

**INFLUENCE OF LEARNING RESOURCES ON THE ACADEMIC
PERFORMANCE IN DAY PUBLIC SECONDARY SCHOOLS IN KIMININI SUB-
COUNTY, TRANS NZOIA COUNTY, KENYA**

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DECLARATION AND APPROVAL

Declaration by the Student

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This research project has been authorized and submitted for assessment by me, the supervisor from Mount Kenya University.

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DEDICATION

This work is dedicated to my family for their support throughout my education.



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I express my gratitude to the Supreme Being for His favor and grace during the development of this project. I express my gratitude to Mount Kenya University for according me the opportunity to successfully complete my academic pursuits. Additionally, I express my gratitude to my superintendent, Dr. Sabwami, for his mentorship and counsel throughout the development of this endeavor.

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ABSTRACT

Kenya has seen a notable surge in the quantity of day public secondary schools situated around the nation in the last five years. The government's efforts to guarantee that the majority of Kenyans have better access to educational opportunities have a direct bearing on these outcomes. In spite of this, these establishments have consistently prioritized academic performance. The aim of this study was to examine the influence of educational resources on the academic capacity of students at day public secondary schools situated in the Kiminini sub-county of Trans-Nzoia County, Kenya. The goals of the inquiry are listed as follows: In order to ascertain the degree to which academic progress in day public secondary schools in the Kiminini sub-county is influenced by the availability of material resources, To ascertain the degree to which the physical layout of day public secondary schools in Kiminini Sub-County influences students' academic performance, The aim of this research was to examine the effects of digital learning materials and teacher influence on academic achievement in day public secondary schools in Kiminini Sub-County, Kenya. The theoretical framework of this study was the Resource-Based View (RBV), which states that an organization's performance is influenced by how it uses its resource endowment. A descriptive survey was the research methodology used. Within the Kiminini Sub-County, there are reportedly 51 public secondary schools. Consequently, 509 teachers and 51 school administrators was included in the targeted population. A systematic random selection procedure to pick the instructors who took part in the research was used. Using a random selection technique, the researcher chose nine instructors from twenty-two schools and eight teachers from one school from the total of 206 teacher answers. Because of their community's modest size, a total of 27 principals were chosen using the purposive selection procedure. At this time, there had been 233 responses overall. Ten respondents who were not part of the research sample took a preliminary test as part of the procedure to evaluate the validity and reliability of the questionnaire. Furthermore, the supervisor assessed the instruments' validity. A correlation value of at least 0.7 is necessary to determine the reliability of an instrument. Descriptive statistics was used by the study to do the data analysis. Descriptive statistics use percentages, means, frequencies, and standard deviations among other statistical kinds. The Statistical Package for the Social Sciences, or SPSS, version 28 was used to do the data analysis process. In the past, tables, info graphics, and other figures were used to display the results. The ultimate goal of this study is to improve the quality of education provided in day public secondary schools by adding to the body of knowledge already available regarding the effect of learning materials on academic success in these institutions. The study provides compelling evidence that various factors significantly influence academic performance and the highest level of education completed among teachers. The findings highlight the critical importance of material resources, teacher expertise, physical facilities, and digital learning resources.

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ACRONYMS/ ABBREVIATIONS

GDP	: Gross Domestic Product
MoE	: Ministry of Education
MoEST	Ministry of Education, Science and Technology
NSF	: National Science Foundation
SDGs	: Sustainable Development Goals
TSC	: Teachers Service Commission
UNESCO	: United Nations Educational, Scientific and Cultural Organization
KCSE	: Kenya Certificate of Secondary Education

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter contains the study's background, the issue statement, the purpose, the aims, and the research questions. Along with an operational description of terminology, it also covers the research's limitations, scope, and importance.

1.1 Background to the Study

Achieving intellectual achievement is the driving force behind individual, national, and societal progress. Both China and the United States have strengthened their educational resources in order to attain top-notch academic achievement and academic brilliance. The academic achievements of Chinese and American students was compared and contrasted in this essay utilizing relevant sources. The 1980s were a decade in which China achieved tremendous intellectual development. From 65% in the 1980s to 96% in 2020, the literacy rate in China has increased significantly (UNESCO, 2021). According to China Daily in 2020, the Chinese government increased the proportion of its GDP that is allocated to education from 2% in the 1980s to 4% in the year 2020.

The Chinese government has also made measures to ensure that every kid has access to educational resources. For example, the government mandates that all children must attend school for a period of nine years (China Education Center, 2021). Through the provision of essential educational resources, a national curriculum guarantees that all

Chinese schools provided students with an education of the highest possible standard (China Education Center, 2021).

In comparison, the educational system in the United States of America is top-notch. In 2021, UNESCO projected that 99% of Americans was literate. It is well known that American schools are not only diverse but also of high quality. According to the United States of America, as of the year 2021, the Department of State reports that more than 4,500 educational institutions, including universities, provide foreign students an education of superior quality and sufficient resources for study. Education receives almost 6% of the total GDP investment from the United States government (U.S. Department of State, 2021). There has been substantial academic advancement in both China and the United States, with the majority of children getting grades that are high enough to allow them to attend university. The United States of America is well-known for its inclusive and high-quality educational system, while China ensures that all students have access to school. Both nations are making significant investments in educational resources in order to enhance their educational systems and bring them in line with international norms.

Myanmar, which is located in Southeast Asia, is now undergoing the process of transitioning from military authority to democratic governance. The literacy rate in the nation is just 75%, and there is a significant discrepancy between the urban and rural areas (UNESCO, 2021). The government of Myanmar places a high importance on education and has made measures to enhance the academic performance of schools. During the year 2020, the government raised the amount of money it spent on educational materials from 1.3% of GDP to 7.2% (World Bank, 2020). In addition, the government

has required a nine-year education strategy in order to guarantee that all children attend school (UNESCO, 2021).

The provision of sufficient resources to schools in Rwanda and Myanmar has allowed for academic advancement, despite the various obstacles that have been encountered. The Rwandan government has made significant investments in education and enacted legislation to guarantee that educational resources are distributed fairly. Education changes have been made in Myanmar, which is in the process of transitioning to democracy. In order to strengthen their educational institutions and bring them in line with worldwide norms, both nations make investments in instructional materials.

Academic achievement is essential to the development of any nation, but it is especially important for developing nations like Dubai and Qatar. In recent years, Dubai and Qatar have made significant investments in their educational systems in order to establish institutions that are of world-class quality (Alshamali, 2021). Several institutions, organizations, and schools have been constructed in Dubai in order to enhance the city's educational system. In 2003, Dubai Knowledge Park was established as a free zone for businesses that fall under the category of education and training. According to Alshamali (2021), the park is home to three educational institutions: the American University in Dubai, Middlesex University Dubai, and the University of Wollongong in Dubai.

To transform its economy into one that is driven by information, Qatar has made significant investments in education over the last ten years. These institutions include Texas A&M University in Qatar, Weill Cornell Medicine-Qatar, and Qatar University, all

of which are located in Qatar. In order to establish a knowledge-based economy, Qatar has started the process of putting into action the Qatar National Vision 2030.

Due to the emphasis placed on academic achievement in Dubai and Qatar, a number of projects and programs have been developed to enhance the educational resources available in schools. With the Dubai Quality Award, businesses that have developed learning resource management systems of exceptional quality are recognized and rewarded for their innovation. In contrast, Qatar has established the Qatar National Quality Standards for Education in order to enhance the quality of the instructional resources that are available (Alkandari & Al-Hunaiyyan, 2016). Multiple research projects have been conducted to investigate the academic achievement of students in Dubai and Qatar. Alkandari and Al-Hunaiyyan (2016) conducted research on Qatari academic performance and discovered a great deal of factors that contributed to its improvement. Among the things that were covered were classroom technology, teacher education and professional development, physical infrastructure, and material resources. Alshamali (2021) conducted research to determine whether or not e-learning was helpful in enhancing academic performance in Dubai. What they discovered was that there were a number of challenges, including a shortage of human resources.

These nations have made significant investments and taken steps to enhance the academic performance of their students. That being said, there are a number of obstacles that need to be conquered in order to guarantee that the educational systems of these nations are up to the best standards (Alshamali, 2021). Improving academic performance is critical to achieving sustainable development in every country, and it contributes to the achievement of the United Nations Sustainable Development Goals (SDGs), which

include equal, and inclusive quality education and learning that continues throughout one's life. African public secondary schools are suffering from a lack of resources, including a lack of infrastructure, a lack of competent instructors, and access to digital learning tools. Due to these issues, the academic performance of schools is hindered. This study, which is based on previous research, investigates the ways in which learning materials influence academic achievement in day public secondary schools.

In order to achieve academic achievement, educational resources are necessary, and the availability of these materials has a direct impact on the results. African public day secondary schools have a difficult time academically (Chikoko, 2018). This is because there are not enough classrooms, libraries, or labs in the institutions. An inadequate amount of textbooks, charts, maps, and scientific equipment contributes to a decrease in the quality of education provided by these establishments (Ozdemir, 2020). There is a paucity of instructional resources, which makes it difficult for instructors to give high-quality education, which in turn has an impact on the performance of students. There is a shortage of qualified instructors in public secondary schools in Africa, which contributes to a decline in the quality of education. According to Chikoko (2018), several African countries have a ratio of one teacher to every fifty students. As a result of a lack of experienced educators, the quality of education is diminished since these educators are less able to provide high-quality instruction that increases academic achievement (Ozdemir, 2020).

As a result of their limited financial resources, public day secondary schools in a number of African nations are having difficulty making academic progress. This results in a shortage of physical infrastructure, material resources, instructors, and digital learning

technologies in several African nations (Ozdemir, 2020). Education expenditures in many countries are inadequate to meet the fundamental education demands of their citizens. Due to financial restrictions, schools are unable to provide competitive compensation and comprehensive benefits in order to entice and keep professionals in the teaching profession. The availability of learning resources, such as infrastructure, materials, trained instructors, and digital learning aids, may have an impact on academic success. By addressing these difficulties, it was possible to enhance academic performance in these schools and achieve the Sustainable Development Goals (SDGs) of providing everyone with access to excellent education that is both inclusive and fair, as well as learning that continues throughout their lives (Ozdemir, 2020).

Following the genocide that occurred in 1994, Rwanda, a nation located in East Africa that is landlocked, has upgraded its educational resources. It has been estimated by the World Bank that Rwanda's spending on education would increase from 2% of GDP in 1995 to 15% of GDP in 2020. In addition, the government has made it mandatory for all students to have access to the resources that are available in schools. In order to guarantee that every kid is enrolled in school, for example, the government stipulates that they get a 12-year education (UNESCO, 2021). For the purpose of ensuring that all schools have access to educational resources, their government has implemented a curriculum that is based on competencies (MoE, 2021).

Education is the basis for the development of any country. To guarantee that education is both accessible and of high quality, Kenya has launched a number of different projects. Although these improvements have been made, day public secondary schools continue to face difficulties in the classroom (UNESCO, 2021). Day public secondary school

performance is hindered by a number of issues that are present in Kiminini Sub-County, which is located within Trans-Nzoia County. The purpose of this study is to investigate the ways in which educational resources influence academic performance in public secondary schools located in Kiminini Sub-County, which is located in Trans-Nzoia County, Kenya.

The Kiminini Sub-County public secondary schools are experiencing difficulties with their learning resources, which is affecting their academic performance. Lack of financial resources is a significant problem. This is because these schools get a little amount of funds from the government, which restricts their capacity to provide students with educational resources. The reason for this is that they are unable to adequately recruit a sufficient number of skilled teachers, purchase materials and digital tools, and maintain physical infrastructure.

Because the majority of these establishments do not have textbooks, charts, maps, laboratory equipment, and other instructional resources, it is difficult to teach and study at these institutions. The majority of these establishments do not possess the necessary physical infrastructure, such as libraries that meet academic standards. According to Olum, Wandera, and Wamalwa (2018), it assists students in developing a culture of reading as well as research abilities.

It is difficult for educational institutions to find skilled instructors to fill open positions. The high rate of teacher turnover in these institutions has a negative impact on the instruction. It is possible that professors who lack qualifications or competency may have difficulty teaching, which led to low performance from their students. In order to improve

students' academic performance, it is necessary to get skilled instructors, classrooms that are well-equipped, labs, libraries, and instructional materials. According to Olum, Wandera, and Wamalwa (2018), these technologies help to improve academic achievement by providing assistance for education that is both effective and efficient.

According to the findings of Olum, Wandera, and Wamalwa (2018), textbooks have a considerable impact on the academic achievement of secondary school students. The kids that were given with textbooks had greater academic performance. Mwakisha (2018) asserts that the academic performance of students is improved by the use of teaching and learning materials such as laboratory equipment. Teachers who are competent are essential to the growth of students. Academic advancement is impacted by the quality of teachers, according to UNESCO (2014). The provision of trained teachers makes it possible to achieve academic achievement and get a quality education (Mwakisha, 2018). Learning materials have a significant impact on the academic achievement of students attending public secondary schools in Kiminini Sub-County, which is located in Trans-Nzoia County, Kenya. As a result of resource difficulties, school performance is hindered. These resource challenges include a shortage of skilled instructors, material resources, digital learning tools, and physical resources. Therefore, the government, non-governmental organizations (NGOs), and other stakeholders are obligated to provide enough educational resources and subsidize these schools. Because of this, high-quality education would be possible, and academic achievement would be enhanced.

1.2 Statement of the Problem

Availability of high-quality secondary education is directly proportional to the socioeconomic development of each nation. To promote equal treatment for all students and enhance educational opportunities, the Kenyan government has implemented several legislative measures, one of which is the establishment of free day secondary schools. A persistent challenge that persists is the substandard academic performance of students, specifically in rural day secondary schools that occasionally lack adequate learning resources. Notwithstanding the rise in enrollment figures, this remains the case.

A study collated by the MoE (2021), indicates that day secondary schools in rural areas exhibit inferior academic performance when compared to their counterparts in metropolitan regions. As an illustration, in 2021, the average score achieved by students enrolled in day secondary schools situated in rural regions on the Kenya Certificate of Secondary Education (KCSE) examinations was 4.2. In contrast, students attending day schools in urban areas achieved a score of 6.8. Due to this trend, concerns have been expressed regarding the variables that affect academic achievement in these remote institutions.

The quantity of public day secondary schools in the Kiminini Sub-County, situated within Trans Nzoia County, has increased significantly over the past decade. The majority of this sub-county consists of rural regions. Conversely, the Sub-County Education office has expressed concern regarding the below-average performance of these institutions on the Kenya Certificate of Secondary Education (KCSE) examinations when compared to the national average. For instance, day secondary schools in Kiminini

Sub-County achieved a mean score of 4.416 on the 2022 Kenya Certificate of Secondary Education examinations, which is significantly higher than the national average of 5.3.

Current trends indicate that day secondary schools in Kiminini Sub-County are performing less well than their counterparts in other regions of the nation. According to authorities in the field of education, the availability of adequate learning materials is the determining element in whether or not academic institutions achieve their full potential. Notwithstanding this, rural day secondary schools occasionally suffer from deficiencies in critical learning resources, including physical infrastructure, instructional materials, faculty, and digital learning tools. The insufficiency influences both the effectiveness of instruction and the outcomes of learning.

Despite apprehensions regarding the substandard academic achievement within day secondary schools in Kiminini Sub-County, research on the variables that impact performance in these institutions is scarce. More specifically, no research has been conducted to assess the influence of learning resources—including digital tools, physical facilities, instructors, and instructional materials—on the academic achievement of students in the Sub-County. Presented here is one of the most critical knowledge gaps that requires attention.

As a result, the objective of this study is to investigate the influence of educational resources on the scholastic achievement of day secondary school students residing in the Kiminini Sub-County. We had a greater understanding of the primary variables that influence academic achievement at these institutions as a consequence of these findings. Furthermore, the results was utilized to inform policy decisions regarding the distribution

of resources and the interventions required to enhance the effectiveness of instruction and the achievements of students across diverse academic establishments. Ultimately, the research endeavors to improve the academic performance and educational standard of day secondary school students enrolled in institutions within the Kiminini Sub-County.

1.3 Purpose of the Study

The purpose of this study is to establish the influence of learning resources on academic performance in day public secondary schools in Kiminini Sub-County.

1.4 Research Objectives

- i. To assess the influence of material resources on academic performance in day public secondary schools in Kiminini Sub-County, Kenya.
- ii. To assess the influence of teachers on academic performance in day public secondary schools in Kiminini Sub-County, Kenya
- iii. To assess the influence of physical facilities on academic performance in day public secondary schools in Kiminini Sub-County, Kenya.
- iv. To assess the influence of digital learning resources on academic performance in day public secondary schools in Kiminini Sub-County, Kenya.

1.5 Research Questions

- i. How do material resources affect academic performance in day public secondary schools in Kiminini Sub-County, Kenya?

- ii. What is the impact of teachers on academic performance in day public secondary schools in Kiminini Sub-County?
- iii. How do physical facilities affect academic performance in day public secondary schools in Kiminini Sub-County, Kenya?
- iv. How do digital learning resources affect academic performance in day public secondary schools in Kiminini Sub-county, Kenya?

1.6 Justification of the Study

In the Constitution of Kenya from 2010, the provision of a high-quality education is envisioned as one of the basic rights of Kenyan populations. For the purpose of this research, information should be provided on the current state of day public secondary schools as well as the academic accomplishment that is achieved in these schools. It is expected that the research would gather information on the current state of the material resources, instructors, physical facilities, and digital learning tools.

In order to facilitate the design of policies that guided the construction of new public secondary schools, the results should be of assistance to the Ministry of Education. The document might serve as a reference for scholars in the future when it comes to formulating policies regarding the development of public secondary schools and the distribution of resources.

1.7 Significance of the Study

This research seeks to solve a significant problem in the education system—the academic performance in day public secondary schools. The quality of instruction and students' general academic performance are both affected by the absence of sufficient learning materials in these institutions. Guaranteeing that all people may participate in and benefit from educational opportunities that raise their level of knowledge, competence, and employability is central to the concept of education as a human right. The elements that impact academic achievement in day secondary schools must be understood.

Day public secondary schools in the Kiminini Sub-County of Trans-Nzoia County, Kenya, are the subject of this research. The communities and education stakeholders in the Sub-County found the study more relevant since it is being conducted in this local environment. The findings may influence choices and initiatives targeted at enhancing educational performance at these particular schools. Also, the study fills a gap in the literature by providing empirical evidence on what matters most for students' academic success in rural day secondary schools.

In sum, this research sheds light on how learning materials affect academic performance, which is useful for informing policy decisions, allocating resources, and implementing interventions to improve the quality of secondary education in day public schools. The data could inspire these institutions to do better in terms of both teaching efficiency and student achievement. Therefore, the research is pertinent since it tackles a big educational problem and provides context-specific insights to back up quality improvement efforts in Kiminini Sub-County's schools.

1.8 Limitations of the Study

Results may not apply outside of Kiminini Sub-County or Kenya as a whole since the research relied on information gathered from day public secondary schools there. The study only show the current state of affairs rather than any patterns over the long run since it is a cross-sectional study that gathers data at a single moment in time. Over time, changes may not be recorded. Due of its heavy reliance on the present school year, its results may not be applicable to future years.

The data that may be acquired is limited by the use of questionnaires and interview guides. Alternative data collecting procedures that may have provided more nuanced insights into the respondent's mental health and the psychological aspects impacting their academic performance may have been overlooked in this research. The data supplied by respondents can be skewed and inaccurate. The results was based on the opinions of the participants, which may not be entirely accurate.

The conclusions that may be reached are limited by the sample size and the sampling procedures. Despite efforts to guarantee representation, the sample could not be representative of the population at large. We presume, but cannot guarantee, that responders cooperated honestly by giving correct information. The results might be skewed if any information is withheld or misreported.

1.9 Scope of the Study

Finding out how well day public secondary schools do academically is the main goal of this research. The primary emphasis of the research was on instructional materials used in

regular public secondary schools. Concerns center on whether or not learning materials are adequate and applicable in this subset of secondary schools. Findings centered on the relationship between students' achievement and factors including classroom instruction, available physical space, and digital learning tools.

1.10 Assumptions of the Study

The foundation of this investigation was the following presumptions:

- i. Kiminini Sub-County day public secondary school teachers and students took part in the study and provide candid comments on how instructional materials impact students' grades.
- ii. The study's variables are regarded as stable if they do not alter in value during the duration of the inquiry.
- iii. The research's first assumption is that confounding factors have no effect on respondents' replies.

1.11 Operational Definition of Terms

Infrastructure: Classrooms, labs, and other facilities are examples of physical facilities and buildings essential for teaching and learning.

Personnel: Teachers and other personnel engaged in the provision of education at day public secondary schools.

Policy decisions: Refers to policymakers' and other stakeholders' choices that impact the provision of education in day public secondary schools.

Quality education: Refers to the delivery of education that fulfills specified criteria, guaranteeing that students obtain relevant and up-to-date knowledge and can study successfully.

Learning resources: The infrastructure, technology and learning resources, and staff needed for successful teaching and learning are all referred to as "required."

Social and economic development: Refers to the advancement and enhancement of a society's social and economic components, such as education, healthcare, and economic growth.

Teacher-student ratio: The number of students per instructor in a school, which influences the quality of education provided.

Digital learning resources: Refers to digitally structured instructional resources such as graphics, pictures or photographs, audio and video, simulations

and animations, and other technologies that help students accomplish their learning objectives.



CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Literature reviews synthesize current knowledge on the topic, making them essential to research projects. The literature research explored how learning resources impact academic achievement at day public secondary schools in Kiminini Sub-County, Trans-Nzoia County, Kenya. The study analyzes how material resources such as Textbooks, maps, charts and lab equipment impact academic performance at day public secondary schools in Kiminini Sub-County, Kenya. Second, assess how Kiminini Sub-County day public high school teachers affect academic performance. Teacher qualifications, instructional methods, and professional progress in quality education were examined in this literature review.

Third, examine how Kiminini Sub-County day secondary schools' physical facilities impact academic performance. We assessed papers on how physical amenities affect academic performance. Fourth, examine how digital learning tools affect academic success in day public secondary schools in Kiminini Sub-County, Kenya. The literature review evaluated digital access, use, and integration into teaching and learning. These issues were addressed by reviewing government policies, stakeholder partnerships, and community engagement. The report will identify research gaps and recommend further investigations.

2.1 Theoretical Framework

This research had its theoretical underpinnings in the Resource-Based View (RBV) paradigm. This idea states that an organization's performance is heavily dependent on its resources and how it makes use of them. The resources of an institution have a significant impact on the quality of its education. Books, maps, charts, lab equipment, instructors, classrooms, scientific labs, libraries, and digital learning tools including audio, visuals, video, animation, and simulation are all examples of what might be considered resources (Barney, 1991).

According to experts, the availability and quality of material resources significantly influence academic performance, which in turn affects the quality of education (Mubyazi & Bloch, 2012). The purpose of this research is to assess the material resources available to, adequate to, and used by day public secondary schools in the Kiminini sub-county, and how these factors affect students' academic achievement.

An additional important component of the RBV theory is the impact of instructors on student achievement in the classroom. As pointed out by Barney (1991), educators are vital to the success of schools. Day public high school instructors in Kiminini sub-county had their credentials, experience, motivation, and pedagogical approaches examined in this research.

It is impossible to overstate the importance of physical amenities on students' academic achievement. Students may struggle academically due to lack of suitable classroom resources such as furniture and scientific labs (Mwenda, 2020). Therefore, the purpose of this research is to examine the physical infrastructure of public secondary schools,

including its accessibility, utilization, and condition, and to determine whether or not these factors impact students' academic performance throughout the school day.

Adewale and Masinge (2021) found that students' academic performance improved when they started using digital learning materials in public secondary schools throughout Africa. Sharing recorded lectures or supplementary reading is a breeze, giving students the opportunity to work together to improve their understanding. Barney (1991) argues that problems faced by an organization might have a detrimental effect on its performance. Finding and understanding the obstacles to improving digital learning that public secondary schools in Kiminini sub-county encounter, as well as the effects of these obstacles on students' academic performance, is the primary goal of this research.

2.2 Empirical Review

2.2.1 The effect of Material Resources on Academic Performance in Day Public Secondary Schools

Various factors can significantly impact students' performance on exams during their secondary school years. Considering the accessibility of material resources is of utmost importance. This research study aims to thoroughly analyze the impact of material resources on academic achievement in day secondary schools across various countries, including Dubai, China, and the United States. This review aims to thoroughly analyze and evaluate pertinent research, hypotheses, and models pertaining to the subject matter. Extensive research has been conducted in the United States on the impact of students' access to resources on their academic performance in secondary schools. Research conducted by Darling-Hammond (2017) revealed that student performance was greatly

impacted by the accessibility of essential resources, including textbooks, maps, and laboratory equipment. In a study conducted by Borman and Overman (2017), it was discovered that the presence of these tools had a positive effect on students' engagement and academic achievement.

Considerable investments have been made by the Chinese government to enhance the quality of public secondary schools, with a particular focus on rural areas. Research conducted by Han (2015) suggests that the availability of essential resources in rural day secondary schools resulted in a noticeable enhancement in students' academic performance. The research found that the availability of instructional resources, such as textbooks and visual aids like maps and charts, led to a significant improvement in students' performance.

Dubai has made significant investments in the construction of secondary schools. According to a study conducted by Al Hammadi and Al Mulla (2017), the academic performance of students in Dubai's secondary schools was found to be significantly impacted by the availability of resources. Research findings indicate that the presence of essential resources, such as textbooks and laboratory equipment, had a significant impact on students' academic performance.

The availability of resources greatly impacts the academic performance of day secondary schools in Dubai, China, and the United States. Textbooks, graphs, maps, and lab equipment play a vital role in enhancing students' academic performance, as supported by extensive research. In order to enhance students' academic performance, it is imperative

for educational institutions and governments to allocate resources towards the provision of a top-notch education.

Worries regarding the academic performance of recently established day secondary schools are widespread across Africa. The availability of resources is a crucial factor that significantly impacts academic achievement at these institutions. This study aims to synthesize and evaluate previous research on the impact of material resources on secondary schools in Africa.

As stated by Adewale and Masinge (2021), the academic performance of students in public secondary schools across Africa is heavily influenced by the presence of essential resources like textbooks and laboratory equipment. According to the authors, a common outcome of limited resources in these institutions is students' low academic achievement. In a study conducted by Mohammed and Fuseini (2020), it was discovered that the absence of adequate laboratory equipment in Ghana's day public secondary schools had a detrimental impact on students' performance in science classes.

In a recent study conducted by Ndofirepi and Mapfumo (2019), the focus was on examining the various challenges encountered by day public secondary schools in Zimbabwe. According to the findings, the inadequate availability of essential resources, particularly textbooks, had a significant negative impact on the academic performance of students in these schools. According to the writers, students in these institutions frequently faced academic challenges because they did not have access to appropriate learning resources.

However, it is important to note that not all studies have found a clear link between financial resources and academic performance in African public secondary schools. While material resources played a significant role in enhancing academic achievement in these institutions, a study conducted by Kivunja (2019) in Tanzania revealed that their influence was somewhat restricted. According to the author, the academic success of these schools was influenced by various factors, including teacher training and student motivation.

Research conducted by Ondigi and Masese (2019) on the challenges encountered by Kenyan day public secondary schools revealed that the mere presence of material resources did not lead to enhanced academic performance. According to the authors, the usage of resources by both teachers and students played a crucial role in determining academic achievement in these institutions.

Extensive research has consistently demonstrated the significant impact of material resources on the academic performance of students in public secondary schools across Africa. Several factors, including the preparedness of the instructor, the motivation of the students, and the efficient utilization of resources, play a crucial role in determining the impact of these products. In order to witness enhanced academic performance in these schools, it is imperative to implement a comprehensive approach that takes into account all the pertinent factors.

2.2.2 The Impact of Teachers on Academic Performance in Day Public Secondary Schools

Education is a natural human right and an important catalyst for national development. Developing countries in the West and Middle East face a number of challenges that hinder their efforts to improve the educational performance of their citizens, one of the most important of which is the lack of adequately trained teachers. This literature review aims to critically analyze the influence of teachers and, as suggested by Darling-Hammond (2017), teacher quality can be an important predictor of student achievement. The authors responded that highly effective teachers can significantly improve student achievement, especially in economically disadvantaged and minority communities, while ineffective teachers negatively affect academic achievement. Therefore, developing countries in the West and the Middle East must prioritize the quality of teachers in their education systems to achieve the desired results.

Teacher professional development was an important part of improving teacher quality as well as improving student achievement. Ofer and Peder (2020) stated that to be effective, programs must be consistent with the goals of the education system as a whole. In addition, the importance of continuous professional development of teachers for the sustainability of the education system is emphasized. Therefore, developing countries in the West and Middle East should provide teacher professional development programs aimed at improving teacher quality and improving student outcomes.

As UNESCO (2021) points out, the lack of trained teachers is a major obstacle for developing countries in the West and Middle East. Estimates show that the demand for

teachers in low-income countries increased by 70% by 2030. To address this issue, these countries must invest in teacher recruitment and retention programs to attract and retain high-quality teachers. A study by Zabin and Ahmed (2021) highlighted the impact of teacher motivation, job satisfaction and work environment on teacher retention. Therefore, this factor should be developed to increase teacher retention rates in developing countries in the Western and Middle Eastern regions. In fact, teacher quality, professional development, recruitment and retention affect educational performance in these countries and require efforts to improve.

Given the situation in Africa, education is a key tool for human development and essential for a country's sustainable development. Developing countries in Africa face many challenges that prevent them from providing quality education and improving school performance. This literature review aims to look in detail at the role of teachers in academic achievement in developing countries in Africa.

In Kenya, as in other African countries, a number of problems hinder the efforts of its citizens to improve the level of education. Kihoro (2018) stated that teacher quality is the most important factor influencing student education in Kenya and pointed out that teacher quality needs to be prioritized to achieve desired outcomes. Therefore, Kenya needs to emphasize the quality of teachers in its education system to achieve this goal.

Teacher professional development that reflects a global perspective plays an important role in improving teacher quality as well as student outcomes in Kenya. The Ministry of Education, Science and Technology emphasized that the program should be in line with the goals of the education system to be effective. Continuous and meaningful

professional development based on the needs of the changing education system is considered essential. Therefore, Kenya should invest in these programs to improve teacher quality and student performance.

Like its peers, Kenya faces a shortage of trained teachers as highlighted by the Teachers Recruitment Commission (TSC, 2020). To meet the demand in primary and secondary schools, the country needs a large number of teachers - about 47 thousand. Therefore, Kenya should invest in recruitment and retention programs to attract and retain high-quality teachers. A study by Obara and Orodho (2017) highlighted the influence of teacher motivation, job satisfaction and work environment in Kenya. Investing in teacher motivation, professional development and improved working conditions is essential to achieving the desired educational outcomes for Kenya.

2.2.3 The effect of Physical Facilities on Academic Performance in Day Public

Secondary Schools

Having physical facilities is essential to putting the teaching and learning process into practice in schools. We shall critically analyze how physical amenities affect academic achievement in day public secondary schools in this examination of the research. According to a 2017 research conducted in America, the presence of physical spaces like libraries, scientific labs, and art galleries had a favorable effect on student performance and engagement.

Day public secondary schools in Iceland are confronted with a number of difficulties, one of which is the lack of proper physical infrastructure (Halldorsdottir & Einarsson, 2016). The tiny population and distributed geography of the nation compound these difficulties by making it challenging to gather sufficient cash to provide equitable access to better physical facilities in day public secondary schools. Day public secondary schools in Turkey confront a number of difficulties, including limited physical facilities including classrooms, labs, and libraries (Karakus & Ozel, 2016). Similar problems with a lack of proper physical facilities, such as labs and libraries, plague day public secondary schools in the Seychelles (Elsdon, 2018).

The difficulties faced by day public secondary schools varied between African nations. Nonetheless, inadequate physical resources, such as labs and libraries, are one of the prevalent problems. Day public secondary schools in Rwanda encounter difficulties such as poor physical infrastructure (Twizeyimana & Gasana, 2019).

Insufficient physical facilities, including classrooms, labs, computer labs, and libraries, are a problem for Kenya's day public secondary schools (Mutie & Ndethi, 2017). In Kenya, secondary education is a vital stage of education as it provides students with essential information and abilities for their future academic and professional endeavors. There are now more day secondary schools in the nation because of the government's dedication to expanding educational opportunities. Nonetheless, Kenya's day public secondary schools struggle with insufficient physical infrastructure, which impairs their ability to function effectively and efficiently in the classroom.

A research by Mwenda (2020) found that the majority of these schools are devoid of scientific labs, classrooms, and furnishings. Poor academic performance results from inadequate physical infrastructure, which impedes teaching and learning activities. High student-teacher ratios are another effect of poor infrastructure, which makes it difficult for instructors to provide each student individualized attention. Budgetary restrictions restrict the government's ability to provide sufficient money for physical infrastructure at day public secondary schools, according to a National Treasury study from 2019.

In Kenya, opening day public secondary schools is a vital step in increasing educational access. But today's public secondary schools confront a number of obstacles that make it more difficult for them to provide students with a high-quality education in an effort to boost academic achievement. Among these difficulties are limited physical spaces for classrooms, libraries, and science and computer labs. A variety of stakeholders, including the government, schools, and community members, must be involved in addressing these issues. With the correct assistance, day public secondary schools may provide kids a top-notch education, enhancing their success in the classroom and beyond.

2.2.4 The Impact of Digital Learning Resources on Academic Performance in Day Public Secondary Schools

There are several factors that can impact the quality of education in secondary schools. One element that has become increasingly prevalent in classrooms is the availability of digital learning tools. The objective of this literature analysis is to examine the effects of digital learning tools on secondary schools in Dubai, China, and the United States. A multitude of research studies have been conducted on the effects of digital learning

materials in the United States. Researchers found that the presence of computers had a significant influence on the academic performance of students. Hammond Darling's work in 2017 has shown that the inclusion of visual aids, such as graphs and charts, can greatly enhance students' comprehension of complex concepts. Interactive models and simulations have the potential to greatly enhance learning in the fields of mathematics and science.

The Chinese government has made substantial investments in the development of public secondary schools, particularly in rural areas. The presence of digital learning materials has had a significant impact on the academic performance of students in public secondary schools. In a study conducted by Han (2015) has shown that learners' academic performance can be greatly enhanced by utilizing videos and animations from online platforms such as YouTube. These resources provide valuable assistance in explaining subjects. Students found the process of learning topics to be quite enjoyable when using online educational games. Students were able to study mathematics without the need to purchase physical calculators, thanks to the availability of tools such as graphing calculators.

The availability of audio learning materials, such as music and podcasts, in Dubai fosters active participation and caters to students with diverse learning preferences. In a publication by Al Mulla and Al Hammadi (2017), Based on the aforementioned research, the presence of digital learning materials has a significant influence on academic performance in day public secondary schools in Dubai, China, and the United States.

Public secondary schools in Africa often encounter numerous challenges when trying to incorporate digital learning resources into their curriculum. This literature review aims to provide a comprehensive analysis of the research conducted on the effects of digital learning tools on academic performance in African day public secondary schools. From a global perspective, technology plays a significant role in enhancing academic performance in public secondary schools across Africa. With the accessibility of recorded lectures and additional reading materials, students can optimize their education by revisiting challenging courses and deepening their understanding of subjects they wish to grasp more fully.

In many underdeveloped nations, such as our own, attending public secondary schools reveals a clear lack of resources needed to significantly improve students' academic achievement. This is indicative of the continent's technological lag. Computers have had a significant impact on the quality of education, as stated by Ndofirepi and Mapfumo (2019). As per the author's perspective, digital learning plays a crucial role in fostering collaboration among students. It accomplishes this by equipping them with the necessary skills required for the workforce, enabling the seamless sharing of documents between students and professors, and bringing individuals closer through the medium of video conferencing.

Public secondary schools in Rwanda face challenges such as a shortage of digital learning materials (Twizeyimana & Gasana, 2019). Given the unique learning styles and strategies employed by individuals, digital learning can provide valuable support for personalized education. Effective delivery of learning occurs when educators and learners possess a profound understanding of the most effective teaching methods for their needs.

According to a recent study by Mwenda (2020), public secondary schools in Kenya are currently facing a shortage of digital learning tools, which is hindering the effectiveness of the teaching and learning process. These materials have the potential to foster strong communities between students and professors, benefiting and assisting everyone involved. Students from various regions around the world can connect with each other through them, even if they are not physically present in the same location. As Omaiyo (2013) explains, students play an active role in constructing their knowledge by engaging with various materials and connecting them to their existing knowledge. It is crucial to provide students with a diverse range of resources to enhance their knowledge-building skills.

Research has shown that the use of digital learning materials has a substantial impact on academic achievement in public secondary schools. They offer continuous access to resources, facilitate group instruction, and enhance student engagement and personalized instruction. Incorporating digital learning tools into regular public secondary schools provides students with the opportunity to explore a diverse range of teaching methods, resulting in a substantial enhancement of their academic performance.

2.3 Conceptual Framework

Figure 2 is a visual representation of the conceptual framework, which lays out the important aspects, variables, and interactions that was investigated in the research study. Section 3.1 provides an illustration of the theoretical framework that underpins the methodology and design of the research. Here we'll have a look at the connection between the learning resources (the independent variables) and the academic success (the

dependent variable). Material resources, instructors, physical spaces, and electronic resources are all part of the learning resources that are considered. The public tends to feel that these materials have a major impact on how well students do in day secondary schools.



Independent variables

Dependent variable

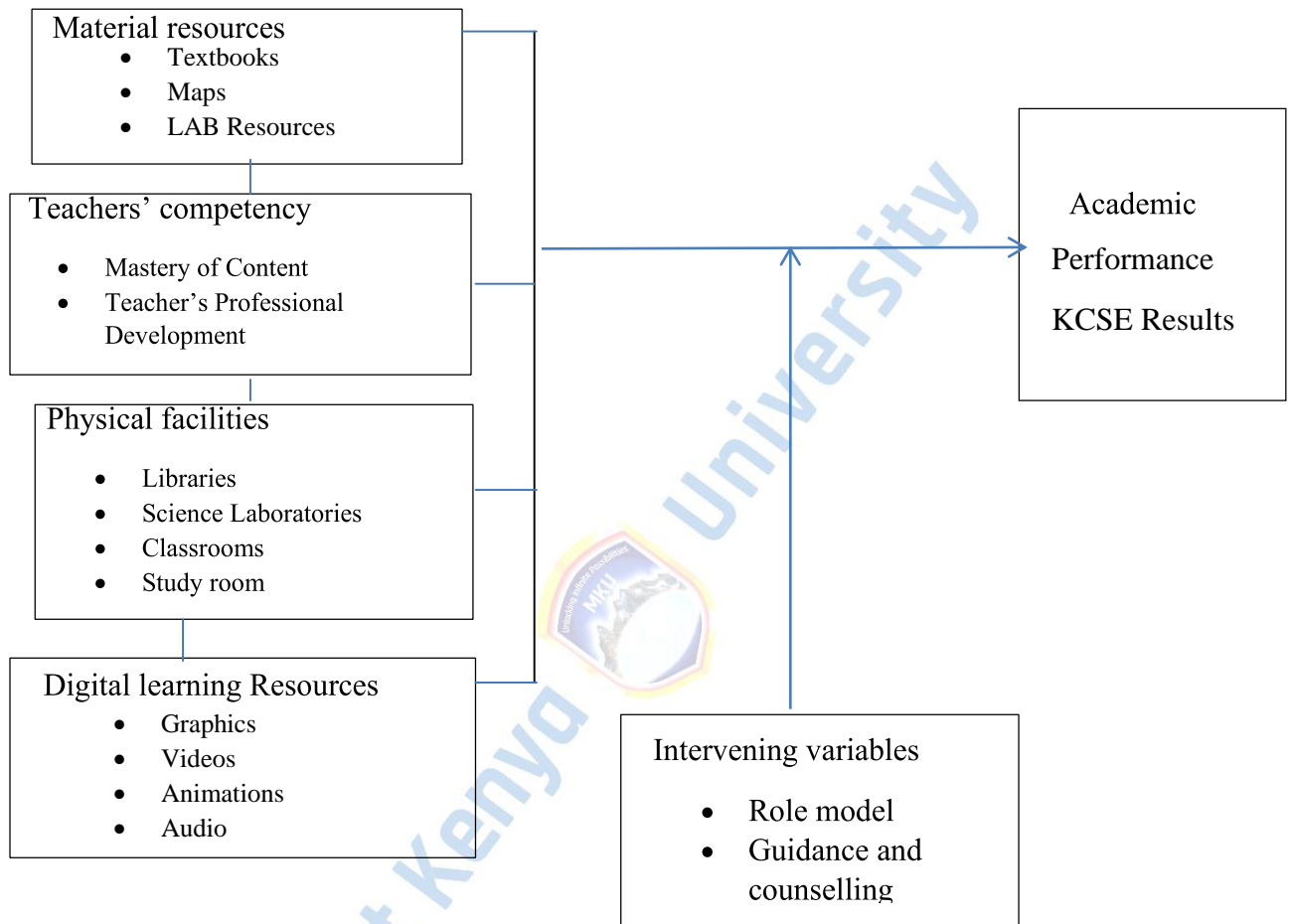


Figure 1: Conceptual framework

There has been a dramatic surge in enrollment since public secondary schools became free for all students. Resources for learning, including course materials, instructor expertise, school infrastructure, and online tools, have an impact on students' academic achievement in these institutions. Students may engage in independent study and research-based learning when they have access to these materials. As a result, students' academic performance improves.

Students' restricted study time due to a lack of learning materials leads to a lack of information and bad marks. Learners' pace of understanding is impacted by the instructors' competence level as seen in their application of teaching approaches, knowledge of teaching subject, and classroom management skills. The results of the students' tests show this. But these schools may still have success in the classroom thanks to mentors and counseling services.

2.4 Knowledge gap

In this chapter, we explored the importance and purpose of a literature review in academic research. The literature review serves the important function of evaluating existing knowledge and situating a research within the broader academic discourse on a particular subject. This chapter presents the framework and primary focus of the review, in line with the study's objectives. The literature review provides a comprehensive overview of the sources and geographic coverage that were examined. Extensive research has been conducted on day secondary schools in Africa.

The knowledge gap offers a succinct summary of the Resource-Based View theory, which serves as the theoretical basis for the research. The performance of an organization is determined by its resource utilization, as per this concept. The effectiveness of student learning in schools is influenced by various factors such as materials, instructors, physical space, and technological tools (Barney, 1991).

The chapter primarily focuses on conducting a thorough assessment of pertinent empirical research for each research objective. A comprehensive examination is undertaken to assess the influence of different resources on academic performance,

encompassing material resources, instructors, physical facilities, and digital resources. Highlighted are the relevant findings, discrepancies, variations in context, and areas where further research is needed.

The relationship between learning resources and academic success is illustrated in a diagram that presents a conceptual framework. This model visually presents the study's premise and variables.

The chapter summary highlights the key points discussed in the literature study. It explains how these findings guide the present study's methodology, objectives, and scope. Based on the gaps in the available literature, we suggest areas for further investigation.

The researcher's expertise in analyzing academic sources, identifying areas where information is lacking, and integrating new research into the existing body of knowledge is evident in the literature review chapter. The study's design is robust, ensuring the reliability of the findings. Additionally, the research topic is contextualized, highlighting its significance.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

When it comes to conducting an investigation, the research methodology portion of a scholarly publication provides a comprehensive overview of the processes, materials, and equipment that were employed to carry out the study. This paper provides a detailed description of the research methodology, study location, target population, sample size and sampling techniques, research instruments used, as well as the reliability and validity of the instruments. Furthermore, the chapter delves into the processing of data, the processes involved in data collecting, and the ethical concerns that arise in research.

3.1 Research Design

The research methodology that was used in this study is a descriptive survey. This study strategy allowed the investigator to collect data that provided a comprehensive picture of how instructional materials impact students' performance in day public secondary schools in Kiminini Sub-County, Trans-Nzoia County, Kenya. Descriptive survey research is one method of conducting studies. The goal of this approach is to describe a group by collecting information on its members from a representative sample of the population. Here, the researcher is interested in discovering how day public secondary school students in Kiminini Sub-County, Trans-Nzoia County, Kenya, fare academically as a result of the course materials they use.

The objective of descriptive research is to provide a description of a population, circumstance, or phenomenon, as stated by Babbie (2016). Conversely, survey research is a method that includes collecting data from a statistically valid subset of the population by means of interviews or structured questionnaires. This study would benefit greatly from a combination of the two methods as it would allow the researcher to collect detailed information on the target population using standardized instruments.

Researchers who want to evaluate the opinions, actions, or attitudes of a specific group for the sake of study might benefit from survey research, according to Creswell (2014). The purpose of this study is to investigate the relationship between the use of instructional materials and the academic achievement of secondary school students in the Kiminini Sub-County of Trans-Nzoia County, Kenya. Researchers may discover more about the extent to which learning resources are available and adequate, and how these resources affect students' academic performance, by using a survey-based study technique. The study involved day public secondary schools in Kiminini Sub-County, Trans-Nzoia County, Kenya, using a descriptive survey research methodology to examine the impact of instructional materials on student performance. This is due to the fact that the researcher had the means to get this data. The researcher was able to draw solid conclusions from the collected data and have a thorough understanding of the population of interest using this method.

3.2 Study Locale

The study was carried out in Kiminini Sub-County, which is situated in the county of Trans-Nzoia in Kenya. The sub-county has witnessed a substantial surge in the number of

public secondary institutions that have been established in recent years. The investigation region was selected due to its representation of a viable population for the study.

Located in the Rift Valley Province of Kenya, Kiminini Sub-County encompasses an area of around 255 square kilometers. Based on the findings of the 2019 census carried out by the Kenya National Bureau of Statistics (KNBS), the population of the sub-county is estimated to be around 100,000 individuals.

The rationale for selecting Kiminini Sub-County as the research site is the discernible decline in scholastic achievement observed in day public secondary schools. The director for education for the TSC Sub-county reports that mean grades have steadily decreased for the past three years. The institutions in question achieved mean grades of 4.426 on KCSE examinations in 2020, 4.713 in 2021, and 4.416 in 2022, as indicated by the provided instances.

The investigation region was selected due to its representation of a viable population for the study. The proliferation of public secondary schools in the region has presented an exceptional occasion to examine the ramifications of school expansion on the accessibility, fairness, and caliber of education.

Furthermore, the Kiminini Sub-County serves as a prominent example of numerous rural regions in Kenya that encounter difficulties concerning restricted opportunities for secondary education. The results of this study may offer policymakers and practitioners working to expand secondary education in rural regions of Kenya and other developing countries valuable insights.

3.3 Target Population

A total of 560 teachers, including administrators, are employed at the 51 day public secondary schools that are located within the Kiminini Sub-County. "The entire group of individuals, objects, or events that possess the information or data sought in a study" is how Mugenda and Mugenda (2013) describe the target population (p. 76). This definition can be found in their published work. The demographic that was targeted in this particular instance consisted of 560 respondents, which included principals and educators from 51 day public secondary schools located in Kiminini Sub-County, which is located in Trans-Nzoia County, Kenya.

Table 1: Target Population

Item	Frequency
Principals	51
Teachers	509
Total	560

Source: Sub County of Education (2024)

3.4 Sample Size and Sampling Procedure

3.4.1 Sample Size Determination

According to Mugenda & Mugenda (2013), the number of people, instances, or units selected from a population to be a part of a study is known as the sample size. Because it affects the reliability, validity, and generalizability of the results, research design is an important concept to grasp. To minimize the possibility of sampling mistakes and biases

and to successfully uncover significant differences and correlations between variables, a sample size that is adequate is required. The realm of quantitative and qualitative research methods: an exploration. Research and Education on Technology in Africa

Specifically, 560 students from different public secondary schools in Kenya's Kiminini Sub-County, located in Trans-Nzoia County, would be the subjects of this research.

Mugenda and Mugenda (2013) provide a formula for calculating the sample size:

$$n = N / (1 + N(e)^2)$$

where:

n = sample size

N = target population

e = margin of error (usually set at 5%)

N = 560 as 560 is the target population here. e= 0.05 as we're going to assume a 5% margin of error. We get by substituting these numbers into the formula:

$$n = 560 / (1 + 560(0.05)^2)$$

$$n = 233$$

In light of this, 233 students attending day public secondary schools in the Kiminini Sub-County of Trans-Nzoia County, Kenya, would provide a sufficient sample size for the purpose of this inquiry.

Table 2: Sample Size

Category	Population	Sample Size
Principals	51	27
Teachers	509	206
Total	560	233

3.4.2 Sampling Procedure

The target group consists of 560 persons, with 51 principals and 509 teachers included. Day secondary schools in the Kiminini Sub-County employ these people. In order to choose a sufficient sample size, both statistical and non-statistical methods were used. In order to determine the proper sample size within the boundaries of the given population size, a formula for estimating sample size was applied from a statistical perspective. Stratified sampling and census processes were used as non-statistical methodologies based on the subpopulations.

By using a standard procedure for calculating sample size, 233 people were selected for the study. This computation was predicated on the following parameters: a 95% confidence interval, a 5% margin of error, 560 total respondents, and a 50% response distribution. Results that were both highly accurate and within the allowable range of sampling error were produced by this specific sample size.

The next step was to split the participants into groups made up of administrators and teachers. All 27 of the principals included in the study were selected via a census, due to the small size of the principals' population. The teachers were selected using a simple

random sampling technique. From a pool of 509 teachers and their respective schools, 206 were selected at random using a computerized random number generator.

For this reason, 233 individuals were chosen at random from each subpopulation using a combination of statistical sample size estimations and non-probability selection approaches. The sample included 206 teachers and 27 principals. In order to achieve the study goals, this sampling strategy ensures that different subgroups of the target population are included in appropriate proportions.

3.5 Data Collection Tools and Methods

For the purpose of this investigation, the instruments for collecting data were a structured questionnaire that was sent to both administrators and teachers inside the educational institution. For the purpose of collecting information about the availability and sufficiency of educational resources in public secondary schools, as well as the influence these materials have on academic attainment, a questionnaire was developed.

3.5.1 Research Instruments

The study utilized a questionnaire, an observation guide, and interview guides as the principal research tools with participants. The instruments were designed with clear and concise language, ensuring ease of use for the responder when filling them out. The questionnaire consisted of a combination of open-ended and closed questions, specifically designed to cater to the requirements of the administrators and instructors.

3.5.1.1 Secondary School Principal's Questionnaire

The research employed a survey instrument tailored for secondary school principals to collect information from this particular cohort of participants concerning the academic standing of day public secondary schools located in Kiminini Sub-county. The purpose of this survey is to obtain pertinent background information from the principal. One section of the questionnaire pertains to the present condition of learning resources in day public secondary schools located in Kiminini Sub-County. The subsequent segment consisted of collecting data pertaining to the level of competency exhibited by educators in secondary public institutions. Data was collected in the third section pertaining to the condition, availability, and utilization of tangible facilities. In the fourth section, information regarding the implementation and effects of digital learning resources in a public secondary school situated in Kiminini Sub-County was gathered.

3.5.1.2 Secondary School Teachers Questionnaire

The questionnaire known as the Secondary School instructors Questionnaire (SSTQ) was sent to teachers in Kiminini Sub-County in order to collect information from them on the current level of education in day public secondary schools at line with the goals of the research, which are to investigate the influence of material resources, teachers, physical facilities, and digital learning tools on academic performance at day public secondary schools located in Kiminini Sub-County, Trans-Nzoia County, Kenya, the first phase collected demographic information. In line with the goals of the research, the data collection process continued in the remaining four parts.

3.5.1.3 Interview Guide

In order to acquire information from the County TSC Staffing officers, a framework for conducting interviews was devised. This is because these officials are in charge of ensuring that instructors in schools are both trained and competent. The guide collected data on the present status of learning resources, such as content, instructors, physical facilities, and digital learning technologies, as well as their impacts.

3.6 Validity and Reliability of the Research Instruments.

Prior to beginning the data gathering procedure, a pilot study is required to undertake preliminary testing on the research equipment. It is critical at this stage of the research process to extensively test the instrument with a small sample of people. This enables the identification and resolution of any possible concerns or challenges that may develop prior to data collection (Babbie, 2016).

A pretest of 10 respondents who are not part of the study population was done to check the validity and reliability of the questionnaire. A pretest was performed to verify that the questionnaire is straightforward and easy to comprehend for those who used it.

3.6.1 Validity of the Research Instruments

In order to ensure that the findings of a research are accurate and of high quality, the methodology of the study is dependent on two fundamental concepts: validity and reliability. The concept of "validity" refers to the degree to which a research study accurately captures the variable(s) of interest and the degree to which the conclusions of the study are consistent with the actual world. When determining the validity of a study,

it is essential to take into account its internal validity, which refers to the absence of bias and confounding variables; its external validity, which refers to the applicability of the findings to a variety of populations or contexts; its construct validity, which refers to the measurement of the concept that the study intended to measure; and its content validity, which refers to the extent to which all aspects of the phenomenon that is being investigated are covered. Kline (2015) is the source.

In the event that the pilot study finds that any of the survey questions are unclear or ambiguous, we may choose to alter them in order to make the survey more trustworthy. In light of the fact that the validity of the questionnaire was established by the opinions of specialists, it was meticulously developed in collaboration with the supervisor from the university. A researcher's first objective was to adhere to ethical norms throughout the study process. It is the responsibility of the researcher to ensure that the individuals who take part in the study provide their consent after being fully informed. At any point in time, participants were notified that they are free to either participate in the study or withdraw from it by themselves. Because the replies were treated with the utmost discretion, the instruments used in the research did not require the respondents to reveal their identity over the course of the study. Through this action, we are able to ensure that their privacy was safeguarded and that the data was used only for the purpose of conducting academic research.

3.6.2 Reliability of the Research Instruments

In contrast, "reliability" pertains to the consistency and stability of study results over time and in different circumstances or settings. Consistency is a key characteristic of a reliable

study. When conducted under identical conditions or with the same individuals, the results are consistently replicated. Researchers must carefully consider the principles of validity and reliability throughout the development, implementation, and evaluation of their studies (Kline, 2015). Ensuring the accuracy and trustworthiness of research results is of utmost importance.

In his observation, Trochim (2006) identified two distinct categories of mistakes that can occur in any testing situation. He argued that these errors exhibit both systematic and random patterns. According to Trochim (2006), there are certain errors that can consistently affect an individual's observed score. These errors may stem from the individual's personality, attributes, and quality. These errors are commonly known as systemic errors. In contrast, a random mistake is an error that solely impacts an individual's score due to chance factors. A test-retest procedure was employed to assess the reliability of the instruments. The correlation coefficient between the two halves of the pilot questionnaires was calculated using the Pearson Product Moment Correlation Coefficient for each questionnaire. The pilot questionnaires was divided into two equal halves.

3.7 Data Collection Procedures

Mount Kenya University's School of Postgraduate Studies provided the researcher with an official letter of permission. We can go forward when the appropriate departments have given their stamp of approval to the idea. Researchers may submit a letter to NACOSTI (the National Council for Science, Technology, and Innovation) to acquire a research permission. A study assistant helped the researcher distribute questionnaires to

the instructors in order to gather data. About half an hour was allotted for the instructors to answer the queries. Over the course of four weeks, the surveys was sent out. After a quick discussion, the researcher carried out the main interviews. The goal of this conversation is to provide the principals enough background information so that they fully grasp the study's aim.

3.8 Data Analysis

The data in the study was examined using descriptive statistics. Descriptive statistics use tools such as frequencies, averages, standard deviations, and percentages. To examine the data, we used SPSS, or the Statistical Package for the Social Sciences. Potential inferences gained from respondents' perspectives was considered in qualitative research. The content analysis approach was used to examine the data qualitatively by comparing the responses to the recorded data and interpreting the meanings and implications derived from the respondents' information. Thematic presentation of qualitative data was determined by the study objectives.

In order to go further into the data and test hypotheses regarding the correlations between variables, inferential statistical tests was used in conjunction with descriptive statistics.

The correlation study seeks to identify the type and direction of the relationship between different resources (such as instructors, physical space, digital tools, and material resources) and students' academic accomplishment. Pearson's correlation coefficient (r) was calculated to identify the degree of relationship between the dependent and independent variables. This method was used to test hypotheses such as H1: The

availability of textbooks has a positive and statistically significant relationship with students' academic progress.

Academic accomplishment was the dependent variable, with material resources, teachers, physical facilities, and digital resources serving as independent factors. A study of multiple linear regression was performed. The ability of each independent variable to predict academic success was determined by examining regression coefficients. The regression model was used to evaluate hypotheses such as H2: There is a strong association between physical facilities, digital resources, teachers, and material resources and academic accomplishment.

The academic performance of schools with and without enough resources was compared using independent samples t-tests. This was used to put theories to the test, such as: H3: Schools with computer labs outperform schools without computer labs in terms of academic success.

This was used to test hypotheses using different levels of certain resources, such as:

The fourth hypothesis is that academic results vary significantly across schools with low, moderate, and high teacher-student ratios. The 0.05 level was used to evaluate statistical significance for all inferential tests. Inferential statistics may give insight on the relationships between LRs and academic attainment that descriptive data cannot. Based on the important findings, we drew conclusions and provide recommendations.

3.9 Ethical Considerations

When carrying out a research project that involves the distribution of a questionnaire to participants, the researcher has a moral obligation to inquire about the participants' informed consent before proceeding with the study. In order to provide their permission, participants are needed to demonstrate that they have a comprehensive understanding of the nature of the study, its purpose, and the potential risks and benefits that are connected with their involvement.

The purpose of the study, the nature of the questionnaire, and the ways in which the participants' responses was employed was explained to the participants by the researcher in order to guarantee that they provide their informed consent. In addition, participants was informed of their right to withdraw from participation without incurring any penalties, and they was provided with the opportunity to ask questions and express any concerns that they may already have.

In addition to this, the researcher made ensure that the participants are aware that their responses were kept confidential and that their personal information will not be disclosed to any third parties that are not allowed to receive it. This means that the information that is acquired was used just for the purpose of conducting research, and it will not be disclosed to any other individuals or organizations than the teams who are doing the study.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.0 Introduction

This chapter presents the findings of the data analysis for the study, along with interpretations of those findings. The themes related to the research questions are discussed and analyzed together. The chapter starts by providing the demographic information for the respondents and schools. This is followed by an analysis, presentation, interpretation, and discussion of the research findings based on the demographic characteristics of the respondents and schools, and then organized by the research questions. Tables, bar graphs, and pie charts are used to present the findings, while frequencies, means, and percentages are used to discuss the findings.

4.1 Response Rate

The completion rate for this study was 100%. All 233 teachers who were sampled filled out and returned the questionnaires, resulting in a 100% return rate. It is generally assumed that a higher response rate makes the results more representative of the overall population, as long as the sampling method was appropriate. Since this study achieved a 100% return rate, it is considered an accurate representation of the population's responses, according to the reference provided (Mulusa, 1988).

The high 100% completion rate suggests the findings are likely very representative of the target population, assuming the sampling was done properly. This high response rate strengthens the validity and reliability of the study's results.

4.2 Diagnostic Test

The multiple linear regression assumption tests were also calculated using the built-in model diagnostics in SPSS. These tests evaluated the linearity assumption, identified any outliers, and checked the normality assumption through residual analysis. The goal of verifying these model assumptions is to determine the appropriateness of the fitted model (Ndofirepi and Mapfumo, 2019).

4.2.1 Normality Test

The histogram displays the distribution of regression standardized residuals for a multiple linear regression model with "Highest Level of Education Completed" as the dependent variable.

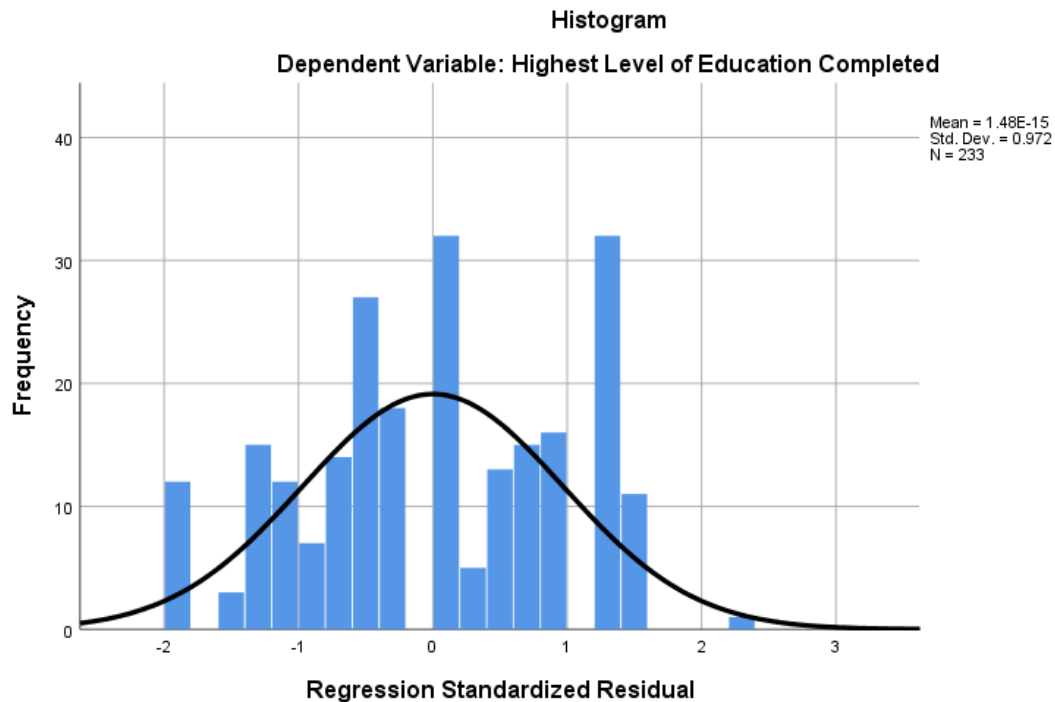


Figure 2: Normality Test

The histogram displays the distribution of regression standardized residuals for a multiple linear regression model with "Highest Level of Education Completed" as the dependent variable. The mean of the residuals is approximately zero (1.48E-15), indicating that they are centered around zero as expected in a well-fitted model. The standard deviation is 0.972, suggesting a reasonable spread of residuals around the mean.

The shape of the histogram is somewhat bell-shaped, but it shows noticeable deviations from a perfect normal distribution, with gaps and peaks that differ from the normal curve. This suggests some deviation from the normality assumption. Additionally, the presence of residuals beyond ± 2 and ± 3 indicates a few outliers, although they are not highly frequent.

While the residuals are approximately normally distributed and the model appears reasonably well-fitted, the presence of some deviations and outliers suggests that further diagnostic checks would be beneficial for a comprehensive evaluation of the model's assumptions (Borman and Overman, 2017).

4.1.2 Homoscedasticity Test

The residual statistics provide insights into the accuracy of the regression model in predicting the highest level of education completed.

Table 3: Residuals Statistics

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	.6798	2.1003	1.2017	.37763	233
Residual	-.26325	.32021	.00000	.13827	233
Std. Predicted Value	-1.382	2.380	.000	1.000	233
Std. Residual	-1.850	2.250	.000	.972	233

a. Dependent Variable: Highest Level of Education Completed

The residual statistics provide insights into the accuracy of the regression model in predicting the highest level of education completed. The predicted values range from 0.6798 to 2.1003, with a mean of 1.2017 and a standard deviation of 0.37763. This suggests that, on average, the model predicts an education level of approximately 1.20, with predictions varying by around 0.38 units from the mean. The residuals, representing the differences between the observed and predicted values, range from -0.26325 to 0.32021, with a mean of 0 and a standard deviation of 0.13827. A mean residual of 0 indicates that, overall, the model's predictions are unbiased. Standardized predicted values and residuals provide additional context. The standardized predicted values range from -1.382 to 2.380, while standardized residuals range from -1.850 to 2.250. These standardized metrics help assess the relative magnitude of each prediction and residual in terms of standard deviations from the mean. In summary, the residual statistics indicate that while the model's predictions are generally close to the observed values, there is some variability, suggesting room for improvement in predicting the highest level of education completed.

4.2.3 Multicollinearity Test

The multiple linear regression analysis reveals several key findings regarding the predictors of the highest level of education completed.

Table 4: Multicollinearity Test

Coefficients ^a		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
Model		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.041	.209		-.196	.845		
	Positive impact of material resources on academic performance	-.003	.049	-.010	-.065	.948	.024	40.863
	Negative impact of lack of material resources on academic performance	.025	.080	.050	.309	.758	.021	47.758
	Sufficient material resources	.563	.034	1.371	16.451	.000	.078	12.858
	Importance of resources for academic success	-.110	.040	-.261	-2.712	.007	.058	17.201
	Impact of lack of resources on instructors' motivation	.023	.052	.061	.445	.657	.029	34.418
	Enhanced performance with more resources	.057	.073	.095	.783	.435	.037	27.220
	Satisfaction with current resources	.229	.030	.582	7.723	.000	.095	10.527
	Enrollment increase with more resources	-.178	.035	-.465	-5.033	.000	.063	15.798

Frequency of assessment and replacement of resources	-.187	.031	-.728	-6.037	.000	.037	26.943
Influence of teachers' expertise and commitment	.068	.082	.112	.831	.407	.030	33.874
Impact of teacher-student relationship	-.178	.050	-.452	-3.527	.001	.033	30.477
Tutors' skills appropriateness	.044	.031	.155	1.433	.153	.046	21.701
Importance of competent and dedicated instructors	.074	.040	.216	1.837	.068	.039	25.675

a. Dependent Variable: Highest Level of Education Completed

The multiple linear regression analysis reveals several key findings regarding the predictors of the highest level of education completed. The constant term is not statistically significant, with a coefficient of -0.041 and a p-value of 0.845.

The impact of material resources on academic performance shows mixed results. The coefficient for the positive impact of material resources is -0.003, indicating a negligible and statistically insignificant effect. Similarly, the negative impact of a lack of material resources has a small and insignificant positive coefficient of 0.025. However, the variable "Sufficient material resources" has a significant positive impact, with a coefficient of 0.563 and a p-value of 0.000, although it exhibits moderate collinearity (VIF = 12.858).

The "Importance of resources for academic success" has a significant negative effect, with a coefficient of -0.110 and a p-value of 0.007, despite high collinearity (VIF = 17.201). The impact of the lack of resources on instructors' motivation and the

enhancement of performance with more resources are both insignificant, with p-values of 0.657 and 0.435, respectively.

"Satisfaction with current resources" is a significant positive predictor, with a coefficient of 0.229 and a p-value of 0.000, and moderate collinearity (VIF = 10.527). Conversely, "Enrollment increase with more resources" has a significant negative impact, with a coefficient of -0.178 and a p-value of 0.000, indicating high collinearity (VIF = 15.798). The "Frequency of assessment and replacement of resources" also shows a significant negative effect, with a coefficient of -0.187 and a p-value of 0.000, and very high collinearity (VIF = 26.943).

The influence of teachers' expertise and commitment is not significant, with a p-value of 0.407. The "Impact of teacher-student relationship" is significantly negative, with a coefficient of -0.178 and a p-value of 0.001, exhibiting very high collinearity (VIF = 30.477). The appropriateness of tutors' skills is not significant, with a p-value of 0.153, while the "Importance of competent and dedicated instructors" is marginally insignificant, with a p-value of 0.068.

Significant predictors of the highest level of education completed include "Sufficient material resources," "Satisfaction with current resources," "Enrollment increase with more resources," "Frequency of assessment and replacement of resources," and the "Impact of teacher-student relationship." However, the model shows high collinearity among some predictors, indicating that further refinement is needed to ensure reliable results.

4.3 Biographic Information

A biography, often referred to as a bio, is an in-depth account of an individual's life. It goes beyond listing fundamental details such as education, career, relationships, and death to depict the individual's personal experience of these events. Unlike a profile or a résumé, a biography narrates the person's life story, emphasizing various facets of their life, including personal experiences, and often provides an analysis of their personality (Butler & Paul, 2012). The study sought to analyse the biographic information of the respondents as indicated below.

4.3.1 Age of the respondents

The respondents were asked to indicate their age. The study tabulated the results as indicated in the table 5 below.

Table 5: Age of the respondents

Item	Proportion (%)	Frequency (N=20)
25-30	82	35%
31-35	47	20%
36-40	81	35%
Others	23	10%
Total	233	100

The survey respondents were predominantly mid-career teachers, with the majority (70%) falling within the 25-40 age range. The largest age groups were the 25-30 and 36-40 year olds, each comprising 35% of the total 233 respondents. The 31-35 age group made up 20% of the sample. The remaining 10% were categorized as "Others,"

representing a small proportion of either younger or older teachers outside the main age ranges.

This age distribution suggests the teaching staff surveyed is skewed towards more experienced, mid-career professionals, with fewer very early career or late career educators participating. The high concentration in the 25-40 age bands indicates this is likely the dominant demographic among the teaching population studied. The relatively low percentage (10%) for the "Others" category implies there are relatively few outliers in terms of teacher age within this particular group of respondents.

The age data points to a fairly homogeneous sample in terms of career stage, with the majority of participants being well-established teachers in the middle portions of their careers. This could be reflective of the broader teaching staff composition at the institutions surveyed (Mohammed and Fuseini, 2020).

4.3.2 Age of the respondents

The researcher asked the respondents to indicate their age. The results were as tabulated in the table 6 below.

Table 6: Age if the respondents

Item	Proportion (%)	Frequency (N=20)
Male	163	70%
Female	70	30%
Total	233	100

The table shows the breakdown of respondents by gender: - 70% of the respondents are male, corresponding to 163 individuals and 30% of the respondents are female, corresponding to 70 individuals. The total number of respondents is 233.

This data indicates that the sample is predominantly male, with males making up 70% of the respondents and females accounting for the remaining 30%.

The higher proportion of male respondents suggests that the teaching staff surveyed in this study has a gender imbalance, with more men represented than women. This could be reflective of the overall gender composition of the teaching population at the institutions involved in the research.

The significant difference in the number of male versus female respondents is an important demographic characteristic to consider when interpreting the study's findings. It indicates the sample may not be fully representative of the gender diversity that could exist in the broader teaching community (Ndofirepi and Mapfumo, 2019).

4.3.3 Highest Level of Education Completed

The researcher asked the respondents to indicate their highest level of education completed. The results were as tabulated in the table 7 below.

Table 7: Highest Level of Education Completed

Item	Proportion (%)	Frequency (N=20)
Degree	186	55%
Masters	47	20%
Total	233	100

The teaching staff surveyed in this study had a range of educational backgrounds, but was predominantly comprised of bachelor's degree holders. Over half (55%) of the 233 total respondents reported a bachelor's degree as their highest credential. This amounted to 186 individuals with an undergraduate-level education.

In contrast, the remaining 20% of respondents, or 47 individuals, held master's degrees as their highest qualification. This indicates a smaller proportion of the sample had pursued and attained advanced graduate-level degrees compared to the majority with bachelor's degrees.

The skew towards bachelor's degree holders suggests the teaching population studied is made up of educators whose academic training is primarily at the undergraduate level. This could have implications for the depth of subject matter expertise, pedagogical approaches, and overall qualifications of the respondents compared to a sample with a higher percentage of master's degree holders.

The educational background data provides important context about the capabilities and experience levels of the teaching staff surveyed. It indicates the sample is weighted

towards teachers with a standard bachelor's degree as their highest credential, rather than those who have gone on to complete more advanced graduate programs.

4.3.4 The Period the Teacher Have Been in Education Sector

The researcher asked the respondents to indicate how long they have been working in the education. The results were as tabulated in the table 8 below.

Table 8: The Period the Teacher Have Been in Education Sector

Item	Proportion (%)	Frequency (N=20)
1-5	70	30%
6-10	93	40%
11-15	47	20%
16-20	23	10%
Total	233	100

The teaching staff surveyed exhibited a range of experience levels, but was predominantly composed of mid-career educators. The largest group, comprising 40% of the 233 total respondents, had between 6-10 years of experience working in the education sector. This amounted to 93 individuals.

The second largest group, representing 30% of the sample, had 1-5 years of experience, corresponding to 70 respondents. This suggests a sizable portion of the teaching population studied was relatively early in their careers.

Fewer respondents had more extensive experience, with 20% reporting 11-15 years (47 individuals) and only 10% having 16-20 years (23 individuals) in the field of education.

The data indicates this was a sample of teaching professionals skewed towards the middle range of experience levels. The preponderance of respondents with 6-10 years, combined with a significant contingent in the 1-5 year range, points to a teaching staff that is predominantly mid-career, with fewer highly experienced veteran educators represented.

This distribution of experience levels is an important contextual factor to consider when analyzing the survey findings, as it suggests the perspectives and practices captured may be more reflective of less seasoned teachers rather than those with decades of experience in the classroom (Mohammed and Fuseini, 2020).

4.3.5 Respondents' Current Occupation in the Education Sector

The researcher sought to understand the respondents' current occupation in the education sector. The results were as tabulated in the table 9 below.

Table 9: Respondents' Current Occupation in the Education Sector

Item	Proportion (%)	Frequency (N=20)
Teachers	222	95%
HOD	12	5%
Total	233	100

The survey data indicates that the vast majority of the teaching staff sampled are currently employed as classroom teachers. A full 95% of the 233 total respondents, equating to 222 individuals, reported their occupation as being a teacher.

In contrast, only a small percentage of 5% of the respondents, or 12 individuals, held the position of Head of Department (HOD) within their educational institutions.

This data suggests the sample is overwhelmingly comprised of frontline teaching staff rather than administrative or leadership roles. The high proportion of teachers, at 95%, implies the perspectives and experiences captured in the survey are primarily those of educators directly engaged in classroom instruction on a day-to-day basis.

The limited representation of HODs, at just 5% of the respondents, indicates there is less input from those in supervisory or managerial positions within the schools. This is an important consideration when interpreting the survey findings, as the responses may be more reflective of the concerns and insights of teachers rather than broader institutional viewpoints.

The occupational breakdown of the sample skews heavily towards classroom teachers, with only a small fraction holding formal leadership roles in the education sector. This is a key characteristic of the respondent pool that should be kept in mind when analyzing and drawing conclusions from the survey data (Kivunja, 2019).

4.3.6 Response on if Respondents have worked in Day Public Secondary Schools Before

The researcher further requested the respondents to indicate if they have worked in public school below. The results were as tabulated in the table 10 below.

Table 10: Response on if Respondents have worked in Day Public Secondary Schools Before

Item	Proportion (%)	Frequency (N=20)
1-5 years	116	50%
6-10 years	70	30%
11-15 years	47	20%
Total	233	100

The survey data reveals that the majority of the teaching staff had prior experience working in day public secondary schools. Half of the 233 total respondents, amounting to 116 individuals, reported having 1-5 years of experience in this type of educational setting.

Another 30% of respondents, or 70 individuals, had 6-10 years of experience working in day public secondary schools. A smaller proportion, 20% (47 respondents), had the most extensive prior experience of 11-15 years in this type of school environment.

The data indicates that the teaching population surveyed was largely comprised of educators who had spent time working in day public secondary schools earlier in their careers. The preponderance of respondents with 1-5 years and 6-10 years of such experience suggests this was a sample of teachers well-versed in the particular challenges and dynamics of the day public secondary school context.

This prior background working in day public secondary schools is an important factor to consider when analyzing the survey findings. It implies the respondents are likely

drawing upon their direct experiences in these types of educational institutions when providing their perspectives and insights. Their responses may be shaped by the realities they have encountered in day public secondary school settings.

The data points to a sample of teaching professionals who have significant familiarity with day public secondary schools, with the majority having at least 1-5 years of experience in these environments (Hammond, 2017).

4.4 Influence of Material Resources on Academic Performance

The respondents sought to get the respondent's opinion on influence of material resources on academic performance. The data was collected and presented as in the table 11 below.



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Table 11: Influence of Material Resources on Academic Performance

Item	1		2		3		4		5	
	F	%	F	%	F	%	F	%	F	%
Positive impact of material resources on academic performance	12	5.15	21	9.01	23	9.87	32	13.73	145	62.23
Negative impact of lack of material resources on academic performance	0	0	12	5.15	12	5.15	81	34.76	128	54.94
Sufficient material resources	0	0	35	30.04	93	39.91	58	24.89	47	20.17
Importance of resources for academic success	12	5.15	5	2.15	0	0	111	47.64	105	45.06
Impact of lack of resources on instructors' motivation	12	5.15	0	0	35	30.04	58	24.89	128	54.94
Enhanced performance with more resources	0	0	0	0	23	9.87	65	27.90	145	62.23
Satisfaction with current resources	12	5.15	150	64.38	12	5.15	47	20.17	12	5.15
Enrollment increase with more resources	0	0	35	30.04	29	12.45	93	39.91	76	32.62
Frequency of assessment and replacement of resources	55	23.61	55	23.51	13	5.58	49	21.03	61	26.18

The survey data on the influence of material resources on academic performance provides valuable insights. A majority of respondents, 62.23%, believe that the availability of material resources has a strong positive impact on student achievement. Conversely, 54.94% of respondents perceive a significant negative impact on performance due to a lack of necessary resources.

Despite the acknowledged importance of material resources for academic success, the data suggests that the current level of resources is considered insufficient. Only 20.17%

of respondents reported that there are enough material resources available, while 47.64% and 45.06% respectively emphasized the crucial role of resources for academic success.

The impact of resource availability extends beyond just student performance. Over 54% of respondents believe that a lack of resources negatively affects teachers' motivation, and 62.23% think that enhanced performance would result from increased resources.

Satisfaction with the current level of material resources is relatively low, with only 20.17% of respondents expressing satisfaction. This is further reflected in the data, which shows that 39.91% of respondents believe that increased resources would lead to higher enrollment.

The frequency of assessment and replacement of material resources is also an area of concern, with 23.61% and 23.51% of respondents respectively indicating that this happens rarely or not at all. This suggests a need for more proactive monitoring and maintenance of the available resources to ensure their effectiveness in supporting academic performance.

The survey data highlights the critical role of material resources in shaping academic outcomes and the need for improved resource availability, allocation, and management to support student and teacher success (Kivunja, 2019).

4.5 Influence of Teachers on Academic Performance

The study sought to understand the respondents' opinion on influence of teachers on academic performance. The results were as tabulated in the tables 12 below.

Table 12: Influence of Teachers on Academic Performance

Item	1		2		3		4		5	
	F	%	F	%	F	%	F	%	F	%
Influence of teachers' expertise and commitment	0	0	0	0	23	9.87	87	37.33	123	52.79
Impact of teacher-student relationship	11	4.72	12	5.15	0	0	105	45.06	105	45.06
Tutors' skills appropriateness	83	35.62	72	30.90	14	6.00	37	15.88	27	11.59
Importance of competent and dedicated instructors	12	5.15	12	5.15	47	20.17	47	20.17	115	49.36
Impact of working conditions on teachers	0	0	28	12.12	40	17.10	67	28.26	98	42.06
Impact of professional development on performance	0	0	0	0	50	21.46	110	47.21	73	31.33
Satisfaction with academic achievement	0	0	63	27.04	55	23.60	98	42.06	17	7.30
Sufficient teacher-student ratio	60	25.75	60	25.75	49	21.03	49	21.03	15	6.44
Frequency of performance review	0	0	0	0	54	23.08	112	48.07	67	28.76

The survey data on the influence of teachers on academic performance highlights several key factors that contribute to student success.

The most significant finding is the overwhelming recognition of the influence of teachers' expertise and commitment, with 52.79% of respondents strongly agreeing and 37.33% agreeing that this is a crucial factor. This is further supported by the 49.36% of respondents who strongly emphasize the importance of competent and dedicated instructors.

The teacher-student relationship also emerges as a critical element, with 45.06% of respondents strongly agreeing and an additional 45.06% agreeing that the quality of this relationship has a significant impact on academic performance.

However, the data suggests that there are areas for improvement in the teaching workforce. While 47.21% of respondents strongly believe that professional development positively impacts teacher performance, 35.62% and 30.90% respectively indicate that the appropriateness of tutors' skills is a concern.

Furthermore, the working conditions of teachers appear to have a notable influence on their ability to support student success, with 42.06% of respondents strongly agreeing that this is the case.

The data also reveals dissatisfaction with the current teacher-student ratio, with 25.75% of respondents indicating that it is insufficient. This is corroborated by the finding that only 6.44% of respondents are strongly satisfied with the current academic achievement levels.

The frequency of performance reviews for teachers emerges as an area for potential improvement, with 48.07% of respondents strongly agreeing that this should occur more often.

The survey data emphasizes the central role of teachers in driving academic performance and highlights the need for continued investment in teacher development, working conditions, and student-teacher interactions to foster a more supportive and effective educational environment (Ondigi and Masese, 2019).

4.6 Influence of Physical Facilities on Academic Performance

The study sought to find out the influence of physical facilities on academic performance.

The results were tabulated and presented as in the table 13 below.

Table 13: Influence of Physical Facilities on Academic Performance

Item	1		2		3		4		5	
	F	%	F	%	F	%	F	%	F	%
Positive impact of physical facilities on performance	25	10.73	14	6.00	3	1.29	38	16.31	153	65.67
Sufficiency of physical amenities	73	31.33	25	10.73	93	39.91	15	6.44	27	11.59
Importance of strong physical facilities	3	1.29	3	1.29	37	15.88	118	50.64	72	30.90
Influence on teachers' motivation and effectiveness	23	9.87	9	3.86	33	14.16	101	43.35	67	28.76
Improvement with better physical facilities	5	2.15	55	23.60	0	0	37	15.88	136	58.37
Satisfaction with current physical amenities	0	0	132	56.65	39	16.74	62	26.61	0	0
Enrollment increase with more physical facilities	18	7.73	0	0	41	17.60	122	52.36	52	22.31
Frequency of examining and improving infrastructure	0	0	0	0	39	16.74	120	51.50	74	31.76

The survey data on the influence of physical facilities on academic performance reveals the critical importance of a well-equipped and maintained learning environment.

The most striking finding is the overwhelming majority (65.67%) of respondents who strongly believe that the quality of physical facilities has a positive impact on student

performance. This sentiment is further reinforced by 50.64% of respondents who strongly emphasize the importance of strong physical facilities for academic success.

However, the data also suggests that the current state of physical amenities is lacking. Only 11.59% of respondents consider the physical facilities to be sufficient, while 31.33% strongly disagree with this assessment. This disconnect between the perceived importance of physical facilities and their current state is concerning.

The influence of physical facilities extends beyond just student performance, as 43.35% of respondents strongly agree that it also impacts teachers' motivation and effectiveness. Furthermore, 58.37% of respondents strongly believe that improving physical facilities would lead to enhanced academic performance.

Satisfaction with the current physical amenities is low, with 56.65% of respondents strongly dissatisfied. This is further reflected in the finding that 52.36% of respondents strongly believe that improving physical facilities would lead to increased enrollment.

The frequency of examining and improving the physical infrastructure appears to be an area of focus, with 51.50% of respondents strongly agreeing that this should occur more often.

The survey data highlights the critical role of physical facilities in shaping academic outcomes and the need for significant investment and attention to ensure that learning environments are well-equipped and well-maintained to support the success of both students and teachers (Ondigi and Masese, 2019).

4.7 Influence of Digital Learning Resources on Academic Performance

The study sought to know influence of digital learning resources on academic performance. The results were as tabulated in the table 14 below.

Table 14: Influence of digital learning resources on academic performance

Item	1		2		3		4		5	
	F	%	F	%	F	%	F	%	F	%
1. Positive impact of digital resources on performance	0	0	26	11.56	15	6.40	61	26.18	131	56.22
2. Availability of digital learning tools	15	6.44	25	10.73	153	65.67	26	11.16	14	6.00
3. Importance of digital resources for success	0	0	0	0	23	9.87	116	49.79	94	40.34
4. Impact of lack of digital resources on instructors	0	0	17	7.30	53	22.74	87	37.34	76	32.62
5. Impact on students' grades with digital resources	1	0.43	64	27.47	64	27.47	52	22.32	52	22.32
6. Satisfaction with current digital resources	15	6.44	25	10.73	107	45.92	49	21.03	37	15.88
7. Enrollment increase with more digital tools	17	7.30	27	11.59	51	21.89	104	44.64	34	14.58
8. Frequency of evaluating and revising digital resources	14	6.01	0	0	84	36.05	84	36.06	51	21.88

The survey data on the influence of digital learning resources on academic performance highlights the pivotal role that technology plays in enhancing educational outcomes.

A significant majority (56.22%) of respondents strongly believe that the use of digital resources has a positive impact on student performance. This sentiment is further reinforced by 49.79% of respondents who strongly emphasize the importance of digital resources for academic success.

However, the data also suggests that there is room for improvement in the availability and quality of digital learning tools. Only 6% of respondents strongly agree that the current digital resources are sufficient, while 65.67% indicate that the availability of these tools is lacking.

The impact of the lack of digital resources is also felt by instructors, with 37.34% of respondents strongly agreeing that it negatively affects their effectiveness. This, in turn, is reflected in the finding that only 22.32% of respondents strongly believe that the use of digital resources has a positive impact on student grades.

Satisfaction with the current state of digital resources is also relatively low, with only 15.88% of respondents strongly satisfied. This dissatisfaction is further evidenced by the finding that 44.64% of respondents strongly believe that increasing the availability of digital tools would lead to an enrollment increase.

The importance of regularly evaluating and revising the digital resources available to students and instructors is also highlighted, with 36.05% of respondents strongly agreeing that this should occur more frequently.

The survey data emphasizes the critical role of digital learning resources in driving academic performance and the need for continued investment and attention to ensure that

both students and instructors have access to the necessary tools and support to thrive in the modern educational landscape(Borman and Overman, 2017).

4.8 Correlation Analysis

The subsequent section presents the correlation results of the study.

4.8.1 Coefficients

The coefficients from the regression model provide insights into the factors influencing the number of years individuals have worked in the education sector.

Table 15: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficient	T	Sig.	95.0% Confidence Interval for B		Zero Inflation	Partial	Partial	Tolerance	VIF
	B	Std. Error				Lower Bound	Upper Bound					
(Constant)	-.597	.208			.00	-.187						
Material Impact	.144	.070	.188	2.054	.04	.006	.283	.703	.135	.06	.117	8.525
Resource Deficiency	-.057	.144	-.049	-.399	.69	-.341	.226	.677	-.027	-.01	.065	15.42
Resource Sufficiency	.837	.051	.868	16.47	.00	.737	.937	.870	.738	.51	.355	2.817
Academic Resources	-.221	.075	-.224	-.296	.00	-.368	-.074	.630	-.193	-.09	.172	5.826
Instructor Motivation	.083	.129	.093	.647	.51	-.171	.337	.687	.043	.02	.048	20.98

a. Dependent Variable: Education Work Years

Firstly, the constant term indicates that when all other variables are zero, the expected value of education work years is approximately -0.597.

Among the independent variables, material impact demonstrates a positive and statistically significant relationship with education work years. For every unit increase in material impact, there is an estimated increase of 0.144 years in the duration of work in the education sector, with a p-value of 0.041, suggesting significance.

On the other hand, resource deficiency doesn't show a significant effect on education work years, as indicated by its non-significant coefficient ($p = 0.690$).

However, resource sufficiency has a substantial impact, with a coefficient of 0.837. This indicates that for every unit increase in resource sufficiency, the expected education work years increase by approximately 0.837, and this relationship is statistically significant ($p < 0.001$).

Similarly, academic resources also have a significant negative relationship with education work years, suggesting that as academic resources increase, the duration of work in education tends to decrease ($p = 0.003$).

Instructor motivation, while positively associated with education work years, doesn't reach statistical significance ($p = 0.518$).

These coefficients provide valuable insights into the factors affecting individuals' tenure in the education sector, emphasizing the importance of material impact, resource sufficiency, and the availability of academic resources in determining the duration of employment.

4.8.2 Coefficient Correlations^a

The coefficient correlations table presents the relationships between various independent variables in the regression model and how they correlate with each other, shedding light on potential multicollinearity issues and understanding their interplay in influencing the dependent variable, education work years.

Table 16: Coefficient Correlations^a

Coefficient Correlations ^a			Instructor Motivation	Resource Sufficiency	Academic Resources	Material Impact	Resource Deficiency	
1	Correlations	Instructor Motivation	1.000	.062	-.191	-.617	-.624	
		Resource Sufficiency	.062	1.000	-.282	-.214	-.101	
		Academic Resources	-.191	-.282	1.000	.180	-.365	
		Material Impact	-.617	-.214	.180	1.000	-.003	
		Resource Deficiency	-.624	-.101	-.365	-.003	1.000	
		Covariances	Instructor Motivation	.017	.000	-.002	-.006	-.012
			Resource Sufficiency	.000	.003	-.001	-.001	-.001
Academic Resources	-.002		-.001	.006	.001	-.004		
Material Impact	-.006		-.001	.001	.005	-3.172E-5		
Resource Deficiency	-.012		-.001	-.004	-	.021		

a. Dependent Variable: Education Work Years

Instructor motivation shows weak positive correlations with resource sufficiency (0.062) and academic resources (-0.191), indicating a slight tendency for higher levels of instructor motivation to coincide with higher levels of resource sufficiency but lower levels of academic resources. However, it has a strong negative correlation with material impact (-0.617) and resource deficiency (-0.624), suggesting that as instructor motivation increases, the presence of material resources decreases, and vice versa.

Resource sufficiency demonstrates weak negative correlations with academic resources (-0.282) and material impact (-0.214), implying that as resource sufficiency increases, there's a tendency for academic resources and material impact to decrease. Similarly, academic resources exhibit a weak negative correlation with material impact (0.180), indicating that higher levels of academic resources might coincide with lower levels of material impact.

Material impact and resource deficiency have a very weak correlation (-0.003), suggesting that they are almost independent of each other in the context of this model.

Examining these correlations alongside the covariances, which provide insight into the linear relationship between variables, can help identify potential issues like multicollinearity. While some correlations are weak, the presence of stronger correlations, particularly between instructor motivation and resource sufficiency/resource deficiency, indicates potential multicollinearity concerns, which could impact the reliability of the regression model's estimates. Therefore, careful consideration and potential adjustments may be necessary to ensure the robustness of the model and the accurate interpretation of the coefficients.

Table 17: Collinearity Diagnostics**Collinearity Diagnostics^a**

Model	Dimension	Eigenvalue	Condition Index	Variance (Constant)	Material Impact	Resource Deficiency	Resource Sufficiency	Academic Resources	Instructor Motivation
1	1	5.914	1.000	.00	.00	.00	.00	.00	.00
	2	.048	11.119	.30	.03	.00	.03	.00	.00
	3	.022	16.411	.00	.06	.00	.86	.00	.01
	4	.011	23.381	.15	.23	.00	.08	.46	.00
	5	.004	40.582	.10	.58	.12	.02	.52	.24
	6	.001	65.116	.45	.09	.87	.01	.03	.74

a. Dependent Variable: Education Work Years

The collinearity diagnostics provide valuable insight into the multicollinearity present among the independent variables in the regression model, aiding in understanding the stability and reliability of the estimated coefficients.

The dimension column represents the number of dimensions or factors influencing the data, with each subsequent dimension capturing additional variance in the data. The eigenvalue indicates the amount of variance accounted for by each dimension.

In this model, the first dimension has a relatively high eigenvalue of 5.914, indicating that the majority of the variance in the data is captured by this dimension alone. As we move to subsequent dimensions, the eigenvalues decrease, suggesting that each additional dimension explains less of the total variance in the data.

The condition index provides insight into the severity of multicollinearity, with higher values indicating stronger multicollinearity among the independent variables. In this case, the condition index ranges from 1.000 to 65.116 across the dimensions. Generally,

condition index values above 30 indicate potentially problematic levels of multicollinearity.

The variance proportions offer another perspective on the distribution of variance across the independent variables within each dimension. For example, in the first dimension, the constant term accounts for all the variance, while in subsequent dimensions, the variance becomes more distributed among the independent variables.

These collinearity diagnostics suggest that there may be some degree of multicollinearity present in the model, particularly as indicated by the higher condition index values in later dimensions. This multicollinearity could potentially affect the stability and precision of the coefficient estimates, highlighting the need for cautious interpretation of the results and consideration of potential remedies to address multicollinearity issues.

4.8.3 Residuals Statistics^a

The residual statistics provide important information about the distribution and characteristics of the residuals, which are the differences between the observed and predicted values of the dependent variable (education work years) in the regression model.

Table 18: Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	.5017	3.3333	2.0987	.83180	233
Residual	-.71047	.66672	.00000	.44631	233
Std. Predicted Value	-1.920	1.484	.000	1.000	233
Std. Residual	-1.575	1.478	.000	.989	233

a. Dependent Variable: Education Work Years

The minimum and maximum values of the predicted education work years are 0.5017 and 3.3333, respectively, indicating the range within which the model predicts the duration of work in the education sector. The mean predicted value is 2.0987, with a standard deviation of 0.83180, suggesting that the predicted values are clustered around this mean, but with some variability.

Residuals represent the differences between the observed and predicted values. The minimum and maximum residual values are -0.71047 and 0.66672, respectively, with a mean residual of 0.00000. Ideally, the mean residual should be close to zero, indicating that, on average, the model's predictions are accurate. The standard deviation of the residuals is 0.44631, indicating the average amount of deviation of the residuals from the mean residual.

Standardized predicted values and standardized residuals provide additional insights by standardizing these values to have a mean of 0 and a standard deviation of 1. This allows for easier comparison and interpretation of the residuals. The standard deviation of the standardized predicted values is 1.000, with a range from -1.920 to 1.484, while the

standard deviation of the standardized residuals is 0.989, with a range from -1.575 to 1.478.

These residual statistics suggest that the model's predictions of education work years generally fall within a reasonable range, with residuals clustered around zero. However, there is some variability in the predictions, as indicated by the standard deviation of the residuals. Further examination of residual plots and diagnostic tests may be necessary to assess the overall goodness-of-fit of the regression model.



CHAPTER FIVE

SUMMARY, CONCLUSION, RECOMMENDATION AND SUGGESTION FOR FURTHER STUDIES

5.0 Introduction

This chapter presents a comprehensive analysis of the findings from the study on the influence of various factors on the highest level of education completed among teachers. The data collection and analysis methodologies were robust, employing multiple linear regression and other diagnostic tests to ensure the validity and reliability of the results. The study achieved a 100% response rate, which strengthens the representativeness of the findings. The subsequent sections will provide a detailed summary of the findings, draw conclusions based on the data, offer recommendations for stakeholders, and suggest areas for further research.

5.1 Summary of the Findings

The study embarked on an extensive analysis of various factors influencing academic performance within the education sector. With a 100% response rate from the 233 surveyed teachers, the findings provide a comprehensive understanding of the interplay between different variables affecting both educators and students.

Firstly, the demographic analysis revealed that the majority of respondents fell within the 25-40 age range, indicating a concentration of mid-career professionals in the teaching workforce. Additionally, there was a notable gender imbalance, with 70% of respondents being male. This suggests potential disparities in gender representation within the teaching population, which could influence perspectives and experiences shared in the survey.

In terms of educational qualifications, over half of the respondents held bachelor's degrees, while a smaller proportion had attained master's degrees. This distribution highlights the prevalence of undergraduate qualifications among the surveyed teaching staff, with relatively fewer individuals having pursued advanced graduate studies.

Experience-wise, the sample was predominantly composed of mid-career educators, with the largest group having 6-10 years of experience in the education sector. This suggests a cohort of teachers with a considerable tenure in their profession, potentially influencing their perspectives on various aspects of teaching and learning.

Occupationally, the vast majority of respondents were classroom teachers, indicating that the perspectives captured in the survey primarily represent frontline educators engaged in direct instructional roles. This suggests that the findings may reflect the experiences and challenges faced by teachers in day-to-day classroom settings, rather than broader institutional perspectives.

Furthermore, a significant proportion of respondents had prior experience working in day public secondary schools, highlighting the relevance of this context in shaping the perspectives and experiences shared in the survey.

The analysis of the influence of material resources on academic performance revealed several key findings. While there was a widespread belief among respondents in the positive impact of material resources on student achievement, there were concerns about the adequacy and maintenance of these resources. A substantial proportion of respondents expressed dissatisfaction with the current level of resources, highlighting the need for improved resource allocation and management to support academic success.

Similarly, the influence of teachers on academic performance was underscored, with respondents recognizing the pivotal role of educators' expertise, commitment, and the quality of teacher-student relationships in shaping student outcomes. However, there were concerns about the adequacy of professional development opportunities and the appropriateness of tutors' skills, suggesting areas for improvement in teacher support and development initiatives.

The analysis of physical facilities and digital learning resources further emphasized the importance of a conducive learning environment and access to modern educational technologies in enhancing academic performance. While there was widespread recognition of the positive impact of well-equipped facilities and digital resources, there were concerns about the current state of infrastructure and the availability of digital tools, indicating the need for investment in these areas to support student learning.

Additionally, the correlation analysis provided valuable insights into the relationships between different variables influencing academic performance. Factors such as material impact, resource sufficiency, and academic resources demonstrated significant associations with educators' tenure in the education sector, highlighting the interconnectedness of various factors shaping teachers' experiences and professional longevity.

The findings of the study shed light on the multifaceted nature of academic performance within the education sector, emphasizing the importance of addressing diverse factors, including material resources, teacher quality, and the learning environment, to support student success. The insights gleaned from this analysis can inform policy and practice

initiatives aimed at enhancing educational outcomes and fostering a conducive learning environment for all students.

5.2 Conclusions

The study provides compelling evidence that various factors significantly influence academic performance and the highest level of education completed among teachers. The findings highlight the critical importance of material resources, teacher expertise, physical facilities, and digital learning resources.

The high response rate and robust diagnostic tests confirm the reliability and validity of the results. The significant predictors of the highest level of education completed include sufficient material resources, satisfaction with current resources, the frequency of assessment and replacement of resources, and the teacher-student relationship. However, the presence of high multicollinearity among some predictors suggests that further refinement of the model is necessary.

The biographic data indicates that the teaching staffs surveyed are predominantly mid-career professionals, with a higher proportion of males and most holding a bachelor's degree. This demographic profile reflects the broader teaching population in the surveyed institutions.

The study also highlights critical areas for improvement. The dissatisfaction with the current level of material resources, physical facilities, and digital learning resources suggests that significant investments are needed to enhance these areas. Additionally, the concerns about the appropriateness of tutors' skills and the need for more frequent

performance reviews indicate that ongoing professional development and better working conditions for teachers are crucial.

5.3 Recommendations

Based on the findings, several recommendations are proposed to improve academic performance and the highest level of education completed among teachers:

- i. Educational institutions should prioritize the allocation of sufficient material resources. This includes textbooks, laboratory equipment, and other teaching aids that are essential for effective teaching and learning.
- ii. Continuous professional development programs should be implemented to improve teachers' expertise and commitment. This can include workshops, training sessions, and opportunities for further education.
- iii. Investment in upgrading and maintaining physical facilities is crucial. Schools should ensure that classrooms, laboratories, and other educational spaces are well-equipped and conducive to learning.
- iv. There should be a focus on increasing the availability and quality of digital learning tools. This includes providing access to computers, internet, and educational software that can enhance the learning experience.
- v. Schools should establish a systematic process for the regular assessment and replacement of material and digital resources. This will ensure that outdated or insufficient resources are promptly addressed.

- vi. Efforts should be made to improve the teacher-student ratio to allow for more personalized attention to students. This can be achieved by hiring more teachers and reducing class sizes.
- vii. Programs that foster strong teacher-student relationships should be encouraged. This can include mentorship programs, counseling services, and extracurricular activities that build rapport between teachers and students.
- viii. Steps should be taken to address the gender imbalance among teachers. This can involve targeted recruitment efforts and support programs for female teachers.

5.4 Suggestions for Further Studies

While this study provides valuable insights, further research is necessary to deepen the understanding of the factors influencing academic performance and the highest level of education completed among teachers. The following areas are suggested for future studies:

- i. Conduct longitudinal studies to track changes in the influence of various factors over time. This can provide insights into how long-term investments in material resources, physical facilities, and digital learning tools impact academic performance.
- ii. Complement quantitative data with qualitative research to explore the experiences and perspectives of teachers and students in more depth. Interviews and focus groups can provide nuanced insights into the challenges and opportunities in the education sector.

- iii. Conduct comparative studies across different regions or educational systems to identify best practices and successful strategies that can be replicated in other contexts.
- iv. Investigate the impact of recent policy changes on educational outcomes. This can include analyzing the effects of new educational reforms, funding allocations, and teacher training programs.
- v. Focus on the perspectives of students to understand how material resources, teacher expertise, physical facilities, and digital learning tools directly impact their learning experiences and outcomes.
- vi. Explore the effectiveness of integrating emerging technologies, such as artificial intelligence and virtual reality, into the educational environment. Assess how these technologies can enhance teaching and learning.
- vii. Study the well-being and job satisfaction of teachers to understand how their mental and physical health impacts their effectiveness and the overall academic performance of students.
- viii. Examine the role of parental involvement in supporting academic success. Investigate how schools can foster stronger partnerships with parents to create a more supportive learning environment for students.
- ix. By addressing these areas, future research can build on the findings of this study to further improve educational outcomes and support the development of effective teaching practices.

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APPENDICES

Appendix I: Consent Form

The study's working title is Impact of Learning Materials on Students' Academic Achievement in Day Public Secondary Schools in Kiminini Sub-County, Trans-Nzoia County, Kenya.

Mr. Joseph Wanyoike Mburu is the name of the researcher.

Get in touch with [+254 723 149011] if you need further details.

Introductions:

Your participation in this research study is cordially invited. Its purpose is to examine the relationship between the use of instructional materials and the academic achievement of secondary school students in the Kiminini Sub-County of Trans-Nzoia County, Kenya. The author, Joseph Wanyoike Mburu, is pursuing a Master of Education degree in Leadership and Management from Mount Kenya University, and this article is a component of his research project for that degree. Your participation in this study is totally voluntary, and you are under no obligation to do so. You are under no obligation to continue participating in the research and may discontinue participation at any moment with or without cause.

Students in the Kiminini Sub-County of Trans-Nzoia County, Kenya, who attend day public secondary schools, had their academic performance examined in this study. This study aims to examine the relationship between students' academic performance in day public secondary schools in Kiminini Sub-County, Trans Nzoia County, Kenya, and factors such as course content, teachers' pedagogical approaches, school infrastructure, and technological learning aids.

Instructions:

Please complete the following activities if you would want to be a part of this research project:

Make sure you've indicated your consent to participate in the study by filling out a permission form.

Please respond to the following questions on the effect of course materials on the academic achievement of secondary school students in the Kiminini Sub-County of Trans-Nzoia County, Kenya.

Your participation was kept anonymous, and no information that might identify you was collected.

Drawbacks and Implications:

There are no known risks associated with participating in this study. To be sure, this study might teach you a thing or two about how different types of instructional materials affect students' performance at day public secondary schools in the Kiminini Sub-County of Trans-Nzoia County, Kenya.

With respect to privacy, all data collected from participants will remain anonymous and undisclosed. If any presentations or publications are created as a result of this study, your identity will remain hidden.

Engagement is voluntary. You are under no obligation to participate in this study and may discontinue your involvement at any moment without explanation if you change your mind.

Please feel free to contact the researcher at [0723149011] if you have any questions or issues about this study.

Consent:

By checking this box, I confirm that I have read the previous sections and understand them, and that I am willing to participate in this study at my own discretion.

This is the name that appears on the label: The following names and numbers are protected:

Name (Printed): _____

Signature: _____

Date: _____

Appendix II: Questionnaire

You have been extended an invitation to take part in a research project that will investigate the impact that learning materials have on the academic performance of students attending day public secondary schools in the Kiminini Sub-County of Trans-Nzoia County situated in Kenya. This is part of a research project that is being undertaken by JOSEPH WANYOIKE MBURU in order to get a Master of Education degree in Leadership and Management from Mount Kenya University. Participation in this research is entirely optional, and you are free to opt out of taking part in it on your own will.

PART A: BIOGRAPHIC INFORMATION

1. What is your age?.....
2. What is your gender?.....
3. What is your highest level of education completed?.....
4. How long have you been working in the education sector?.....
5. What is your current occupation in the education sector?.....
6. Have you worked in day public secondary schools before? If so, how many years of experience do you have?.....

PART B: TO ASSESS THE INFLUENCE OF MATERIAL RESOURCES ON ACADEMIC PERFORMANCE IN DAY PUBLIC SECONDARY SCHOOLS IN KIMININI SUB-COUNTY, KENYA. KEY: 1 - Strongly Disagree 2 - Disagree 3 - Neutral 4 - Agree 5 - Strongly Agree

No	Item	1	2	3	4	5
1.	Could you please tell me how much you agree or disagree with this statement: "The availability of adequate materials resources in this school has a positive impact on academic performance."					
2.	How strongly do you agree or disagree with the following statement? "The lack of material resources in this school negatively affects academic performance."					
3.	In your opinion, in a scale of 1-5 does the school have sufficient material resources to facilitate effective teaching and learning?					
4.	Please rate how important it is for a school to have enough resources to help students succeed academically. Level 1-It has zero bearing, Level 2-is somewhat essential, level 3-is somewhat significant, level 4- is very crucial, and level 5- is really critical.					
5.	In your opinion, does the instructors' motivation and performance suffer due to the school's lack of material resources? 1-Absolutely not, 2-Minimally. 3-to a moderate degree, 4-Quite a bit, 5-extremely					

6.	In your view, would the academic performance of the students be enhanced if the school were to get more material resources? The scale goes as follows: 1= not at all, 2 = slightly, 3 = moderate, 4 = a lot and 5 = very.					
7.	To what extent are you satisfied with the educational institution's current material resource provision? 1-completely contented, 2-delighted to a certain degree, 3-Non-committal, 4-minor detriment, 5-Terribly Unhappy with					
8.	Would you think the school's enrollment would go up if it invested more money into its material resources? On a scale of 1-5					
9.	How often do you think the school assess and replace its material resources to ensure that students' academic performance improves? 1- always, 2- often, 3- sometimes, 4- very seldom in a week 5 - Never					

10. In your opinion, what is the biggest challenge faced by the school in ensuring adequate material resources for improved academic performance

Please specify.....

PART C: TO ASSESS THE INFLUENCE OF TEACHERS ON ACADEMIC PERFORMANCE IN DAY PUBLIC SECONDARY SCHOOLS IN KIMININI SUB-COUNTY. KEY: 1 - Strongly Disagree 2 - Disagree 3 - Neutral 4 - Agree 5 - Strongly Agree

No	Item	1	2	3	4	5
1.	What are your thoughts on the following statement? "The academic performance and success in this school are heavily influenced by the expertise and commitment of the teachers." Do you agree or disagree with this statement?					
2.	What percentage of the time do you agree or disagree with this statement? "The positive impact of the teacher-student relationship on academic performance in this school is evident."					
3.	How often do you believe the tutors here have the appropriate skills to teach the courses in which they are enrolled? 1-always, 2-often, 3-sometimes, 4-rarely, 5- never					
4.	The influence of competent and dedicated instructors on student success must be evaluated. 1 - Insignificant. 2-Not very significant Level 3-somehow significant, Level 4: Critical, 5-Extremely significant					
5.	Is the motivation and performance of teachers at this school impacted by their working conditions, such as income and benefits? 1-definitely not, Option 2: Minimally, 3-To a certain extent, 4-To a					

	significant extent, 5-Exactly in every way					
6.	How much do you suppose the kids' academic performance would increase if this school offered more opportunities for teachers to get professional development? 1-never; 2-Gently, 3-quite a bit, 4-often, 5-extremely					
7.	How pleased are you with this school in terms of academic achievement? 1-I am pleased with the results, 2- somehow, 3-not sure, 4- slightly disappointed, 5- Extremely Dissatisfied					
8.	On a scale of 1-5 do you think there is sufficient teacher-student ratio at this school to enhance student achievement?					
9.	Figuring out how often a school should review and monitor the performance of its educators is a key aspect of boosting academic attainment. Never, ever, underestimate the importance of this concept; it is crucial. This recommendation must be followed consistently and without fail. By following this guideline, one may ensure that any potentially negative effects are avoided. This is why you must never forget it and adhere to it at all costs. 1-Only on rare occasions, 2-On very unusual instances, 3 –not sure, 4- At all times, 5-without fail.					

10. What do you believe are the most significant hurdles that schools encounter when attempting to find skilled and devoted teachers in order to increase academic achievement?

Please specify.....

**PART D: TO ASSESS THE INFLUENCE OF PHYSICAL FACILITIES ON
ACADEMIC PERFORMANCE IN DAY PUBLIC SECONDARY SCHOOLS IN
KIMININI SUB-COUNTY, KENYA**

No	Item	1	2	3	4	5
1.	To what extent do you agree or disagree with the following statement: "The availability of physical facilities such as classrooms, a library, and laboratories in this school positively affects academic performance"					
2.	On what occasions do you believe the physical amenities of the school are sufficient to allow excellent teaching and student learning? 1- Always,2- often 3-occasionally,4- not even twice, 5-No way					
3.	How essential do you believe it is for a school to have strong physical facilities in order for kids to succeed? 1-Totally irrelevant, 2- not at all important, 3-average, 4 -very important, 5-Most importantly					
4.	Do you believe that the physical amenities of the school have an influence on teachers' motivation and effectiveness? On a scale of 1-5					
5.	How much do you believe improved physical facilities would improve the school's academic performance? 1 - Not at all, 2-Not sure, 3 –Nearly,4- A little bit more, 5-A lot more					
6.	How satisfied are you with the school's physical amenities right now? 1- Extremely contended, 2- Moderately satisfied, 3-unconcerned, 4- only moderately dissatisfied, 5- extremely dissatisfied					

7.	Do you think the school's enrollment would increase if additional physical facilities were made accessible to students? On a scale of 1-5					
8.	How often, in your view, should the school examine and improve its physical infrastructure to ensure greater academic performance? 1- No way, 2-not even twice. 3-Occasionally, 4-often, 5-always					

9. What, in your opinion, is the most critical barrier that the school must overcome in order to offer adequate physical facilities that will improve academic performance?

Please specify.....

PART E: TO ASSESS THE INFLUENCE OF DIGITAL LEARNING RESOURCES ON ACADEMIC PERFORMANCE IN DAY PUBLIC SECONDARY SCHOOLS IN KIMININI SUB-COUNTY, KENYA

No	Item	1	2	3	4	5
1.	Do you agree or disagree that "the availability of digital learning resources such as audio, video, graphics and animation in this school positively affects academic performance"					
2.	Tell me how frequently you think there are enough digital learning tools at your school to help teachers and students succeed. 1-very much available, 2-Somehow, 3- averagely, 4-unavailable, 5-rarely					
3.	How important do you think it is for students' academic success if schools have sufficient digital learning resources? 1: completely unimportant; 2: somewhat significant 3- Considered to be of moderate importance. 4- important, 5-Primarily crucial					

4.	Is the school's lack of digital learning resources having an impact on instructors' motivation and performance? 1: hardly at all; 2: rather 3:Mildly 4:Almost 5: A great deal				
5.	How much do you think students' grades would increase if the school had access to digital learning materials? 1: Not at all; 2: A little; 3: Moderate; 4: A lot; 5: Very				
6.	What do you think of the school's present selection of digital learning resources? 1-Extremely contended, 2- indifferent, 3- Mildly satisfied, 4-Modestly Unhappy, 5- very unhappy				
7.	In your opinion, would a rise in enrollment be possible if the school made more digital learning tools available to students? on a scale of 1-5				
8.	In your opinion, how often should the school evaluate and revise its online teaching materials to boost student achievement? 1-No way, 2-two to three times, 3-Occasionally, 4-often, 5-always				

9. What do you think the school's main obstacle is when it comes to providing students with sufficient digital learning materials to help them succeed in school?

Please specify.....

Appendix III: Interview Guide

Introduction:

1. Would you please provide us a brief introduction of yourself?
2. Would you please provide me some information about your experience in the subject of education and your current role?
3. What, in your opinion, are the main elements influencing academic achievement at these schools?
4. In what way would you rate these schools' material resource accessibility—such as that of textbooks, maps, charts, and lab equipment—?
5. What effect do you think these material resources have on students' academic success at these schools?
6. Do the schools have any trouble obtaining materials that have an influence on students' academic performance?
7. How would you rank the quality of instruction at these schools?
8. What do you think about the impact that these schools' instructors have on students' academic performance?
9. Are there any issues with the quality of instruction that affect the students' academic achievement at these schools?

10. What do you think about the impact of these schools' physical infrastructure on students' academic performance?
11. Are there any issues with physical facility utilization that have an impact on students' academic achievement in these schools?
12. What do you think about how these schools' academic performance is affected by digital learning resources?
13. Do these schools face any obstacles when it comes to accessing and using digital learning resources?
14. Does there exist any other variables that affect how well students succeed academically in these schools?
15. Are there any more details you would want to share that we haven't discussed?
16. What steps can be done to address these issues?

Appendix IV: Work plan

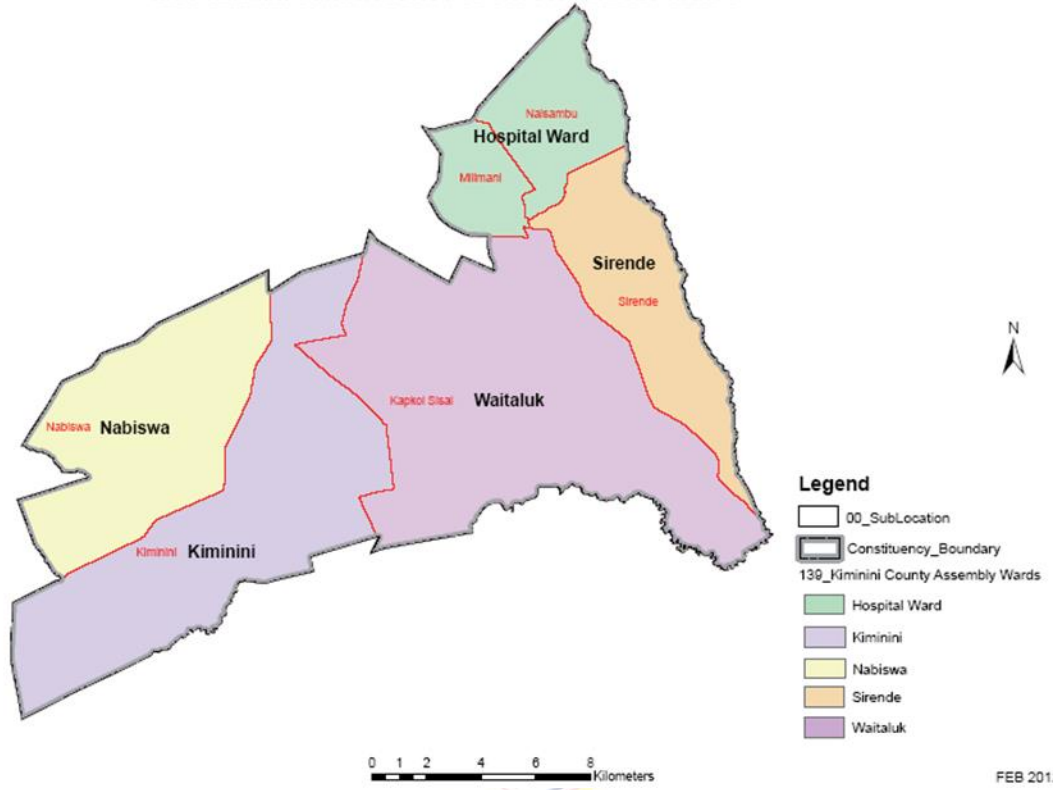
APPENDIX	EVENT	APPROXIMATE TIME			
		Week 1 to 4	Week 5 to 8	Week 9 to 12	Week 13 to 14
1	Data collection	Done	Done	Done	Done
2	Data analysis	Done	Done	Done	Done
3	Report writing	Done	Done	Done	Done
4	Presentation and submission	Done	Done	Done	Done

Appendix V: Budget

Personnel Costs:	Item	Total Cost
	Researcher (including transportation and subsistence) -	KES 100,000
	Equipment Costs:	
	Laptop -	KES 60,000
	External hard drive -	KES 10,000
	Voice recorder -	KES 5,000
	Camera -	KES 20,000
Materials Costs:		
	Printing and photocopying -	KES 5,000
	Stationery (e.g. pens, notebooks) -	KES 2,000
Travel Costs:		
	Transport to and from research sites -	KES 20,000
Communication Costs:		
	Phone calls and internet -	KES 5,000
Total budget:		KES 222,000

Appednix VI: Kiminini Sub County Map

IEBC KIMININI CONSTITUENCY COUNTY ASSEMBLY WARDS



Mount Kenya

Appendix VII: ERC Letter

Mount Kenya University



REF: MKU/ISERC/3591

Date: 04 April 2024

TO: JOSEPH WANYOIKE MBURU

REG: MED/2022/52438

Dear Sir/Madam,

RE: INFLUENCE OF LEARNING RESOURCES ON ACADEMIC PERFORMANCE IN DAY PUBLIC SECONDARY SCHOOLS IN KIMININI SUB-COUNTY, TRANS NZOIA COUNTY, KENYA

This is to inform you that **Mount Kenya University** has reviewed and approved your above research proposal. Your application approval number is **2635**. The approval period is **04/04/2024 - 03/04/2025**.

This approval is subject to compliance with the following requirements:

- i. Only approved documents including informed consents, study instruments, MTA will be used
- ii. All changes including amendments, deviations and violations are submitted for review and approval by **Mount Kenya University**
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to **Mount Kenya University** within 72 hours of notification
- iv. Any changes, anticipated or otherwise that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to **Mount Kenya University** within 72 hours
- v. Clearance for export of biological specimens must be obtained from relevant institutions
- vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal
- vii. Submission of an executive summary report within 90 days upon completion of the study to **Mount Kenya University**

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke> and also obtain other clearances needed.

Yours sincerely,

The Chairman
Mount Kenya University
Ethics Review Committee
P.O. Box 342 - 0100, Thika

Dr. Alfred Owino, PhD
Chairman, Mount Kenya University ISERC

Main Campus, General Kago Road, P.O. Box 342-01000 Thika.
Cell: +254 709 153 000 | +254 709 153 200
Email: info@mku.ac.ke, Web: www.mku.ac.ke
Chartered and ISO 9001 : 2015 Certified Institution.
Unlocking Infinite Possibilities

Appendix VIII: Introduction Letter



DIRECTORATE OF GRADUATE STUDIES

MED/2022/52438

4th April, 2024

National Commission for Science Technology & Innovation (NACOSTI)
Off Waiyaki, Upper Kabete
P.O Box 30623- 00100
NAIROBI, KENYA

Dear Sir/Madam,

RE: JOSEPH WANYOIKE MBURU - REGISTRATION NO. MED/2022/52438


The purpose of this letter is to introduce the above named student who is pursuing **Master of Education Degree** in the **Department of Educational Management and Curriculum Studies** in the **School of Education**.

The title of the research is "**Influence of Learning Resources on Academic Performance in Day Public Secondary Schools in Kiminini Sub- County, Trans Nzoia County, Kenya.**" It has been cleared by the University's Ethics Review Committee (Certificate attached) and now has to proceed to the field to collect data between **April, 2024 and June, 2024**.

Any assistance accorded to the student will be highly appreciated.


Thank you.


Mount Kenya University
P. O. Box 342 - 01000, THIKA
Office of the Director
Graduate Studies


Dr. Samuel M. Karenga, Ph.D
Director, Graduate Studies
Enc.

Main Campus, General Kago Road, P.O. Box 342-01000 Thika. Tel: +254 67 2820 000,
Cell: +254 720 790 796, 0709 153 000
Email: info@mku.ac.ke, Web: www.mku.ac.ke
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Appendix IX: NACOSTI Letter


REPUBLIC OF KENYA


**NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY & INNOVATION**

Ref No: **461212** Date of Issue: **25/April/2024**


RESEARCH LICENSE



This is to Certify that Mr., Joseph Wanyoike Mburu of Mount Kenya University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Transzoia on the topic: INFLUENCE OF LEARNING RESOURCES ON ACADEMIC PERFORMANCE IN DAY PUBLIC SECONDARY SCHOOLS IN KIMINI SUB-COUNTY, TRANS NZOIA COUNTY, KENYA for the period ending : 25/April/2025.

License No: **NACOSTI/P/24/34957**

461212
Applicant Identification Number


Director General
**NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY &
INNOVATION**

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See overleaf for conditions

Appendix X: County Commissioner Authorization Letter



OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND NATIONAL ADMINISTRATION

Telegrams:
Telephone : 054-30020
E-mail: cctranszoiacounty@yahoo.com
When replying please quote our Ref

COUNTY COMMISSIONER
TRANS NZOIA COUNTY
P.O. BOX 11-30200
KITALE

Ref. No: TNZC/CONF/ED.12/2VOLV/166

30th April, 2024

Deputy County Commissioner
KIMININI SUB-COUNTY

RE: RESEARCH AUTHORIZATION

This is to inform you that Mr. Joseph Wanyoike Mburu of Mount Kenya University has been authorized by National Commission for Science, Technology and Innovation to carry out research on "Influence of Learning Resources on Academic Performance in day Public Secondary Schools in Kiminini Sub-County" in Trans Nzoia County for the period ending 25th April, 2025.

Kindly accord him the necessary assistance that he may require.

COUNTY COMMISSIONER
TRANS-NZOIA COUNTY
P. O. Box 11 - 30200 KITALE

BEATRICE LUKOKO
FOR: COUNTY COMMISSIONER
TRANS NZOIA COUNTY

C.C.

1. County Director of Education
TRANS NZOIA COUNTY
2. County Secretary
COUNTY GOVERNMENT OF TRANS NZOIA

Appendix XI: County Education Office



REPUBLIC OF KENYA
Ministry of Education
State Department for Basic Education

Telegrams:
Telephone: Kitale 054-31653 – 30200
Fax: 054-31109
Email: transnzoiacde@gmail.com
When replying please quote:

County Director of Education
Trans Nzoia
P.O. Box 2024 – 30200
KITALE.

Ref. No. TNZ/CNT/CDE/R.GEN/1/VOL.III/55

Date: 30th April, 2024

TO WHOM IT MAY CONCERN

RE: RESEARCH AUTHORIZATION

This office acknowledges receipt of Research License No. **NACOSTI/P/24/34957** dated 24th April, 2024 from National Commission for Science Technology & Innovation.

Joseph Wanyoine Mburu of **Mount Kenya University** has been authorized to carry out research on **“Influence of Learning Resources on Academic Performance in Day Public Secondary Schools in Kiminini Sub-County, Trans-Nzoia County, Kenya”** for a period ending **25th April, 2025**.

The purpose of the letter is to request you to accord him the necessary assistance.

COUNTY DIRECTOR OF EDUCATION
TRANS - NZOIA COUNTY
P. O. Box 2024 - 30200,
KITALE.

PAMELA AKELLO, HSC
COUNTY DIRECTOR OF EDUCATION
TRANS-NZOIA COUNTY

Appendix XII: Plagiarism Index



JOSEPH MBURU

INFLUENCE OF LEARNING RESOURCES ON THE ACADEMIC PERFORMANCE IN DAY PUBLIC SECONDARY SCHOOLS IN KIM...

ProjectA

MBA

Mount Kenya University

Document Details

Submission ID

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128 Pages

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