusions: Students enjoy classes, and teachers used a variety of teaching approaches that encouraged classroom concentration levels. Teachers use various methodologies, which include group discussions, demonstration methods, and the use of examples, which make students understand better and provide encouraging feedback as well. The study gave the following recommendations: Administrators need to ensure that classrooms have a conducive environment for learning. They should provide ventilators, proper lighting, and noise-reduction facilities to ensure that both students and teachers are able to concentrate. Teachers spend most of their time with students at school, and they are some of the most important determinants of whether students will excel in their studies or not. They should, therefore, make use of a variety of teaching methodologies for effective teaching and learning and to ensure maximum student concentration. They should make learning lively and interesting to enhance student concentration. They should also strive to create a good relationship with students in such a way that they are approachable, friendly, and consultable when the need arises.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ABREVIATIONS

MIUC: Marist International University College

MOE: Ministry of Education

SDGs: Sustainable Development Goals

SES: School Environment Scale

SPSS: Statistical Package for Social Sciences

UNESCO: United Nations Educational, Scientific and Cultural Organization

CHAPTER ONE

1.0 Introduction

This chapter presented the background of the study, statement of the problem, research objectives, significance of the study, research objectives, research questions, operational definition of terms, conceptual framework, theoretical framework, and organization of the study.

1.1 Background of the study

Oghenekohwo & Frank (2017) stated that concentration is a subjective concept, and no one can claim to be fully distracted or always focused, but it can be improved and reinforced by altering some of the existing components. Students' active presence as a result of favorable interactions with teachers not only boosts their drive to concentrate on teaching and learning but also has an impact on their future activities.

Johnson et al., (2018) conducted a study at Queensland University in Australia on factors affecting concentration and attendance in the classroom. They found out that lack of sleep was one of the factors that affected students' classroom concentration levels. They also stated that students should have enough sleep-in order to concentrate in class. Therefore, concentration is a learned mental state in which the human mind and all of his or her senses are concentrated on a single discipline.

Studies done by Sukawati et al., (2020) and Abidin et al., (2013) revealed that teachers can utilize a variety of successful ways to boost students' concentration levels. Concentration is one of the vital factors that affect the academic achievement of students and is considered as the ability to focus psychologically in a particular direction for a specified length of time during which other objects of interest or focus can be put aside (Abidin et al., 2013).

Grant (2014) did a study on teaching and learning in secondary schools in America and found that concentration requires a certain degree of interest coupled with enough interactive interchange so that the interest and focus are maintained over some time. He also stated that though the act of concentrating the mind can be considered more of a mental skill, it is the elements of interest, interaction, and participation that are the emotional elements of the process without which concentration could not be sustained. He concluded that a classroom is a place where one learns how to get concentration skills. Karunanayake et al., (2020) stated that one of the most common educational issues is a lack of concentration in the classroom. Most learners who are enthusiastic about attending a class lose concentration and get distracted over time. Therefore, light and ventilation in the classroom are some of the elements that influence concentration.

Spren & Vally (2018) did a study on education policy in South Africa and found out that concentration level is one of the most significant necessities of education and learning. They also indicated that losing concentration can lead the student to get low grades. In this context, students prefer to sit in the front row to follow the explanations of the teacher so that they may develop their cognitive abilities (Kuhfield & Tarasawa, 2020). Concentration is a significant factor that contributes to learning and assists learners to give all their minds and thoughts in class. Therefore, it is through concentration that the student may acquire more information (Spreen & Vally, 2018).

Liu et al., (2020) did a study on family socioeconomic status and academic achievement in secondary schools in Hong Kong. They found out that family problems, such as disputes, crises, communication gaps, uncomfortable environments, divorce, and others, are the major factors that divert students' concentration in the classroom. Therefore, to ensure that students concentrate in the

classroom, teachers should motivate the students to attain a certain degree of interest (Kale et al., 2018).

According to Butakova et al. (2020), the Ministry of Education of the Republic of Kenya (MOEK) stated that students' participation in classrooms was still solely for the goal of learning. Therefore, it is vital to create an adequate educational environment and improve learning conditions for students in order to foster a more positive attitude toward learning.

The Kenyan government has spent the last decade working to increase access to primary and secondary education by implementing free primary and secondary education initiatives. According to UNESCO (2015), the number of students enrolled in elementary and secondary schools has increased dramatically. Exams have historically been the primary means of assessing a student's abilities, as well as a means of determining eligibility for school advancement and employment. Various students, however, do not perform well on national tests in many countries throughout the world, including Kenya. The low performance has sparked worry, and efforts have been made to determine the cause. Many variables have been identified as contributing to poor student performance in schools, including a lack of school facilities, teacher methodology, student indiscipline, an adverse home environment, low intelligence, and lack of concentration (Monks & Schmidt, 2013).

Monks & Schmidt (2013) in their research entitled "classroom environment and student outcomes among students using anthropometry activities in high school science in the Ngong division." They found that many students were unable to sustain their concentration levels throughout the learning process in the classrooms. They indicated that there were many distractions in a typical public-school classroom due to the physical structure of the classroom, such as the ventilation and the location of the school along the roads. They concluded that students struggled with concentration,

3

leading to negative impacts on their academic performance. Therefore, academic achievement requires a conducive learning environment that helps the students stimulate their concentration abilities in the classroom.

Kuhfield and Tarasawa (2020) conducted a study on the impact of class size and the number of students on outcomes in higher education. They identified that many students are unable to maintain concentration throughout long lessons in classrooms. The findings showed that a classroom with a large number of students may negatively impact students' concentration levels. This research focused on the influence of school-related factors on students' classroom concentration levels in Public Secondary Schools in Ngong Division, Kajiado County, Kenya.

1.2 Statement of the problem

Secondary schools in Kenya continue to face pressure to attain academic goals set both internally by the governing board of the school and nationally, as set out under Kenya's Vision 2030, and also internationally, as set out under the Sustainable Development Goals (SDGs). Concentration is relative, and it can be improved and strengthened by changing some of the existing factors, such as students' participation, interaction with teachers, and motivation. If well-grounded, such factors lead to more concentration and better learning (Hamid et al., 2018).

The research done by Rahiminia et al. (2019) on factors affecting concentration and attendance in the classroom in Iran revealed that students pay more attention whenever teachers use various techniques to clarify the main point. Therefore, teachers should use various methodologies in order to attract the minds of the students so that they may find meaning in what they are intending to learn. Concentration should be more focused on the learning process and the learners (Hamid et al., 2018).

The students used to struggle with concentration, leading to negative impacts on their academic performance. Therefore, the study investigates the influence of school-related factors on students' classroom concentration levels in Public Secondary Schools in Ngong Division, Kajiado County, Kenya.

1.3 Research objectives

i. To analyze the effect of teaching methodologies on students' concentration level in public Secondary School in Ngong division, Kajiado.

ii. To determine the effects of school's physical environment on student's concentration levels in Public Secondary Schools, Ngong division, Kajiado-county.

iii. To find out the effect of the school timetable on students' concentration level in public secondary schools, Ngong division, Kajiado-county

1.4 Research questions

i. How do teaching methodologies influence students' concentration in the classroom?

ii. How does physical learning environment influence students' concentration in the classroom?

iii. What is the influence of the school timetable on students' concentration in the classroom?

1.5 Limitation of the study

According to Zina (2021), limitations are conditions or design elements that may have an impact on the generalization and utility of findings, such as small sample size or restricted access to records. There was limited time to carry out the research as the researcher is a student who needs to study at the same time. Other limitations included methodology and financial constraints. Financial constraints may have an effect on the research conducted in three public schools. Also, due to a lack of funding,

the researcher was not able to gather information from all the schools. Due to COVID-19 restrictions, the researcher was not able to gather the students into smaller groups for discussion methods. The questionnaires were not returned on time.

1.6 Delimitation of the Study

The research focused on the influence of school-related factors on students' classroom concentration levels in Public Secondary Schools in Ngong Division, Kajiado County, Kenya. There are numerous elements that influence students' classroom concentration, but this study focused solely on the learning environment, teaching methodologies, and the school timetable, thereby excluding other considerations. The variables in this study are classroom management, learning materials, conducive environment, seating arrangement, and enough rest. Due to a lack of time, the study was confined to three Public Secondary Schools in the Ngong division. As a result, the conclusions of this study cannot be applied to the entire county.

1.7 Significance of the Study

Kruger and Schalkwyk (2015) stated that the main aim of the research is to add to the body of existing knowledge. This study is intended to investigate the influence of school-related factors on students' classroom concentration levels in Public Secondary Schools, Kajiado County, Ngong Division, which can be of great help to a number of stakeholders. The study's findings may aid students in developing skills for being attentive in class. The study can help the teachers use different teaching methodologies to break the monotony in class. The study gives the college departments a better understanding of how to create a conducive learning environment. Similarly, policymakers can be assisted in developing policies that address classroom environment issues and offer the required

resources and facilities for effective learning. Finally, the findings can be used to create a database for future scholars who find the study useful

1.8 Conceptual Framework

Guba and Lincoln, as cited in (Kombo & Tromp, 2006), define a conceptual framework as a research instrument that aids a researcher in developing awareness and comprehension of the topic under investigation. In other words, the researcher's conceptual framework is his or her understanding of how various variables in the study are related to one another. As a result, it specifies the variables that must be included in the research study. It serves as a road map for the researcher while he or she pursues the investigation. As a result, a conceptual framework is a beneficial instrument that can help a researcher come up with relevant conclusions. The following is the study's conceptual framework.:

Independent Variables

Dependent Variable

Teacher Methodology

- -Learning materials
  - Pedagogy
  -Classroom
  management

Intervene Variable

Student's classroom concentration level

Learning environment

- -Conducive environment (temperature, light, physical structure)
- -Seating arrangement

-Student's behavior

-Motivation

School Timetable

- Morning/Afternoon)
  Sleep
  Enough rest
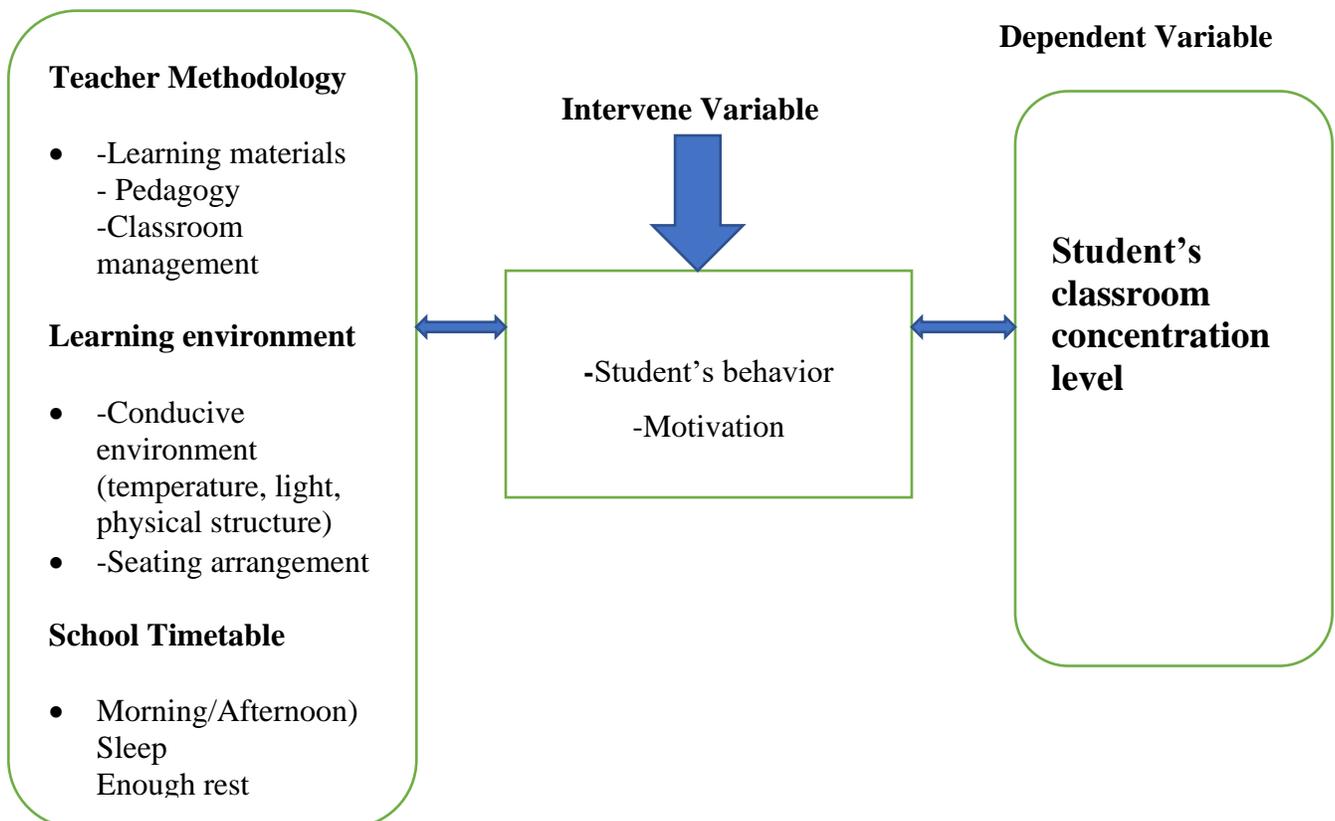
Figure 1.1: Relationship between Independent and Dependent Variables

7

The link between independent variables, dependent variables, and intervening variables in this study is described in this conceptual framework. According to Ogula (2014), an independent variable is the presumed cause of the dependent variable, whereas the dependent variable is the expected outcome of the independent variable. School timetables, learning environments, and teacher methodology are all independent variables in this study. Students' classroom concentration in public secondary schools is the dependent variable. The students' behavior and motivation are the intervene variables in this study. This implies that in order to attain concentration in the classroom, it all depends on the attitude and disposition of the students.

According to Carrell et al. (2014), students concentrate more during the morning classes than the afternoon ones. This is shown by the fact that in the morning, the mind is still fresh and prepared to learn, which is not the case during the afternoon classes because some students become tired. Similarly, teachers are the engines of the minds of their students. Therefore, when a student is in a pleasant learning atmosphere, he or she will be more focused on their studies. When the school learning environment, particularly the classroom, is disorganized, students may exhibit disorderly conduct toward the teacher, making teaching and learning more difficult (Carrell et al., 2014).

1.9 Theoretical Framework

According to Evans et al. (2015), a theoretical framework is a collection of interrelated ideas rooted in theories of prepositions. Karjo (2020) defines a theory as facts or ideas that attempt to explain the nature of society, its structure, and patterns of behavior. Theories are important in all research, and we cannot think without a theory. This study was rooted in two theories: The Humanistic learning theory was developed by, Carl Rogers and James Bugental in the early 1990s. This psychological theory is grounded in the idea that the student is the authority on how they learn and that all of their needs should be met in order for them to learn well. Humanistic learning explains that if students are

upset, sad, or distressed, they are less likely to be able to focus on learning, and this, therefore, will encourage teachers to create a good learning environment that helps students feel comfortable and safe so they can concentrate on their learning (Purswell, 2019). On the other hand, the theory of Abraham Maslow on the hierarchy of needs states that people are motivated to do something based on their needs, which in the hierarchical order means that the lower ones must be met before the upper ones. The theory advocates that for learning to be fully successful, the teacher has to ensure that lighting, space, ventilation, and other basic needs are available in the classroom and school environment. These basic needs help learners concentrate during lessons and other extra-curricular activities.

Drawing the learner's attention to the fact that they are what they are actually going to learn and what they will be learning, is the first step in capturing their attention throughout the learning process. If the student is interested in learning, they will get motivated. Therefore, it is important to remember that students' classroom concentration levels improve significantly when they are kept in suspense, which may be accomplished by randomly engaging students in order to keep them on their toes regardless of whether or not the lesson is very relevant to them (Jensen, 2013).

1.10 Operational Definition of Terms

Concentration level: is a learned mental state in which the human mind and all of his or her senses are concentrated on a single subject.

Influence: It is a drive or desire that drives someone's thinking behavior and judgment.

Student: is primarily a person enrolled in a school or other educational institution and who is under learning with goals of acquiring knowledge.

Public Secondary schools: are schools funded by the government or communities and are managed through a board of governors and parent-teacher associations.

1.11 Organization of the study

The research was organized into five chapters. The first chapter contained the background of the study, statement of the problem, research objectives, research questions, significant of the study, scope and delimitations of the study, organization of the study, conceptual framework, theoretical frameworks, limitations of the study and operational definitions of terms.

The second chapter reviewed literature related to influence schools related factors on students' classroom concentration level in Public Secondary Schools. The third chapter discussed the research design, target population, sampling technique, and sample size. It also described the research instruments used for data collection, the validity of the instruments, the methods and procedures for data analysis, and the ethical considerations used in data collection. The fourth chapter presented the interpretations of the research findings and the fifth chapter gave a summary of the findings, conclusions, recommendations, and proposed areas for further investigation.

CHAPTER TWO

REVIEW OF THE RELATED LITERATURE

2.1 Introduction

This chapter reviews literature related to the influence school related factors on students' classroom concentration level. The review focuses on teacher methodology, learning environment, school timetable. Gaps from the reviewed studies have also been highlighted.

2.2 Influence of Teacher Methodology on students' Classroom Concentration level in Public Secondary Schools

The broad ideas, pedagogy, and classroom management strategies utilized in classroom education are referred to as "teacher methodology" (Moore, 2014). Teachers use different teaching approaches for a variety of reasons, including the learner's ability, the number of pupils in a class, and the topic area.

According to Darling-Hammond et al. (2020), the teaching approach is a significant element in determining student concentration in the classroom. Teaching attempts to create a community whose primary goal is to improve human wellbeing via the use of knowledge. Habók and Nagy (2016) proposed a variety of teaching approaches to achieve the objectives of the secondary school syllabus, including practical work, the lecture method, field trips, class discussions, demonstrations, and work projects. This approach has an impact on students' concentration levels. The current study looked into how these methods could be combined in a class.

Odom and Bell (2015) in their research on teacher lecture demonstrations and student-centered learning. We discovered that a significant number of teachers use only the lecture method in their lessons, with no demonstrations or experiences. The teacher-lecturer technique is a straightforward

method to utilize because it does not necessitate extensive preparation. Every year, teachers fail to break the monotony of employing only one educational approach. Habók & Nagy (2016) emphasize the teachers' use of a variety of teaching methods for a single topic, despite the fact that it is not always possible to use a variety of teaching methods on a single topic due to constraints such as a lack of material resources or even space, which limit the use of a variety of teaching methods. The current study will look for approaches that can be used in tandem to help students pay more attention.

Basheer et al. (2016) studied the effectiveness of teachers' demonstrations in improving students' understanding and attitudes toward learning the oxidation-reduction concept in Israel. The study included 131 Israeli 8th graders in middle schools, and the findings revealed that demonstrations can be an effective platform for improving students' understanding of certain chemistry concepts as well as increasing their motivation and interest in learning chemistry if they are properly planned. The study focused on oxidation-reduction and electrolysis. It was clear that other key concepts needed to be investigated in order to acquire a more complete picture, and the current study was undertaken to fill that gap. According to the reviewed research, good teaching methods by a teacher motivate students to work hard because they promote positive attitudes and interest development among students, which influences their concentration level. When it comes to class management and keeping students' concentration levels, teacher methodology matters a lot. When students become distracted during class, it is the teacher's responsibility to employ the appropriate strategy based on the nature of the subject and the time of day. Teaching strategies and their impact on students' interest in mathematics were investigated by Bieg et al. (2017). The experience-sampling approach was used to measure discrete emotions, control-related assessments, and instructional methods in a sample of 141 Swiss high school pupils. Direct instruction was identified as the most common teaching style at 42.6%, followed by working individually at 24.5%, and working in small groups or pairs at 14.1%.

When compared to the other two teaching modalities, the multilevel analysis found that direct instruction was associated with less attention and higher degrees of boredom. However, given the nature of the subject under investigation, the findings demonstrate that direct instruction and mathematics do not mix well (Kahu, 2013). However, this previous study did not specify the time of day when mathematics was taught; however, learners tended to be more active in the morning than in the afternoon. In terms of technique and the time of day in which this subject is taught, the current study is available to all subjects. During the class, pay special attention to the students' concentration levels.

Teachers should recognize that learning is a process that requires exploring, thinking, reasoning, and utilizing suitable solutions to solve issues. It is more effective if students are given tasks to complete rather than simply asked to memorize knowledge (Odom & Bell (2015). According to Kahu (2013), a conventional learning environment with a teacher's presentation followed by a lecture neither stimulates learners' participation nor develops the appropriate degree of reasoning in students. When students are interested in solving issues during class activities, they pay greater attention and gain a better knowledge of the important themes.

2.3 Influence of Physical's Learning Environment on Student's Classroom Concentration level in Public Secondary Schools

Conducive learning is essential for effective teaching and learning to take place. The classroom is the main learning environment in most Kenyan schools (Monks & Schmidt, 2013). In a study on the influence of the school environment on the academic achievement of secondary students in India's Malda District, Miah (2015) found that the physical classroom environment had a significant impact on student's academic achievement. The data for the study was gathered using a self-created School

Environment Scale (SES). In order to choose the sample, the researcher employed a stratified random sampling technique. A total of 400 pupils were included in the sample. According to the conclusions of the study, the more appropriate a learning environment is, the better the learning outcomes of students are. The reviewed study, however, had certain knowledge gaps that the current study fills because it was conducted in India, whereas the current study was conducted in Kenya, where the two education systems are very different.

In Nigeria, Shamaki (2015) conducted research on the impact of the learning environment on students' academic progress in mathematics. The study looked into several aspects of the learning environment and how they can affect students' academic progress in mathematics. The findings revealed that there was a significant difference in mean performance between students taught in an ideal learning environment and those taught in a dull learning environment. This study was indicative that improving the learning environment significantly improves students' academic performance. Therefore, the above studies had gaps that needed to be filled by the current study. For instance, the study was carried out in Nigeria while the current study is being carried out in Kenya. The reviewed study also focused only on mathematics, while the current study addresses students' classroom concentration levels.

The temperature of the classroom has a significant impact on students' concentration during class. When the temperature is too cold or hot, the brain constantly reminds the body to take action to remedy the situation, and the learner becomes distracted and loses attention in the process of taking control of the issue. Students are leaving the class with nothing towards the conclusion of the school hour, and when asked what they have learned, some will try to recall something, but the majority will say nothing due to the cold weather (Brink et al., 2021).

Grant (2014) and Abidin et al. (2013) note that humidity has an effect on pupils' moods. High humidity levels reduce concentration and cause tiredness in the classroom. Some kids with weakened immune systems may get pneumonia, catarrh, or other cold-related illnesses. This has an impact on their academic achievement as well as their overall health.

Llinares et al. (2021) evaluated the impact of cold and warm-colored classroom walls on university students' cognitive attention and memory function. The participants were all students, numbering 160 in total. According to the findings, cold-colored walls increase a student's ability to pay attention, and they perform better academically in terms of memory. Therefore, the focus of this study was on the factors influencing students' classroom concentration levels in public secondary schools. Weather conditions have an impact on student concentration during classes. Their mood is influenced by the day's meteorological conditions. Extremely cold weather has an impact on their listening attitudes in class, and this has an impact on whether or not they will do well at the conclusion of the term.

The study conducted by Alberto et al. (2021) on the relationship between studies and weather conditions at California State University found that students use study time for leisure when the weather is exceptionally cold. This was the outcome of a study on the impact of temperature on student time allocation; too hot or too cold to study. According to the findings, high school students spend 288.9 minutes in class and self-studying and 975.2 minutes on other activities. When the weather is too chilly, college students spend 177.9 minutes studying and 883.3 minutes relaxing.

According to the findings, harsh temperatures, whether cold or hot, can cause education-leisure in schools. He based his findings on the American Time Use Survey. The intended audience consisted of high school and college students aged 16 and up. The sample consisted of 2561 high school students

and 2556 college students. They found out that high school students spent 288.9 minutes on self-study while 975.2 minutes on other activities. When the weather was cold, college students spent 177.9 minutes studying and 883.3 minutes relaxing. Alberto et al. (2021) study only looked at how the weather affected learners' studies but did not look at the teaching methodologies influencing learners' concentration level. Another gap between their study and the current study is the area of study, period of study, and the study population.

McGowan et al. (2017) conducted research on the learning environment entitled: "Learning to program-does it matter where you sit in the lecture theatre? They discovered that university students in Opatija, Croatia, who sat in the front row had the best assessment results, and that assessment grades declined as students moved far away from the front. While the most engaged students sat in the front row on a regular basis, this was not the case for the most academically gifted or those with the most prior programming expertise. This research confirms that the learners' attention span is affected by their seating position. Since these researchers focused on a specific topic, the research was conducted at a university and the methodology was longitudinal, which took a space of twelve weeks. The researchers overlooked the aspect of personality variables with regard to the sitting location in the class. This current research filled that gap since it focused on a number of Secondary Schools in Ngong and the method was a quantitative approach.

Meeks et al. (2013) researched on the impact of seating location and seating type on student performance in America. During their capstone course, 1,138 undergraduate senior business students provided data over a 10-year span. According to the data, neither sitting location nor sitting type had a substantial impact on pupils' attention spans. In other words, if sitting made a difference, instructors would have a difficult time deciding how to recognize the greatest seats because not every student can

sit in the front row. From the researcher's point of view, this previous research did not consider that some learners have problems with sight. Some see well when they are sitting in front, while others see well when they are at the back or center of the classroom. Therefore, if it happens that a student who is short-sighted is sitting at the back, their level of concentration goes down, and they will fail to follow the teacher during the lesson. This research under review used a different method, which presented an important gap to be filled. The level of education on which Meeks et al. focused was quite advanced, and most of the learners were intrinsically motivated to learn. Consequently, it may bring different results when done at a different level, like this research, which was focused on Secondary Schools in Kenya because in Secondary School, students do not have a clear objective of going to school, so sitting location impacts their concentration level in the classroom.

2.4 Influence of School Timetable on Students' Classroom Concentration level in Public Secondary Schools

In their study on academic achievement across the day in the United States of America, William and Sharpiro (2018) noted that schools are always looking for new methods to improve teaching and learning so that all students can reach their full potential. Restructuring the timetable in order to maximize student achievement in their academic performance is crucial to the educational program. According to a study conducted by Johnson et al. (2018) on indoor air quality in classrooms: environmental measures and effective ventilation rate modeling in urban elementary schools in France, it was concluded that the Académie Nationale de Médecine in France established a working group to assess the effects of the organization of school time on children's health. The study further indicated the importance of taking into account the child's biological and psychological rhythms. This implies that the ability to learn is mainly influenced by a student's psychological condition and biological

rhythms. As a result, improved academic performance should follow if schools can plan classes in a way that decreases students' cognitive load and matches their lessons to their circadian rhythms.

According to the recent study by Ribeiro et al. (2018), a literature review on the theory of constraints applied in the software development process in Latin America. The findings are in line with Johnson et al. (2018) on indoor air quality in classrooms: environmental measures and effective ventilation rate modeling in urban elementary schools in France, which found that the more consecutive classes a student has, the lower their performance becomes.

Furthermore, this effect was especially noticeable among lower-achieving children, preventing them from making much-needed progress. This arises as a result of cognitive exhaustion, which occurs when students are unable to absorb all of the pertinent teaching content. The researchers concluded that schools may explore lengthening the time of the day to provide more breaks and free periods for students to concentrate. Schools may consider extending the lunch period to allow students to take more frequent but shorter breaks during the day, such as 15 to 20 minutes. This means that students have less time to eat their lunch and, in most cases, are not fully focused on learning. (Folcher et al., 2014).

In his study, Maganga (2016) on factors affecting students' academic performance in Ilala District, Tanzania, established that sleep has an impact on a variety of facets of our lives. A good night's sleep allows us to think and accomplish things more efficiently and consistently. According to scientific studies, sleep is also essential for various vital memory, cognitive, and performance-related processes. This implies that insufficient sleep, on the other hand, can be hazardous and hinder a variety of tasks during the day. When the brain is in need of sleep, it responds by inducing a sense of

"sleepiness," which lowers alertness and concentration levels. The study further indicated that insufficient sleep may lead students to fail to concentrate when in classrooms.

Studies conducted by Maras et al. (2018) on students with special educational needs: Transitions from primary to secondary school in the Netherlands and Kale et al. (2018) on perceptions of teachers regarding dental students' classroom behavior in India found that excessive sleepiness is linked to a bad mood, inconsistency in performance, reduced productivity, and short-term memory, which can impair learning ability and some behavioral controls, especially on younger learners.

Folcher et al. (2014) asserted that to comprehend how the time of day affects one's learning ability and productivity, one must first comprehend the underlying biological process that controls human sleep-wake cycles. In humans, the circadian timing system, also known as the circadian rhythm, regulates adaptive behaviors such as feeding, reproduction, and sleep/wake cycles.

Fatade et al. (2013) carried out a study on the effect of problem-based learning on senior secondary school students' achievements in further mathematics in Kajiado. Their findings established that afternoon sessions decreased mathematics test scores while increasing history examination scores, which correlates with psychology and neuroscience research on optimal functioning at various times of the day.

Folcher et al. (2014) observed that most of the time, human brains are healthier and fresher in the morning. This implies that human beings perform better at something repetitious like problem-solving, which requires more speed, attention, and focus. This process appears to slow down throughout the afternoon (Spreen & Vally, 2013). Therefore, schools should allocate subjects like history, geography, and many others to the afternoon classes, when the students are more imaginative

19

and receptive to debate. Time of the day influences could work in a similar way, affecting students' test scores in an indirect way. The study further indicated that morning classes are the most effective for boosting the minds of the students in the classroom. This study was therefore necessary in order to fill the literature gap.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

This chapter presented the methodology used in the study. Research design, target population, sampling technique, and sample size. It also described the research instruments used for data collection, validity, and reliability of the instruments, the methods, and procedures for data analysis, and the ethical considerations employed in data collection.

3.1 Research Design

A research design is a plan used to generate an answer to a research problem (Paul & Criado 2020). In this regard, the current study adopted quantitative methods of research, which is a means of testing the research objective, including theories, by examining the relationships among variables. Research design provides full guidelines for data collection (Westreich et al., 2019). The study focused on cross-examining the influence of school-related factors on students' classroom concentration levels. Specifically, the questionnaire survey was designed with the aim of providing a comprehensive analysis of the research problem. In this case, the study drew a sample of 30% of students and teachers in Kajiado County to ascertain the factors influencing students' classroom concentration levels in Public Secondary Schools. The study administered questionnaires to both students and teachers with the aim of collecting relevant data about the factors influencing students' classroom concentration levels.

3.2 Target Population

According to Asiamah et al. (2017), a population is defined as a complete set of individuals, cases, or objects with some common observable characteristics. Kajiado County has 27 secondary

schools with approximately 23,700 boys and girls, and approximately 1180 teachers (Alberto et al., 2021). The target population for this study was all Public Secondary Schools in Ngong division, Kajiado County.

3.3 Sample Size and Sampling Techniques

According to Mvumbi & Ngumbi (2015), a sample is a small portion of something that is meant to stand for or reflect the entire group. The act, method, or technique of selecting a suitable sample, or a representative part of a population, with the goal of determining parameters or characteristics of the entire population is referred to as sampling (Marshall et al., 2013). Out of the 13 Public Secondary Schools that were targeted, simple random sampling was used to select 30% of the target population. Hence, the researcher used simple random sampling to select 3 Public Secondary Schools out of the 13 to participate in this study.

A simple random sampling approach is one in which every item in the population has an equal probability of being included in the sample (Mvumbi & Ngumbi 2015). The area was chosen because of the concentration of Public Secondary Schools of all types, and therefore all the variables necessary for this research study were present. Form 1 and 2 students, together with some teachers, were the target population for this study. These categories were believed to be the key informants for this research and were able to provide the required information. Similarly, teachers are in more direct contact with students, and they can easily observe which factors are influencing students' classroom concentration levels.

Form one and two students from each of the three schools were also chosen to participate in this study since they were available at that time. Forms three and four did not take part in this study because they

were preparing for the exams. The teachers of the three schools were chosen using a purposive sampling method. The sample size and sampling procedure used is explained in Table 1 below:

Table 3.1: Sample Size

School	Population (Form One and Two)	Number of Students Sampled	Number of teachers Sampled	Total
School A	155	40	4	44
School B	167	35	4	39
School C	188	45	4	49
Total	510	120	12	132

The above table demonstrates the three Public Schools which are represented as School A, B, and C, the total population of students and teachers from each School, sample size taken from the simple mathematical calculation of 30% of the Population from each School, and the total sample size, which is 132. This includes 120 students and 12 teachers. Therefore, the researcher selected three Public Secondary Schools out of thirteen (13) Public Secondary Schools in Ngong division.

3.4 Instruments for Data Collection

A research instrument is a tool used to collect data from a sample. It is a tool the researcher uses to gather information needed to solve a problem (Sandelowski, 2014; & Farrell, 2016). Two types of questionnaires were used in this study: one for the students and one for the teachers. Each of the two questionnaires is comprised of four sections: A, B, C, and D. The questionnaires had both open-ended and closed-ended questions. In closed-ended questions, respondents were required to indicate the extent to which they agreed or disagreed with the statements. The options given were: strongly agree, agree, undecided, disagree, strongly disagree, which students had to select by ticking. While

open-ended questions were meant for respondents to give their options, the questionnaires enabled the researcher to obtain information from the respondents.

3.5 Validity and Reliability of the Instruments

Validity of research refers to the extent to which results obtained from the analysis of the data represent the phenomenon under study (Drucker-Godard et al. 2012). This implies that the accuracy of the measurement used must be determined before conclusive interpretations of findings can be made (Kothari, 2012). The research instruments used in the study were scrutinized by the supervisor and other lecturers. Their suggestions and corrections regarding the questionnaire were incorporated into this study.

Reliability refers to the extent to which a test produces similar results under constant conditions on all occasions (Zina, 2021). To attain considerable reliability in this study, a pilot study was carried out before the final data, but not on the targeted population, to determine plausible arbitrary errors and consequently effect required changes and corrections.

3.6 Methods of Data Analysis

According to Harari et al. (2020), data analysis is the process of finding meaning in data. It involves sorting data, editing, coding, entry, cleaning, processing, and interpretation of the result. Data collected from this study was analyzed using the Statistical Package for Social Science (SPSS) version 21, and the results were presented through the use of percentages and frequency distribution tables, pie charts, and bar graphs. This involved the analysis of both quantitative and qualitative data.

3.7 Ethical Considerations

Zina (2021) defines ethics as the correct rules and procedures of conduct that are necessary when carrying out research. Anonymity and protection of the respondents were respected. To avoid plagiarism, the researcher ensured that all the sources consulted were cited, referenced, and acknowledged as required in any scholarly work. This included adhering to the American Psychological Association (APA) 7th edition.

DATA PRESENTATIONS, INTERPRETATION AND DISCUSSION OF FINDINGS

4.0 Introduction

This chapter presents, interprets and discusses data findings of the present study. The study sought to establish the influence of school related factors on students' classroom concentration level in public secondary schools in Ngong Division, Kajiado County, Kenya. The data analysis is based on the objectives of the study and is presented using frequency tables, pie charts and texts.

4.1 Questionnaire Distribution and Return Rate

Table 4.1: Questionnaire Return Rate

Respondent Type	Questionnaires administered		Returned Questionnaires	
	f	%	f	%
Students	120	91	93	90
Teachers	12	9	10	5
Total	**132**	**100**	**103**	**95**

The study shows that 132 questionnaires were originally distributed. 120 questionnaires were administered to students that gives 91% but 93 students returned the papers which gives 90% of the returned questionnaires, 12 questionnaires were distributed to teachers that gives 9% only 10 returned the questionnaires. In total 103 were successfully filled up and returned back. 90% of the students returned the questionnaires and 95% of the teachers returned the questionnaires. This implies that the return rate was 78%, which can be considered as satisfactory for the present study.

4.2 Demographic Information of the Respondents

The study sought to establish the demographic information of the respondents with the aim of placing them in their right perspective. Information that was sought included n gender, age, school type, class and teaching experience.

4.2.1 Gender Distribution of the Respondents

The gender distribution of the respondents is illustrated as follows:

Table 4.2: Gender Distribution of the Respondents

Gender	Students		Teachers	
	f	*%*	*F*	*%*
Male	71	76.3	4	40.0
Female	22	23.7	6	60.0
Total	**93**	**100.0**	**10**	**100.0**

Table 4.2 demonstrates that there were 76% of male student respondents and 24% of female student respondents. This implies that there were more male student respondents than female respondents. However, there were more female teacher respondents (60%) in relation to male teacher respondents (40%). Nevertheless, although there was discrepancy in terms of gender participation, both genders were able to participate.

4.2.2 Age Distribution

The age distribution analysis is illustrated as shown in Table 4.3 as follows:

Table 4.3: Age Distribution

Students	Teachers

Age (Years)	Frequency	Percent	Age	Frequency	Percent
10-15	21	23	25-30 Years	5	50.0
16-20	72	77	31-35 Years	2	20.0
			Above 40 years	3	30.0
Total	**93**	**100.0**		**10**	**100.0**

The age distribution shows that more student respondents were aged 16-20 years (77%) followed by those aged 10-15 years (23%). This implies that most students were in the right age for secondary school. Similarly, the highest number of teacher respondents were aged 25- 30 years (50%), followed by those aged 40 years and above at 30% while the least number was aged 31-35 years. This implies that, a significant number of teacher respondents were young.

4.2.3 Students' Class Distribution

The study sought to establish the students' class distribution. The results of this analysis are presented as follows:

	Number of Students	Percent
Form 1	254	40.0
Form 2	256	60.0
Total	**510**	**100**

Table 4.3: Students' Class Distribution

The class distribution analysis shows that Form two had the highest representation at 60% followed by Form one at 40%. The study therefore indicates that only two classes participated, that is Form One and Form Two.

4.2.4 School Type

Both students and teachers were asked to respond to the item about the type of schools that were participating in this study. Their responses are presented in Figure 4.2 as follows:
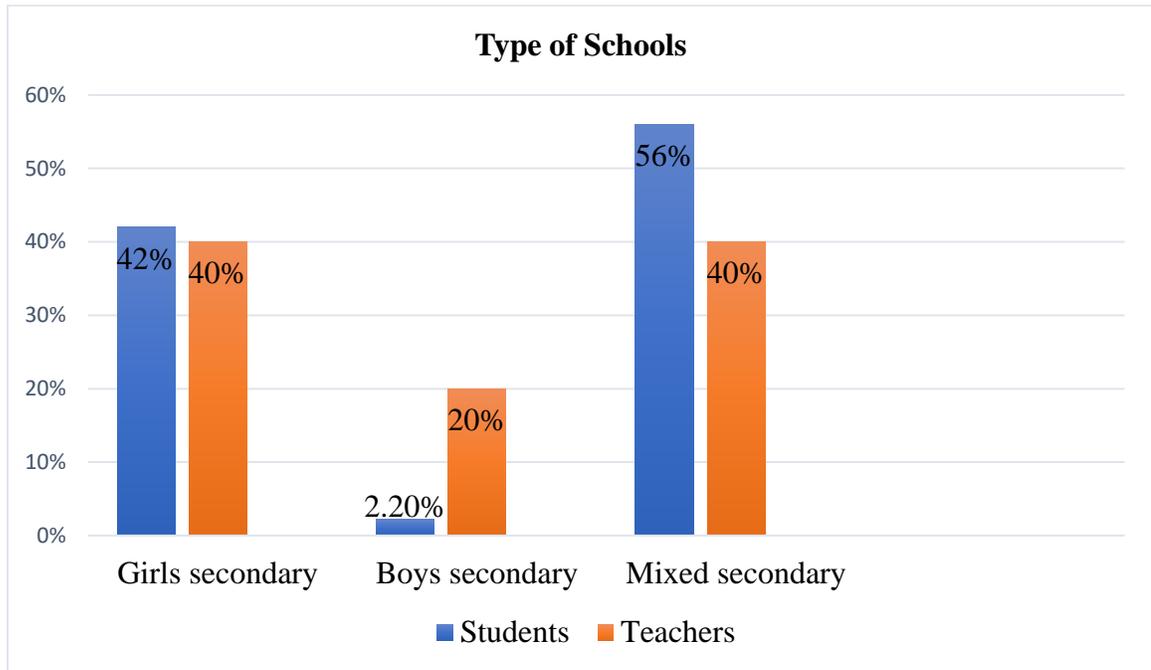
Figure 4.1: School Type

The type of school analysis for students shows that Mixed Secondary Schools had the highest representation at 56% followed by Girls Secondary Schools at 42% while Boys Secondary Schools had the least at 2%. This implies that the respondents were drawn from all types of schools.

Similarly, according to Teacher respondents, both mixed secondary schools and girls secondary schools had equal representation at 40% each while boys' secondary schools had 20% of representation. This shows that a variety of school types were able to participate in this study.

4.2.4 Teachers' Experience

The study sought to establish the teaching experience of the teachers. Figure 4.3 presents the results of this analysis.
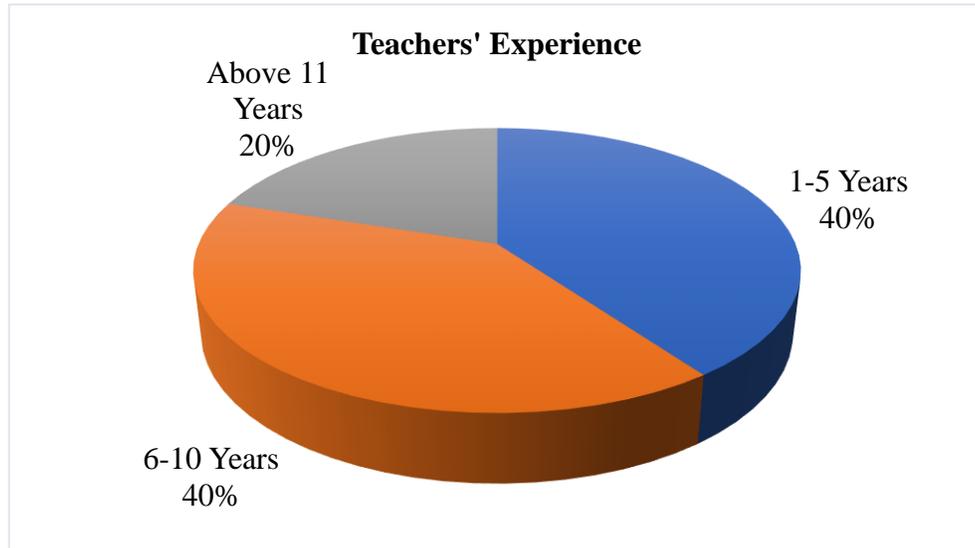
Figure 4.2: Teacher Experience

Teacher experience analysis reveals that 40% of teachers had taught for 1-5 yeas (40%) as well as those who had worked for 6-10 years (40%). However, those aged 11 years and above were 20%. This implies that most teachers had little experience. This can also be attributed to their young age. students.

4.3 Teaching methodology

The study sought to establish the role of teacher's methodology on student class concentration levels. The analyses are presented in Table 4.4 as follows:

Table 4: Teaching Methodology

Teaching Methodology	Respondent	SA	A	U	D	SD
Students enjoy my lessons	Teachers	5(50%)	4(40%)	0(0%)	1(10%)	0(0%)

I teach with examples so that the students may learn well	Teachers	5(50%)	2(20%)	1(10%)	1(10%)	1(10%)
I give corrections whenever an assignment is given	Teachers	4(40%)	3(30%)	1(10%)	2(20%)	0(0%)
The methods used by the teacher makes paying attention easier	Students	23(25%)	50(54%)	8(8.6%)	10(11%)	2(2.2%)
The teacher uses different methods of teaching	Students	29(31%)	39(42%)	13(14%)	7(7.5%)	5(5.4%)
	Teachers	7(70%)	2(20%)	0(0%)	0(0%)	1(10%)
The teacher encourages feedback in the learning process	Students	26(28%)	39(42%)	15(16%)	10(11%)	3(3%)
	Teachers	5(50%)	4(40%)	0(0%)	0(0%)	1(10%)
	Students	22(24%)	42(45%)	10(11%)	10(11%)	9(10%)

Our teacher carries out demonstration of complex examples without rushing	Teachers	3(30)	4(40%)	1(10%)	1(10%)	1(10%)
Our teacher gives classwork / assignments every time	Students	16(17%)	42(45%)	16(17%)	14(15%)	5(5%)
Most of the methods used in our school are not effective for learning	Students	17(18%)	23(25%)	12(13%)	21(23%)	20(21.5%)
Group work and presentation in class enables the students to concentrate	Students	36(39%)	37(40%)	7.(7.5%)	9(9.7%)	4(4.3%)
	Teachers	3(30%)	5(50%)	0(0%)	0(0%)	1(20%)

4.3.1 Students Enjoy My Lessons

There was a strong opinion that (90%) that most students enjoy classes. This was in comparison to 10% that had contrary opinion. This implies that most students were enjoying their classes.

4.3.2 Encouraging Group Discussions

A good number of teacher respondents amounting to 80% were of the opinion that they encourage group discussion in their classes as opposed to 20% that had contrary opinion. This implies that most teachers used group discussions as a method of teaching.

4.3.3 Feedback

The study showed that 90% of teacher respondents were encouraging feedback in the learning process. This is as opposed to 10% that had contrary opinion. This implies that most teachers were encouraging feedback in their teaching sessions.

4.3.4 Demonstration Method

Table 4 showed that, 70% of teacher respondents indicated to be carrying out demonstration of complex examples without rushing as opposed to 20% that refuted that assertion. Another 10% were however undecided. This implies that most teachers were using demonstration methods.

4.3.5 Giving Corrections after Assignments

The findings in Table 4 revealed that, 70% of the teacher respondents reported to be giving corrections whenever an assignment is given. 20% that did not give feedback while another 10% were undecided. This is an indication that a significant number of teachers were giving feedback after marking the assignments.

4.3.6 Using a Variety of Methodologies

The analysis showed that a majority (90%) of teachers were using a variety of methodologies that make students understand better. This was however opposed by 10% who had contrary opinion. It is evidence that students understand better, when the teacher uses variety of methodologies. These outcomes are in accord with the findings of Odom and Bell (2015) who argued that teacher should much creative so that the class may not be monotonous.

4.3.7 Teaching with Examples

It was established that 70% of teacher respondents were teaching with examples to ensure that students learnt well. This was against 20% who were not using examples while 10% were undecided. This implies that a significant number of teachers were using examples in their teaching endeavors.

4.3.8 Teaching Methods and Paying Attention

The study revealed that 79% of student respondents were in agreement that the methods used by the teachers makes paying attention easier. This was against13% that had contrary opinion and another 8.6% that was undecided. This implies that methods used by the teachers makes paying attention easier. This agrees with the findings of Odom and Bell (2015) that by using one method of teaching students get tired and the desire to concentrate is low.

4.3.9 Teachers use of Different Methods of Teaching

From Table 4 above, 70% of the student respondent confirmed that their teachers used different methods of teaching as opposed to 13% that showed disagreement. This implies that most teachers were using different teaching methods.

4.3.10 Teachers' Feedback

Table 4 above showed that 70% reported that most teachers were encouraging feedback in the learning process. This was however opposed by 14% who had contrary opinion while 16% were non-committal. This implies that most teachers were encouraging feedback.

4.3.11 Demonstrations of Complex Concepts

Table 4 above indicated that 69% of student respondents reported that their teachers carried out demonstration of complex examples without rushing. 21% of the respondents who had contrary opinion

4.3.12 Assignments

The findings in Table 4 showed that 62% of student respondents acknowledged having been frequently given classwork or assignments. This was contradicted by 20.5% while another 17% were undecided. This implies that most students were being frequently given assignments.

4.3.13 Effectiveness of Teaching Methods

From the Table 4 above, 43% of student respondents supported the assertion that most of the methods used in their schools were not effective for learning while another 44% were of the opinion that the methods were effective. Another 13% were undecided. This shows that it was not very clear whether the methods were effective or not.

4.3.14 Group work and Presentations and Classroom Concentration

Table 4 showed 79% of student respondents opined that group work and presentation in class enabled the students to concentrate. This was however opposed by 14% that had contrary opinion and another 7.5% that had no opinion. This implies that group work and presentation in class enabled students to concentrate more in class. This is also in agreement with the findings of Park and Choi (2014) who argued that group work in the classroom enforces concentration in the students.

4.4 Classroom Learning Environment

This objective intended to establish the correlation between learning environment and students' ability to concentrate in class. The results of the analyses are provided in Table 4.5

Table 4.5: Learning Environment

Learning Environment	Respondent	SA	A	U	D	SD
Most students have a positive attitude towards their learning environment	Teachers	3(30%)	3(30%)	3(30%)	1(10%)	0(0%)

Classroom environment is conducive for easy teaching and smooth learning	Teachers	4(40%)	6(60%)	0(0%)	0(0%)	0(0%)
The noise does not help to achieve the learning objectives	Teachers	6(60%)	4(40%)	0(0%)	0(0%)	0(0%)
The classroom environment motivates me to impart knowledge	Teachers	4(40%)	3(30%)	2(20%)	1(10%)	0(0%)
The sitting arrangement plays a very important role the academic performance of my students	Teachers	4(40%)	4(40%)	1(10%)	1(10%)	0(0%)
Every time I appreciate and reward my students in the classroom	Teacher	5(50%)	1(10%)	3(30%)	1(10%)	0(0%)
There are many students in the classroom	Student	28(30%)	40(43%)	4(4%)	17(18%)	4(4%)
I like the classroom environment because it makes learning easy for me	Student	20(21.5%)	40(43%)	8(8.6%)	17(18%)	8(8.6%)
Our classroom has good color	Student	11(12%)	34(37%)	15(16%)	18(19%)	15(16%)

Sometimes there is noise coming from outside of the classroom	Student	27(29%)	23(25%)	11(12%)	14(15%)	18(19%)
The classroom environment motivates me to study	Student	18(19%)	38(41%)	10(11%)	16(17%)	11(12%)
The classroom arrangement plays a great role in my academic performance	Student	27(29%)	34(37%)	6(6.5%)	14(15%)	12(13%)
There is proper light and ventilation in the classroom	Student	36(39%)	30(32%)	7(7.5%)	10(11%)	10(11%)

4.4.1 Students Attitude towards their Learning Environment

The data in table 4.5 showed that,60% of teacher respondents observed that most students had a positive attitude towards their learning environment. This was against 10% that had contrary opinion. However, 30% were undecided. This implies that a significant number of teacher respondents considered the learning environment to be conducive.

4.4.2 Conduciveness of Classroom Environment

Table 4.5 showed that 100% of teachers strongly agreed to the effect the classroom environment was conducive for easy teaching and smooth learning.

4.4.2 Noise Pollution

Table 4.5 showed that 100% of teacher respondents strongly agreed to the effect that noise does not help to achieve the learning objectives.

4.4.3 Motivation from Classroom Environment

Table 4.5 indicated that 70% of teacher respondents were in agreement that the classroom environment motivated them to impart knowledge. This was however refuted by 10% while 20% were undecided. Therefore, according to more than half of the respondents, the classroom environment motivates teachers to impart knowledge.

4.4.4 Sitting Arrangement

Table 4.5 showed that 80% of teacher respondents to the fact that the sitting arrangement plays a very important role the academic performance of my students. This was however rejected by 10% of the respondents while another 10% of the teacher respondents was undecided. These statistics are on the same line of Meeks et al., (2013) they pointed out that sitting arrangement enables the students to give all their focus on what the teacher is saying.

4.4.5 Rewarding Students

Table 4.5 indicated that 60% of teacher respondents who confirmed to be appreciating and rewarding students every time they performed well in the classroom. This was against 10% while 30% were undecided. This implies that a significant number of teachers were rewarding students who performed extemporarily well.

4.4.6 Number of Students in Classes

Table 4.5 showed that 73% of student respondents, the schools under study had big classes. This was refuted by 23% of student respondents while 4% were undecided. This is a manifestation that most schools had large classes.

4.4.7 Physical Learning Environment and Making Learning Easy

Those who liked their classroom environment because it makes learning easy were 64.5% while those who opposed it were 27% while those who decried to comment were 18%. This implies

that most schools had conducive classroom environment. Miah (2015), pointed out that classroom environment is essential for any effective learning to take place.

4.4.8 Classroom Colour

Regarding whether classrooms had good colors, 49% showed agreement. This was against 35.5% that showed disagreement while 16% were undecided. This implies that there was no clear decision on whether the colors were good or not.

4.4.9 Noise from Outside

The information in Table 4.5 showed that 54% of student respondents strongly agreed that often get noises coming from outside of the classroom. This was against 34.5% who showed disagreement while another 12% were undecided. This shows that students were not able to concentrate due to the presence of noise.

4.4.10 Classroom Environment and Motivation to Study

Regarding whether the classroom environment motivates students to study, 60% concurred, 29% disproved while 11% were undecided. This shows that indeed, classroom environment motivates students to study.

4.4.11 Classroom Environment and Academic Performance

There was agreement among 65.6% of student respondents to the assertion that the classroom arrangement plays a great role in their academic performance. This was in comparison to 28% that disproved that while 6.5% were undecided. This implies that indeed, classroom arrangement plays a great role in their academic performance.

4.4.12 Classroom Lighting and Ventilation

Brink et al., (2021) noted that a classroom with proper ventilation enables the students to concentrate well. The study noted that there was proper light and ventilation in the classrooms as

witnessed by 71% of student respondents against 22% who disproved that while 7.5% were undecided. Therefore, most classrooms had proper lighting and ventilation.

4.5 School Timetable and Students' Concentration Level

The study established the relationship between Timetable and Student concentration levels. The following are the presentation of the analyses.

Table 6: School Timetable and Students' Concentration Level

Teaching Timetable	Respondent	SA	A	U	D	SD
There is a time table in the classroom available for teaching and learning	Teacher	7(70%)	3(30%)	0(0%)	0(0%)	0(0%)
In the afternoon, the teacher always feels like continuing with the teaching	Teacher	4(40%)	3(30%)	0(0%)	3(30%)	0(0%)
In the morning hours, the students are always in a good disposition	Teacher	6(60%)	2(20%)	1(10%)	1(10%)	0(0%)
The break time disrupts my teaching focus	Teacher	1(10%)	1(10%)	0(0%)	5(50%)	3(30%)
In the morning hours, the teacher struggles to concentrate	Teacher	1(10%)	3(30%)	0(0%)	2(20%)	4(40%)
The school timetable is not in favor of proper teaching	Teacher	1(10%)	1(10%)	0(0%)	5(50%)	3(30%)

In the morning hours, I concentrate well	Student	45(48%)	38(41%)	5(5%)	1(1%)	4(4%)
I always feel tired to follow afternoon classes	Student	28(30%)	36(39%)	12(13%)	11(12%)	6(6.5%)
The break time helps me to remove stress	Student	26(28%)	38(41%)	8.(8.6%)	12(13%)	4(4%)
In the morning hours, I struggle to concentrate because I always sleep late	Student	22(24%)	19(20%)	6(6.5%)	24(26%)	22(24%)
The school timetable is in favor of my learning	Student	26(28%)	35(38%)	4(4%)	11(12%)	17(18%)

4.5.1 Availability of a Timetable

The presence of a timetable in the classroom for teaching and learning was confirmed by 100% of the teacher respondents.

4.5.2 Afternoon Classes

Table 6 showed that 70% of teacher respondents reported to like continuing teaching in the afternoon. This was against 30% who disliked continuing teaching in the afternoon. Therefore, more teachers had no problem teaching in the afternoon than those who found it difficult to teach.

4.5.3 Morning Classes

The study showed that 80% of the student respondents were in agreement that in the morning hours, the students are always in good disposition. This was as opposed to 10% that disputed that while another 10% refused to comment. This implies that morning classes are more refreshing for most

41

students. These findings are in disagreement to what Maras et al., (2018) who said that having classes in the afternoon enables the students to concentrate well because the brain still fresh as he further added saying that there are students who study in shifts.

4.5.4 Break Time

The study noted that 80% of the teacher respondents were not disrupted by the break time as opposed by 10% who felt disrupted while another 10% were non-committal. This implies that break times were not seen as disruptors by a majority of the teachers.

4.5.5 Morning Hours and Class Concentration

The information in Table 6 showed that 60% of teacher respondents found morning hours to be conducive to concentrate as opposed to 10% that had contrary opinion. Another 30% was however undecided. Hence, morning hours were found to be the best in terms of concentration. These findings are not in the same line with Maras et al., (2018) founded out that having classes in the afternoon enables the students to concentrate well because the brain still fresh as he further added saying that there are students who study in shifts.

4.5.6 Favourable Time Table

Table 6 showed that 80% of teacher respondents disproved that the school timetable was not in favor of proper teaching. This is in comparison with 10% who supported that assertion. Therefore, the timetable was found to be favorable for proper teaching.

4.5.7 Classroom Concentration in Morning Hours

Table 6 showed that, 89% of student respondents were in agreement that in the morning hours, they concentrate well as opposed to 5% that had contrary opinion. Another 5% were undecided. This implies that morning hours are ideal for concentration.

4.5.8 Tiredness in the Afternoon Classes

The afternoon classes were found to be tiring as witnessed by 69% of student respondents in comparison with 18% that had contrary opinion while 13% were undecided. This implies that afternoon classes are not very conducive for learning. In the findings done by Folcher et al., (2014) asserts that afternoon classes bring laziness in students.

4.5.9 Break time and Stress Relief

The break time was found to help students remove stress as indicated by 69% of student respondents as opposed to 13% that had contrary opinion and another 8.6% that were undecided. This implies that breaks in between lessons are healthy for students to relief stress.

4.5.10 Morning Hours and Classroom Concentration

The information in Table 6 showed that, 44% of student respondents were in agreement that in the morning hours, they struggle to concentrate because they always slept late. This was however refuted by 50% of student respondents and 6% were undecided. This implies that morning hours had better concentration levels. The results are in agreement with Spreen & Vally (2013) who confirm that in the morning lessons the percentages of understanding is so high.

4.5.11 Favourable Timetable

Table 6 showed that, 60% of students strongly agreed that school timetable was in favor of they are learning. 30% of student responds who opposed with the statement. 4% were undecided. This shows that most students found that the timetable was favorable to them.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presented a summary of the study findings, recommendations and conclusion based on the research findings. Proposed areas for further research were also provided.

5.1 Summary of the Study

The purpose of this study was to investigate the influence of school related factors on students' classroom concentration levels in Public Secondary Schools in Ngong Division, Kajiado County, Kenya. It was guided by these objectives: effect of teaching methodologies on students' concentration level; the relationship between the learning environment and students' concentration level and the effect of the school timetable on students' concentration level in public secondary schools, Ngong division, Kajiado-county.

The study rooted on the two theories such as humanistic learning theory and Abraham's hierarchy of need (human motivation), the humanistic learning theory was developed by Carl Rogers and James Bugental in early 1990's which states that students are the authority on how they learn and that all of their needs should be met in order for them to learn well. While Maslow on hierarchy of need stated that people always desire to meet their needs in order to attain concentration. The study adopted survey design and enlisted a sample of 132 respondents but only 103 managed to participate.

5.2 Summary of the Findings

5.2.1 Influence of Teaching Methodology on Students Class Concentration Levels

The study established that most students were enjoying their classes and that most teachers used teaching approaches that were encouraging classroom concentration. It was also revealed that most teachers were using a variety of methodologies that included group discussions, demonstration

methods, use of examples, which made students understand better and were encouraging feedback as well. Most teachers were also found to be giving frequent assignments.

5.2.2 Influence of Physical's Learning Environment on Students' Classroom Concentration Levels

The study revealed that most schools had a conducive learning environment, which was enhancing classroom concentration as well as motivating teachers to impart knowledge. The study noted that most classrooms had proper lighting and ventilation. Some teachers were also rewarding students who performed exemplary well. The sitting arrangement was found to play an important role in the academic performance of students. However, most schools were found to have big classes and were noisy which was hampering effective teaching and learning.

5.2.5 School Timetable and Students' Concentration Level

The study showed that the schools had timetables in their classrooms that were favorable to students and teachers. Most teachers were found to have problem teaching in the afternoon. However, morning hours were found to be more ideal for teaching and learning and had high concentration levels as well. The study revealed that breaks in between lessons were healthy for students to relief stress.

5.3 Conclusion

The study concludes that the most students were enjoying their classes and that most teachers used a variety of teaching approaches that were encouraging classroom concentration. Most teachers were also using a variety of methodologies which included group discussions, demonstration methods, use of examples, which make students understand better and were encouraging feedback as well.

The study concludes that most schools had a conducive learning environment, which was enhancing classroom concentration as well as motivating teachers to impart knowledge. The study also concludes that all schools had class timetables which were favorable to most students and

teachers. Morning hour classes were found to be more ideal for teaching and learning and had high concentration levels as well while breaks in between lessons were healthy for students to relief stress.

5.4 Recommendations

The study observes that different stakeholders have different roles to play to ensure there is high concentration levels among students. For instance, school administrators, teachers, students and the government have important roles to play. The following are the recommendations of the study:

5.4.1 School Administrators

The administrators need to ensure that classrooms have conducive environment for learning. They should provide ventilators, proper lighting and noise reduction facilities to ensure that both students and teachers are able to concentrate.

5.4.2 The teachers

Teachers spend most of the time with students at school, and are some of the most important determinants of whether students will excel in studies or not. They should therefore make use of a variety of teaching methodologies for effective teaching and learning and to ensure maximum student concentration. They should make learning lively and interesting to enhance student concentration. They should also strive to create a good relationship with students in such a way that they are approachable, friendly and consultable when need arises.

REFERENCES

Abidin, M. J. Z., Rezaee, A. A., Abdullah, H. N., & Singh, K. K. B. (2013). Learning styles and overall academic achievement in a specific educational system. *International Journal of Humanities and Social Science*, *1*(10), 143–152.

Alberto, I. C., Jiao, Y., & Zhang, X. (2021). Too hot or too cold to study? The effect of temperature on student time allocation. *Economics of Education Review*, *84*, 102152.

Asiamah, N., Mensah, H. K., & Oteng-Abayie, E. F. (2017). General, target, and accessible population: Demystifying the concepts for effective sampling. *The Qualitative Report*, *22*(6), 1607.

Butakova, M. M., Sokolova, O. N., Zaitseva, N. A., Larionova, A. A., Ignatova, M. N., Trufanova, S. N., & Yakovlev, A. (2020). Republic of Kenya. *Totally Integrated Quality Education and Training* (Koech Report), Nairobi: Government Printers

Basheer, A., Hugerat, M., Kortam, N., & Hofstein, A. (2016). The effectiveness of teachers' use of demonstrations for enhancing students' understanding of and attitudes to learning the oxidation-reduction concept. Eurasia Journal of Mathematics, Science and Technology Education, 13(3), 555-570.

Bieg, M., Goetz, T., Sticca, F., Brunner, E., Becker, E., Morger, V., & Hubbard, K. (2017). Teaching methods and their impact on students' emotions in mathematics: an experience-sampling approach. ZDM, 49(3), 411-422.

Brink, H. W., Loomans, M. G., Mobach, M. P., & Kort, H. S. (2021). Classrooms' indoor environmental conditions affecting the academic achievement of students and teachers in higher education: A systematic literature review. *Indoor Air*, *31*(2), 405–425.

Carrell, Scott E., Teny Maghakian, and James E. West. (2011). The Causal Effect of School Start

Time on the Academic Achievement of Adolescents: Dataset." *American Economic Journal: Economic Policy*

Drucker-Godard, C., Ehlinger, S., & Grenier, C. (2012). Validity and reliability. *Doing Management Research: A Comprehensive Guide*, 196–219.

Darling-Hammond, L., Flook, L., Cook-Harvey, C., Barron, B., & Osher, D. (2020). Implications for educational practice of the science of learning and development. Applied Developmental Science, 24(2), 97-140.

Evans, D., Gruba, P., & Zobel, J. (2015). *How to write a better thesis*. Melbourne Univ. Publishing.

Folcher, M., Oesterle, S., Zwicky, K., Thekkottil, T., Heymoz, J., Hohmann, M., Christen, M., El-Baba, M. D., Buchmann, P., & Fussenegger, M. (2014). Mind-controlled transgene expression by a wireless-powered optogenetic designer cell implant. *Nature Communications*, *5*(1), 1–11.

Farrell, S. (2016). *Open-Ended vs. Closed-Ended Questions in User Research*.

Fatade, A. O., Mogari, D., & Arigbabu, A. A. (2013). Effect of Problem-Based Learning on Senior Secondary School Students' Achievements in Further Mathematics. *Acta Didactica Napocensia*, *6*(3), 27–44.

Grant, S. G. (2014). *History lessons: Teaching, learning, and testing in US high school classrooms*. Routledge.

Gagne, R. M. (1968). Contributions of learning to human development. *Psychological review, 75(3), 177.*

Harari, M. B., Parola, H. R., Hartwell, C. J., & Riegelman, A. (2020). Literature searches in

systematic reviews and meta-analyses: A review, evaluation, and recommendations. *Journal of Vocational Behavior*, *118*, 103377.

Hamid, N., Boolaghi, Y., & Kiani Moghadam, A. S. (2018). The Efficacy of acceptance and commitment-based therapy (ACT) on depressive symptoms and cognitive emotion regulation strategies in depressive students. *International Journal of Psychology (IPA)*, *12*(1), 5–29.

Habók, A., & Nagy, J. (2016). In-service teachers' perceptions of project-based learning. SpringerPlus, 5(1), 1-14.

Jilcha, K. (2019). *Research Design and Methodology*. Addis Ababa University. Retrieved https://www.researchgate.net/publication/335110374_Research_Design_and_Methodology on April 15, 2021

Johnson, D. L., Lynch, R. A., Floyd, E. L., Wang, J., & Bartels, J. N. (2018). Indoor air quality in classrooms: Environmental measures and effective ventilation rate modeling in urban elementary schools. *Building and Environment*, *136*, 185–197.

Jensen, E. (2013). Engaging students with poverty in mind: Practical strategies for raising achievement. ASCD.

Karjo, C. H. (2020). *Writing and Researching for A Thesis Proposal*. Penerbit Universitas Katolik Indonesia Atma Jaya.

Kothari, C. R. (2012). *Research Methodology: Methods and Techniques.* Mumbai: New Age International Publishers Ltd.

Kombo, D. K. (2006). *Proposal and Thesis Writing: An Introduction.* Nairobi: Paulines Publications Africa.

Kale, S. S., Kakodkar, P., & Shetiya, S. H. (2018). Perception of teachers regarding dental student's classroom behavior: A qualitative study. *Journal of Indian Association of Public Health*

Dentistry, *16*(4), 333.

Karunanayake, D., Chandrapala, K., & Vimukthi, N. D. U. (2020). Students' attitudes about school counseling. *Asian Research Journal of Arts & Social Sciences*, 21–31.

Kahu, E. R. (2013). Framing student engagement in higher education. Studies in higher education, 38(5), 758-773.

Kruger. A. G., & Schallkwyk, O.J. (2015) *Classroom management:* Pretoria

Liu, J., Peng, P., & Luo, L. (2020). The relation between family socioeconomic status and academic achievement in China: A meta-analysis. *Educational Psychology Review*, *32*(1), 49–76.

Llinares, C., Higuera-Trujillo, J. L., & Serra, J. (2021). Cold and warm coloured classrooms. Effects on students' attention and memory measured through psychological and neurophysiological responses. *Building and Environment*, *196*, 107726.

Marshall, B., Cardon, P., Poddar, A., & Fontenot, R. (2013). Does sample size matter in qualitative research? A review of qualitative interviews in IS research. *Journal of Computer Information Systems*, *54*(1), 11–22.

Maras, P., & Aveling, E.-L. (2006). Students with special educational needs: Transitions from primary to secondary school. *British Journal of Special Education*, *33*(4), 196–203.

Monks, J., & Schmidt, R. M (2013). Classroom environment and student outcomes among students using anthropometry activities in high school science. *Research in science & Technological Education, 25(2), 153-166. DOI: 10.1080/0263.5140701250576*

Miah, A. S. (2015) Influence of school environment in relation to the academic achievement of secondary school students of Malta District. *Abhinav National Monthly Refereed Journal of Research in Arts & Education, 4(7),6-10.*

Moore, K. D. (2014). Effective instructional strategies: From theory to practice. Sage Publications.

Maganga, J. H. (2016). Factors Affecting Students" Academic Performance: A Case Study of Public Secondary Schools in Ilala District, Dar es Salaam, Tanzania. *Master of Education Thesis, University of Tanzania*.

McGowan, A., Hanna, P., Greer, D., Busch, J., & Anderson, N. (2017, May). Learning to program-does it matter where you sit in the lecture theatre? In 2017 40th International Convention on Information and Communication Technology, Electronics and Microelectronics (MIPRO) (pp. 624-629). IEEE.

Meeks, M. D., Knotts, T. L., James, K. D., Williams, F., Vassar, J. A., & Wren, A. O. (2013). The impact of seating location and seating type on student performance. Education Sciences, 3(4), 375-386

Mvumbi, F. N., & Ngumbi, E. (2015). *Companion to research methodology: Focus on humanities, education and social sciences.* Nairobi: CUEA Press.

Oghenekohwo, J. E., & Frank-Oputu, E. A. (2017). Literacy education and sustainable development in developing societies. *International Journal of Education and Literacy Studies*, *5*(2), 126–131.

Ogula, P. A. (2015). *Research method.* Nairobi: CUEA Press.

Odom, A. L., & Bell, C. V. (2015). Associations of Middle School Student Science Achievement and Attitudes about Science with Student-Reported Frequency of Teacher Lecture Demonstrations and Student-Centered Learning. *International Journal of Environmental and Science Education*, *10*(1), 87-97.

Odom, A. L., & Bell, C. V. (2015). Associations of Middle School Student Science Achievement and Attitudes about Science with Student-Reported Frequency of Teacher Lecture

Demonstrations and Student-Centered Learning. *International Journal of Environmental and Science Education*, *10*(1), 87-97.

Paul, J., & Criado, A. R. (2020). The art of writing literature review: What do we know and what do we need to know? *International Business Review*, *29*(4), 101717.

Purswell, K. E. (2019). Humanistic Learning Theory in Counselor Education. *Professional Counselor*, *9*(4), 358-368.

Park, E. L., & Choi, B. K. (2014). Transformation of classroom spaces: Traditional versus active learning classroom in colleges. *Higher Education*, *68*(5), 749-771.

Ribeiro, S., Schmitz, E., Alencar, A., & Silva, M. (2018). Literature review on the theory of constraints applied in the software development process. IEEE Latin America Transactions, 16(11), 2747–2756.

Rahiminia et al., (2019) Students' motivation, concentration and learning skills. London

Spreen, C. A., & Vally, S. (2013). Education rights, education policies and inequality in South Africa. International Journal of Educational Development, 26(4), 352–362.

Sandelowski, M. (2014). Combining qualitative and quantitative sampling, data collection, and analysis techniques in mixed-method studies. Research in Nursing & Health, 23(3), 246–255.

Simon, M. (2011). Dissertation and scholarly research: Recipes for success. Seattle, WA, Dissertation Success, LLC

Shamaki, T. A. (2015). Influence of learning environment on students' academic achievement in mathematics: A case study of some selected secondary school in Yobe State-Nigeria. Journal of Education and Practice, 6(34), 40-44.

Westreich, D., Edwards, J. K., Lesko, C. R., Cole, S. R., & Stuart, E. A. (2019). Target validity and the hierarchy of study designs. American Journal of Epidemiology, 188(2), 438–443.

Willian, K. M., Shapiro, T. M. (2018) Academic achievement across the day. United States

Zina, O. (2021). The essential guide to doing your research project. London: Sage.

QUESTIONNAIRE FOR STUDENTS

Marist International University College,

P.O Box 24450-00502,

Nairobi-Kenya.

Dear Respondent,

I am a student at Marist International University College, a Constituent College of the Catholic University of Eastern Africa with the registration number B. Ed/512/18/19. I am carrying out research on "**The Influence of school-related factors on students' classroom concentration level in public secondary schools in Ngong Division, Kajiado County, Kenya**" as part of the fulfillment of the requirements for the award of a Bachelor Degree in Education. Kindly respond to the questions with honesty as the information you will provide will only be used for academic purposes. Do not write your name on this questionnaire because all the information will be treated with confidentiality.

Yours Sincerely

Muchima Tal António Kasombo

Section A: Demographic Information

Instruction: For the following items, please tick (√) in the bracket provided below.

1. Gender: Girl [   ]   Boy [   ]

2. Age: 10 – 15years [   ] 16 – 20 years [   ]

3. School Type: Girls Secondary [   ]   Boys Secondary [   ]   Mixed Secondary [   ]

4. Form One [   ]   Form Two [   ]

Section B: Teacher methodology

Instruction: Please indicate your answer by ticking (√) in the space provided below.

SA = Strongly Agree; **(A)** = Agree; **(U)** = Undecided; **(D)** = Disagree; **(SD)** = Strongly Disagree;

Statements	SA	A	U	D	SD
5. The methods used by the teacher makes paying attention easier					
6. The teacher uses different methods of teaching					
7. The teacher encourages feedback in the learning process					
8. Our teacher carries out a demonstration of complex examples without rushing					
9. Our teacher gives classwork/assignments every time					
10. Most of the methods used in our school are not effective for learning.					
11. Group work and presentation in Class enables the students to concentration					

Section C: Physical Learning environment on students' concentration level in the classroom

Statements	SA	A	U	D	SD
12. Many students in the classroom					
1.3 I like the classroom environment because it makes learning easy for me					
14. Our classroom has good color					
15. Sometimes there is noise coming from outside of the classroom					
16. The classroom environment motivates me to study					
17. The classroom arrangement plays a great role in my academic performance					
18. There is proper light and ventilation in the classroom					

Section D: school timetable on students' concentration level in the classroom

Statements	SA	A	U	D	SD
19. In the morning hours I concentrate well					
20. I always feel tired to follow the afternoon classes					
21. The break time helps me to remove stress					
22. In the morning hours I struggle to concentrate because I always sleep late					
23. The school timetable is in favor of my learning					

24. In your opinion, what are other factors that influence students' classroom concentration level in the learning process?

i.   …………………………………………………………………………………

ii.   …………………………………………………………………………………

iii.   ………………………………………………………………………………….

Thank you so much for your time and patience

QUESTIONNAIRE FOR TEACHERS

Marist International University College,

P.O Box 24450-00502,

Nairobi-Kenya.

Dear Respondent,

I am a student at Marist International University College, a Constituent College of the Catholic University of Eastern Africa with the registration number B. Ed/512/18/19. I am researching on "**The Influence of school-related factors on students' classroom concentration level in public secondary schools in Ngong Division, Kajiado County, Kenya**," as part fulfillment of the requirements for the award of a Bachelor's Degree in Education. Kindly respond to the questions with honesty as the information you will provide will only be used for academic purposes. Do not write your name on this questionnaire because all the information will be treated with confidentiality.

Yours Sincerely

Muchima Tal António Kasombo

SECTION A: Demographic Information

Instruction: For the following items, please tick (√) in the bracket provided below.

1**. Gender**: Male [ ]   Female [ ]

2**. Age**: 25 – 30 years [ ]   31 – 35 years [ ] 36 – 40 years [ ] Above 40 years [ ]

3**. School Type**: Girls Secondary [ ]   Boys Secondary [ ]   Mixed Secondary [ ]

4**. Teaching Experience** :1 – 5 years [ ]   6 – 10 years [ ]   Above 11 years [ ]

SECTION B: Teacher methodology

Instruction: Please indicate your answer by ticking (√) in the space provided below.

SA = Strongly Agree; **A**=Agree; **U** = Undecided; **D** = Disagree; **SD** = Strongly Disagree

Statements	SA	A	U	D	SD
5. Students enjoy my lesson					
6. I encourage group discussion method in my lesson					
7. As a teacher, I encourage feedback in the learning process					
8. The teacher carries out a demonstration of complex examples without rushing					
9. I give corrections whenever an assignment is given					
10. The students understand more whenever the teacher uses various methodologies					
11. I teach with examples so that the students may learn well					

SECTION C: Learning environment on students' concentration level in the classroom

Statements	SA	A	U	D	SD
12. students have always a positive attitude towards their learning environment					
13. The classroom environment is conducive for easy teaching and smooth learning					
14. The noise does not help to achieve the objectives					
15. The classroom environment motivates me to impart the knowledge					
16. The sitting arrangement plays a very important role in the academic performance of my students					
17. Every time I appreciate and reward my students in the classroom					

SECTION D: School timetable on students' concentration level in the classroom

Statements	SA	A	U	D	SD
18. There is a timetable in the classroom available for teaching-learning					
19. In the afternoon classes the teacher feels always to continue with the teaching					
20. In the morning the students are always in a good disposition					
21. The break time destructs my focus to the teaching					
22. In the morning hours the teachers struggle to concentrate					
23. The school timetable is not in favor of proper teaching					

24. In your opinion, what are the factors influencing students' classroom concentration level in the teaching and learning process?

i. ……………………………………………………………………………………………

ii. ………………………………………………………………………………………….

25. In your conclusion, would you confirm that the time of the day affects the students' concentration level and if yes. Why?

………………………………………………………………………………………………

………………………………………………………………………………………………

……………………………………………………………………………………………

Thank you so much for your time and patience.

APPENDIX III

LETTER OF AUTHORIZATION

MARIST INTERNATIONAL UNIVERSITY COLLEGE

Constituent College of The Catholic University of Eastern Africa

Langata Road, P.O. Box 24450 – 00502 Karen, Nairobi

Phone: 254 – 20- 2012787, 2012797; Fax 254 – 20- 2389939;0722391091

OFFICE OF THE PRINCIPAL

RESEARCH AUTHORIZATION

31st JANUARY 2022

TO WHOM IT MAY CONCERN

RE: MUCHIMA TAL ANTONIO KASOMBO (B. Ed/512/18/19)

The person named above is registered as a full-time student at Marist International University College. We kindly request you to assist him carry out the research exercise.

The research topic is:

The Influence of School Related Factors on Students' Classroom Concentration Level in Public Secondary Schools in Ngong Division, Kajiado County, Kenya.

The research project is being undertaken as a partial fulfillment of the requirements for the award of Bachelor of Education in this institution.

We would, therefore, be most grateful if you kindly facilitate the exercise in whichever way possible.

Thank you in advance for your assistance.

Yours sincerely

Br. Dr Vincent de Paul Kouassi
PRINCIPAL

60