

**INFLUENCE OF FREE PRIMARY EDUCATION ON PUPILS' ACADEMIC  
PERFORMANCE IN PUBLIC PRIMARY SCHOOLS IN LAIKIPIA WEST SUB-  
COUNTY, LAIKIPIA COUNTY, KENYA**

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**A Thesis Submitted to the Department of Education in Partial Fulfillment of the  
Requirements for the Award of Masters of Education in Leadership and Management of  
the Kenya Methodist University**

**OCTOBER, 2022**

## DECLARATION AND RECOMMENDATION

### Declaration

This thesis is my original work and has not been submitted for a degree or any other award in any other University.

Signature: ..... Date: .....

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### Recommendation

We confirm that this thesis has been submitted for examination with our approval as university supervisors.

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## **DEDICATION**

This thesis is dedicated to my beloved husband Mr. Nathan Thurania, my children; Christine, Victor and Jesse for their overwhelming support.

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I acknowledge the following personalities and institutions that have contributed to the success of this thesis. To begin with, is my sincere acknowledgement of my Supervisors Dr. Esther Thuba and Dr. Lucy Ikiara who have continuously and meticulously offered the necessary academic guidance. I acknowledge Kenya Methodist University for granting me the opportunity to pursue my Master's degree in Education Management and Leadership. I acknowledge the valuable inputs from all the lecturers who availed themselves with a lot of effort to make this dream come true. I also recognize my colleagues at my workplace, classmates and friends for their consistent and constant encouragement.

## ABSTRACT

Kenya's government implemented free primary education in 2003 as part of its attempts to attain universal primary education. Despite these attempts, worries about the educational quality have grown. Due to a rise in pupils' enrollment, the teacher-to-pupil and pupil-to-textbook ratios, as well as classrooms, are strained. The purpose of this study was to find out how free primary education affects pupils' academic performance in public primary schools in Laikipia West Sub-County. The research looked into the impact of teaching-learning resources, pupil-teacher ratios, teaching-learning methods, and teachers' perceptions on pupil performance in Laikipia West Sub-County public primary schools. The study was anchored on Cognitive Behavioral Theory, Systematic Approach to Instruction Theory and Maslow's hierarchy of needs theory. The research employed descriptive survey design. The target population was 490 teachers from 49 public primary schools in Laikipia West Sub County. A sample size of 220 teachers was selected using simple random sampling method. The researcher also targeted 10 head teachers. Semi-structured questionnaires and interview guides were used to obtain primary data. Thematic content analysis was used to examine qualitative data, while quantitative data was analyzed using descriptive and inferential statistics. The association between free primary education characteristics and pupils' academic performance was determined using correlation analysis. multiple regression model was used to determine the influence of independent variables on the dependent variable. Reliability results indicated Cronbach's alpha values greater than 0.7, implying that the questionnaire was reliable. The findings also indicated that teaching learning resources, teaching-learning methods, and teachers' perception had a positive and significance influence on pupils performance in public primary schools. Further, pupil teacher ratio had a negative and significant influence on pupils' performance. The study concluded that the most significant predictor of pupils' performance was teaching-learning resources, followed by teaching-learning methods, followed by teachers' perception, and lastly pupil-teacher ratio. The study recommended the need for the government of Kenya through the Ministry of Education to provide sufficient teaching-learning resources to public primary schools; to provide sufficient teachers to public primary schools; to strengthen teaching-learning methods in public primary schools. In particular, key emphasis should be on subject matter, learner's assignment, and assessment test. In particular, the focus should be on the following aspects: teachers class attendance, teachers' responsiveness, syllabus coverage and overcrowded classrooms. This study makes a significant contribution towards policy, practice and theory in the field of education leadership and management.

## TABLE OF CONTENTS

DEDICATION.....	iv
ACKNOWLEDGEMENT.....	v
ABSTRACT.....	vi
TABLE OF CONTENTS .....	vii
LIST OF TABLES .....	ix
LIST OF FIGURES .....	x
LIST OF ABBREVIATIONS AND ACRONYMS .....	xi
CHAPTER ONE .....	1
INTRODUCTION.....	1
1.1 Background of the Study.....	1
1.2 Statement of the Problem.....	4
1.3 Purpose of the Study.....	5
1.4 Objectives of the Study.....	5
1.5 Research Hypothesis.....	6
1.6 Significance of the Study .....	6
1.7 Scope of the Study.....	7
1.8 Limitations of the Study .....	7
1.9 Assumptions of the Study.....	8
1.10 Operational Definition of Terms .....	9
CHAPTER TWO .....	10
LITERATURE REVIEW .....	10
2.1 Introduction.....	10
2.2 Literature Review .....	10
2.3 Theoretical Framework.....	41
2.4 Conceptual Framework.....	45
CHAPTER THREE .....	47
RESEARCH METHODOLOGY .....	47
3.1 Introduction.....	47
3.2 Study Location .....	47
3.3 Research Design .....	47
3.4 Target Population .....	48
3.5 Sample Size and Sampling Technique .....	48

<b>3.6 Research Instruments .....</b>	<b>50</b>
<b>3.7 Pilot of the Research Instruments .....</b>	<b>50</b>
<b>3.8 Data Collection Procedure .....</b>	<b>51</b>
<b>3.9 Data Analysis.....</b>	<b>52</b>
<b>3.10 Ethical Considerations.....</b>	<b>53</b>
<b>CHAPTER FOUR.....</b>	<b>55</b>
<b>RESULTS AND DISCUSSION .....</b>	<b>55</b>
<b>4.1 Introduction.....</b>	<b>55</b>
<b>4.2 Reliability Test .....</b>	<b>55</b>
<b>4.3 Response Rate.....</b>	<b>56</b>
<b>4.4 Background Information Results .....</b>	<b>56</b>
<b>4.5 Teaching Learning resources and Pupils’ Performance .....</b>	<b>58</b>
<b>4.6 Pupil Teacher Ratio and Pupils’ Performance .....</b>	<b>61</b>
<b>4.7 Teaching-Learning Methods and Pupils’ Performance .....</b>	<b>63</b>
<b>4.8 Teachers Perception and Pupils’ Performance .....</b>	<b>66</b>
<b>4.9 Pupils’ Academic Performance .....</b>	<b>68</b>
<b>4.10 Correlation Analysis .....</b>	<b>70</b>
<b>4.11 Multiple Regression Model .....</b>	<b>72</b>
<b>CHAPTER FIVE .....</b>	<b>82</b>
<b>SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS .....</b>	<b>82</b>
<b>5.1 Introduction.....</b>	<b>82</b>
<b>5.2 Summary of Major Findings.....</b>	<b>82</b>
<b>5.3 Conclusion .....</b>	<b>86</b>
<b>5.4 Recommendations .....</b>	<b>87</b>
<b>5.5 Suggestions for Further Research .....</b>	<b>88</b>
<b>REFERENCES.....</b>	<b>89</b>
<b>APPENDICES .....</b>	<b>97</b>



## LIST OF TABLES

Table 1.1: Mean standard KCPE score between 2010 and 2019 in Laikipia West Sub-County primary schools.....	3
Table 3.1: Sample Size.....	49
Table 4.1: Reliability Results.....	55
Table 4.2: Background Information Results.....	57
Table 4.3: Descriptive Statistics on Teaching learning resources .....	59
Table 4.4: Descriptive Statistics on Pupil Teacher Ratio .....	61
Table 4.5: Descriptive Statistics on Teaching-learning methods.....	64
Table 4.6: Descriptive Statistics on Teachers Perception.....	66
Table 4.7: Descriptive Statistics on Pupils' Academic Performance .....	68
Table 4.8: Correlation Results .....	70
Table 4.9: Normality Test Results .....	74
Table 4.10: Multicollinearity Test Results .....	77
Table 4.11: Levene's Test of Equality of Error.....	77
Table 4.12: Model Summary; Free Primary Education and Pupils' Academic Performance.....	788
Table 4.13: ANOVA; Free Primary Education and Pupils' Academic Performance .....	788
Table 4.14: Regression Coefficients; Free Primary Education and Pupils' Academic Performance .....	799

## LIST OF FIGURES

Figure 2.1: Conceptual Framework .....	46
Figure 4.1: Linearity Test Plots .....	75

## **LIST OF ABBREVIATIONS AND ACRONYMS**

**CBT:** Cognitive Behavioral Theory

**EFA:** Education for All

**FPR:** Free Primary Education

**GOK:** Government of Kenya

**IEBC:** Independent Electoral and Boundaries Commission

**KCPE:** Kenya Certificate of Primary Education

**MDGs:** Millennium Development Goals

**MOST:** Ministry of Education Science and Technology

**NACOSTI:** National Commission for Science, Technology and Innovation

**NARC:** National Rainbow Coalition

**SATI:** Systematic Approach to Instruction Theory

**SPSS:** Statistical Package for Social Science

**TLR:** Teaching and Learning Resources

**UNESCO:** United Nations Educational Social Cultural Organization

**USAID:** United States Aid

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background of the Study**

One of the most significant forces behind economic progress is commonly mentioned as education. To achieve the Millennium Development Goals (MDGs) of universal basic education by 2015, developing countries have made large investments in cooperation with donors and Non-Governmental Organizations (NGOs). The development of knowledge, skills, and attitudes that are necessary for human survival is the focus of education. Individuals and communities can benefit from education in terms of economic and social growth. Education can contribute up to 20% of income development, according to the United Nations Educational, Scientific, and Cultural Organization (United Nation Educational Scientific and Cultural Organization [UNESCO], 2018). According to United States Aid, education is essential for upholding democracy, enhancing health, increasing per capita income, and protecting the environment (United State Agency of International Development [USAID], 2016). In this sense, education can be viewed as an investment in human abilities that aids in the promotion of economic growth, productivity, national and social development, and the reduction of social inequality.

According to the 1948-adopted Universal Declaration of Human Rights, every child has the right to an education. 2018 (UNESCO). Such international conferences on the right to education have taken place all around the world. The World Forum and the World Conference on Education for All (EFA), both held in Dakar, Senegal in 2000 and Jomtien, Thailand, respectively. The Millennium Development Goals aim to ensure that all children in the world enjoy free primary education by 2015/2018. In African countries, education is valued, but it faces numerous obstacles due to a lack of resources, and it is therefore not totally free. The government encourages citizens

to have access to free basic education. NGOs support free basic education to make it accessible to those in need.

Globally, free primary education has been a significant milestone for the economic development of many democracies particularly in America and Europe (UNESCO, 2018). In the United States of America, pupils must attend elementary schooling which is provided free of charge by the government. The government ensures that effective policies are put in place to enhance the smooth implementation and sustainability of free elementary education programmes in conformation to the international standards (Brown, 2016). According to UNESCO (2018), free primary education in Finland has proved effective in terms of its implementation and unwavering government support. These efforts, according to Brown (2016) have resulted in a tremendous improvement in pupils' enrolment as well as helping in mitigation of the system's inequalities in education access. Some African countries, such as Nigeria and Senegal, were among the first to implement free elementary education, with varying degrees of success, obstacles, and challenges. According to Ministry of Education Science and Technology (MOEST, 2015) implementation of free primary education in efforts towards achieving significant results has been faced by financial and policy challenges. This has greatly affected the achievement of quality education with literacy levels still below the international standard (MOEST, 2015). The Narc government implemented Free Primary Education (FPE) in Kenya in 2003 to fulfill a 2002 campaign pledge, after the Kenyan government accepted and signed off on the suggestions in the above-mentioned international convention. He also sees universal basic education as a development strategy. According to UNESCO's 2018 Policy Summary, free primary education has enabled 1.3 million children from poor backgrounds in Kenya to benefit from basic education for the first time by eliminating tuition fees (Ministry of Education, 2019).

The FPE policy was accompanied by a ban on school fees. The government imposes several requirements for filing taxes, which are very complicated. Basically, both at the school level and at the Ministry of Education headquarters, there are severe issues such as delayed funding, dropouts, and malpractice instances (UNESCO, 2018). According to UNESCO (2018), the implementation of the FPE policy had significant effects on pupils' enrolment and KCPE performance of public primary school pupils in Kenya.

According to Morumbwa (2016), enrollment increased from 6,314,726 to 7,614,326 in 2003. Since 2007, the national average result in the Kenya Basic Education Certificate (KCPE) exam has reached 245,500 points, up from 5,200 in 2007. (Ministry of Education, 2019). Of the 77,614 students who took the KCPE exam in 2011, only 48.28% scored 250 or more and only 5,806 or 0.75% scored more than 400 (Obasi, 2016). The situation in Laikipia West sub-county public primary schools is below the national KCPE standard mean score as indicated in Table 1 below:

**Table 1.1**

*Mean standard KCPE score between 2010 and 2019 in Laikipia West Sub-County primary schools*

<b>Serial No.</b>	<b>Year</b>	<b>Mean standard KCPE score</b>
1	2010	229.99
2	2011	232.06
3	2012	225.77
4	2013	228.87
5	2014	233.74
6	2015	230.15
7	2016	231.44
8	2017	222.42
9	2018	226.48
10	2019	226.79
<b>Overall mean score</b>		<b>228.77</b>

**(Source: Sub- County Director of Education Office, Laikipia West, 2020)**

The overall standard mean score over a period of 10 years remained at 228.77 indicative of poor academic performance. This is because the mean of 228.77 is far much below the average mean of 250 marks out of a possible total of 500 marks. The overall mean score in 10 years in Laikipia

West sub-county primary schools was far below the national standard mean score of 245.5 between 2005 and 2007. This poor performance in the Laikipia West sub-county may be attributed to large classes evident in the sub-county which has led to high pupil-teacher ratios. The implication is that learner-teacher contact is reduced and therefore effective learning and teaching are hindered.

Another challenge arising from large classes of up to 70 pupils per class is overcrowding which leads to challenges of class management contributing to indiscipline. Indiscipline has a negative impact on effective learning hence poor academic achievement. The large classes also contribute to stress on the part of the teacher leading to low morale and ill-health further causing poor academic performance. The large classes also pose the challenge of inequitable sharing of learning/teaching resources such as textbooks and teaching aids, further contributing to ineffective teaching and learning leading to diminished academic performance. In itself, poor academic performance affects learners, school administrators, parents and teachers leading to further low morale leading to a vicious cycle of poor academic performance.

## **1.2 Statement of the Problem**

The Kenyan government is claimed to have reaped numerous benefits from the adoption of FPE in 2003. According to (UNESCO, 2018), FPE has enabled 1.3 million children from low-income families to attend school for the first time. FPE does not urge parents or the community to establish new schools; instead, existing facilities must be utilized (Kemendiknas, 2019). Despite the many advantages of FPE, it also poses a number of obstacles at the same time, including funding, working conditions, textbooks, teaching and learning methods, and the proportion of student teachers who are partially supported by public study.

In addition, enrollment as a result of FPE increased from 5.9 million students to 7.6 million students, an increase of 29% between 2002 and 2003 (UNESCO, 2018). In 2011, 9.6 million

students were enrolled, an increase of 63% over nine years (Republic of Kenya, 2011). The increase in the number of students causes problems in administering the KCPE exam, including high teacher-student ratios, student-textbook ratios, and physical facilities. For example, between 2010 and 2013, the average national standard score on the KCPE test was 245.5 out of 500 points at the national level (Republic of Kenya, 2014). Of the 77,614 people who took the KCPE exam in 2013, only 48.28% scored 250 points, while 5,806 had more than 400 points.

The trend in dismal academic performance occasioned by FPE particularly due to increasing enrolment in primary schools contradicts the very reason envisaged by the FPE system. There are limited studies on how FPE has contributed to academic performance by primary schools pupils. It is imperative to find out the underline aspects that have contributed to this trend in academic performance. As a result, this study aimed to fill the gap by investigating the influence of FPE on pupils' academic performance in public primary schools in Laikipia West Sub-county.

### **1.3 Purpose of the Study**

The purpose of the study was to examine the extent to which free primary education influence the academic performance of pupils' in Lakipia West Sub-County.

### **1.4 Objectives of the Study**

The study was guided by the following objectives:

- i. To assess the influence of teaching-learning resources on academic performance among public primary schools in Laikipia West Sub-County
- ii. To determine the influence of pupil-teacher ratio on academic performance among public primary schools in Laikipia West Sub-County
- iii. To evaluate the influence of teaching-learning methods on academic performance among public primary schools in Laikipia West Sub-County



- iv. To find out the influence of teachers perception on academic performance among public primary schools in Laikipia West Sub-County

### **1.5 Research Hypothesis**

- i. **HO1:** Teaching learning resources have no statistically significant influence on academic performance among pupils in public primary schools in Laikipia West Sub-County
- ii. **HO2:** Pupil-teacher ratio has no statistically significant influence on academic performance among pupils in public primary schools in Laikipia West Sub-County
- iii. **HO3:** Teaching-learning methods have no statistically significant influence on academic performance among pupils in public primary schools in Laikipia West Sub-County
- iv. **HO4:** Teachers' perception has no statistically significant influence on academic performance among pupils in public primary schools in Laikipia West Sub-County

### **1.6 Significance of the Study**

Free Primary Education system in Kenya play a pivotal role in influencing government policies and decisions under the ministry of education. These regulations have a substantial impact on students' academic achievement in public primary schools. The study's main focus will be on the influence of free primary education on public primary school academic performance in Laikipia West Sub-County. The findings from this research will be used by the teacher's service commission to inform their policies of teacher employment, staffing and recruitment in public primary schools in Kenya. The findings will bring new knowledge on the impact of FPE in the Laikipia West sub-county. This knowledge can be used by future researchers in finding solutions to future education-related problems. The negative and positive impacts of FPE are significant in that they can be used to re-evaluate, re-design and re-implement the FPE policy.

The significance of the study lies in the fact that it can be utilized to inform Ministry of Education regulations on the impact of FPE on students' academic performance. The results of the study can also be used by the ministry of education to enable policy changes and to address the needs of students and instructors in Kenya's public primary schools. Education stakeholders in the Laikipia West sub-county can use the findings to inform interventions to the challenge posed by high pupil enrolments in public primary schools within their areas of jurisdiction. Policies guided by research findings have high chances of success. Development partners can also use the findings to understand the impacts of FPE in specific localities in the country. Each locality has unique issues specific to it thus interventions may vary from locality to locality.

### **1.7 Scope of the Study**

This study examined the influence of free primary education on pupils' academic performance in public primary schools in Laikipia West Sub-County, Laikipia County. It focused on four aspects of primary education: teaching-learning resources, pupil-teacher ratio, teaching-learning methods, and teachers' perception. This study focused on 490 public primary school teachers in West Laikipia District to provide an overview of FPE's contribution to student academic achievement in the region. Finally, the study was conducted between January to July 2022.

### **1.8 Limitations of the Study**

Best and Kahn (2008) define constraints as external factors that restrict the applicability of study findings in different contexts. In Kenya, there are many public primary schools; however this study was limited to Laikipia West Sub County public schools. The study did not cover all the primary schools in Kenya in due to limited finances and duration of study. In order to overcome the limitation of time and finances to cover the entire population, the researcher focused on a sample. When conducting the research, the following restrictions were taken into account. This study was

limited by the fact that some intermediate variables could not be controlled. For example, directors' capacities may differ due to experience and education. To mitigate this limitation, the researcher randomly interviewed head teachers of the chosen public primary schools notwithstanding their experience and training backgrounds. In addition, some participants were reluctant to fill out the questionnaire for fear of becoming a victim. To reduce this limitation, the researcher informed the respondent about the importance of filling out the questionnaire.

### **1.9 Assumptions of the Study**

The assumptions of the study are:

1. That the influence of FPE on student performance in public primary schools in the Laikipia West Sub county, all of the teachers questioned in the chosen schools would be able to offer pertinent information about FPE.
2. That all participants would answer the questionnaire truthfully and honestly,
3. That all public primary schools in West Laikipia District receive free basic education funds.

## 1.10 Operational Definition of Terms

This section provides definitions of terms and concepts used in the study.

- Enrolment:** It refers to the number of kids enrolled in public elementary schools in a class.
- Free Primary Education:** All children are entitled to a free primary school education, which is funded by the government.
- Performance:** Refers to the KCPE mean scores.
- Pupil-teacher ratio:** The number of primary school students divided by the number of primary school instructors engaged by the school.
- Teaching-learning methods:** This term refers to the concepts and practices that teachers employ to help students learn.
- Teaching and learning resources:** Teachers, instructional materials, classrooms, and recreational facilities are examples of assets or tools that promote effective teaching.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter introduced the literature review which was based on each of the variables and the past studies conducted on them. It presented the theoretical review based on the various variables i.e. independent and dependent variables. The conceptual framework was also included, which graphically displayed the relationship between the independent and dependent variables.

#### **2.2 Literature Review**

This section explored the literature of the previous research work with respect to the study variables. Studies relating to free primary education and pupils' academic performance were reviewed to determine the research gaps inherent in the study.

##### **2.2.1 Teaching Learning Resources and Performance**

According to Chunk (2019), teaching and learning resources include, among other things, teachers and teaching supplies including classrooms, teacher manuals and powders, chalk scraps, sanitary facilities, and entertainment facilities. These resources promote effective instruction. According to Kenya's MOEST (2019), FPE has enabled 1.5 million primary school kids to attend for the first time. Despite the increase in school enrollment, the Ministry of Education continues to receive insufficient funds from the government to purchase enough textbooks, teacher manuals, vacuum cleaners and others, resulting in limited resources. According to Chunk (2019), the amount of textbooks per pupil remains high - 4:1, compared to a global standard of 2:1. The majority of purchased materials are lost within a short period of time, forcing pupils to disregard them. The shortage of these vital resources has compromised affecting teaching and learning activities leading to low quality of educations in schools as well as poor academic performance.

Apart from the government paying for extra teachers to be deployed in various schools particularly those perceived to be less desirable due to either poor performance or accessibility issues, the government resulted in persuading teachers to take a post in those areas. Teachers and school authorities resisted the change, resulting in more staff shortages in low-income schools since teachers were hesitant to go to regions where parents couldn't afford private tuition after school hours (Chunk, 2019). Romiszowski (2018) finds that unless governments identify and implement effective policies for teaching and assessment in schools, student performance will not improve. According to Sifuna (2015), the teacher's role is as dynamic as the society in which he or she lives. According to Sifuna (2015), teachers need to have a supportive environment and resources in order to work effectively. Kinyanjui (2017) conducted research on the differences in the distribution of educational resources between regions of Kenya and in the separation between rural and urban areas. The study found that although national education assistance is provided equally by central organizations such as the Teacher Services Commission and the Kenya School Equipment Scheme; Rich areas like cities can also subsidize their schools. Rural areas need to build school facilities, pay for transportation, and are more vulnerable to environmental disasters. The Consortium for Access to Education, Transition and Justice Studies reviewed the literature on free primary education in East Africa. The monograph examines the history of education policy in Kenya, Tanzania and Uganda and compares their efforts to implement FPE since independence. In Kenya, the review of literature on FPE revealed that their issue in implementation and sustainability has been a major challenge in meeting the required goals in line with the international standards. Since the NARC government implemented the FPE policy in 2003, it has caused major problems in the public primary school system in Kenya and a decline in the quality of basic education. Sifuna (2015) noted that FPE was received with mixed feelings from various walks of

life. While some people express feelings of discontent, failure, and betrayal, among others, many low-income people see this as a God-given opportunity. Faced with many concerns, Sifuna (2015) finds that little progress has been made in the dissemination of learning itself and the adequacy of teaching materials for school-wide teaching.

Teaching materials are instructional aids used in classroom instruction and learning. In a study by Naisiano et al. (2020) the researchers looked at how instructional materials availability affected students' growth in senior elementary schools in the Karunga region of the Gilgil District. The results of the study showed students from public schools did not achieve the achievements of their peers in private elementary schools due to lack of resources and teachers. These materials equip students with basic knowledge and skills, as well as the ability to develop and support institutions and equip students with problem-solving skills and critical analytical thinking (Saad & Sankaran, 2020). The availability of teaching materials is very important and brings positive changes to the academic development of students. Inadequate teaching materials lead to abstract instruction and exhibit passive learning, which ultimately leads to poor performance (Wambua & Murungi, 2018). Livumbaze and Achoka (2017) in their research analyzing the effect of teaching and learning resources on student achievement in public secondary schools in Hamisi District, Kenya, found that teaching and learning success was related to the availability of instruction and learning resources. According to the study, underperforming schools need to be provided with adequate learning and teaching resources to improve their performance. This study also identifies the importance of adequate libraries, classrooms and laboratories to improve the performance of public schools, Laikipia Barat District, Laikipia District. The study found that some schools had turned classrooms into laboratories exacerbating three science subjects, even in small spaces. The lack of internet connection in schools hampers the online teaching and learning process.

Tobister (2017) conducted research on the variables affecting students' ability to succeed in school and earn a Certificate in Basic Education in the Kenyan districts of Kiminini and Transzoia. The study's findings showed that student performance in public primary schools was influenced by the availability of teaching and learning resources such as computer and science labs, libraries, classrooms, workshops, agricultural buildings and structures, farms, and playgrounds. According to the study, teachers and other staff care about the maintenance of school physical facilities because the availability of these resources and facilities in the school environment affects the teaching and learning process and student performance. Lack of adequate facilities, especially desks, classrooms, toilets, dormitories and teacher accommodation, reduces the quality of teaching. In addition, low salaries and poor working conditions for teachers affect their ability and motivation to provide quality educational facilities, which are strategic factors in the functioning of the organization. A good learning environment is associated with smaller class sizes, which can result in better academic performance and better access to resources. Clean air, good lighting, small, quiet, comfortable and safe are one of the indicators of a good learning environment, which is important for student academic achievement. There is a better correlation between textbooks and academic performance than other learning/teaching resources identified as teaching materials. In the same note, Musyoka (2018) in a study of academic factors influencing Kenyan students' performance at the Katiani sub-district high school diploma, found that educational resources, particularly radio, television, computers and projectors, in public schools and teacher shortages were inadequate. This can be explained by the fact that nothing changed right away when the teacher was kicked out of the school. The investigation also uncovered insufficient lab and library facilities, among other things. Finally, this study found that principals rarely reviewed teachers' lesson notes and rarely assessed teachers. Additional research results show that learning resources,



teacher adequacy, physical facilities, and the supervisory role of school principals are positively and significantly related to student achievement.

Julius and Ronald (2021) also did a study on the impact of educational resources on the performance of public high school students in West Transmara sub-district, Narok County, Kenya, which showed that educational resources affected the performance of public high school students in Transmara. "District, Kenya." Financial resources through community grants, early tuition payments, scholarships, and district development funds improve school administration, influence student performance, and thereby improve student performance. Students perform better when they have access to learning resources including suitable textbooks, writing prompts, e-learning tools like radio, tape recorders, television, and video recorders, as well as teacher manuals and instructions. Similar to this, physical features like well-equipped classrooms, libraries, labs, and special areas like clinics, staff rooms, dorm rooms, kitchens, cafeterias, and restrooms improve student performance. Human resources, including adequate and well-trained teachers and non-teacher staff, enhance student performance.

The use of appropriate training facilities at all levels, including equipment and staff, improves the quality and relevance of skills taught to students, according to Otieno and Ochieng (2020), who examined the effects of the 100 percent transition policy on public secondary schools in Machakos County, Kenya. Classrooms, labs, libraries, playgrounds, and textbooks are just a few examples of teaching and learning tools. In fact, physical assets play a significant role in fostering an environment that supports efficient teaching and learning. School implementation is related to the state of educational resources in schools. The distribution of teaching and learning resources in public schools is not balanced. Schools whose student population is dominated by students from

modest backgrounds tend to underperform due to insufficient teaching and learning resources due to high student-teacher ratios.

The impact of instructional materials on the academic performance of physics students in Sokoto, Nigeria, is the subject of a research study carried out by (Abubakar, 2020). The results of the study indicate that learning resources are needed to improve student achievement. The survey found that public schools have inadequate educational resources, leading to poor student performance. Training resources include textbooks, internet facilities, videos, CDs, projectors, and other electronic and print media. The availability of these educational resources needs to be increased in public schools, and free access to these resources needs to be increased.

A study conducted by Galle et al. (2020) on the impact of teaching materials on the academic performance of quantitative economics students at Northwestern State Colleges of Education, Nigeria. The survey results showed that the majority of respondents agree that they do not always use teaching materials during their lectures. There are no teaching materials in their school. The results also show that teaching materials have a significant effect on students' academic achievement. Appropriate training resources should be used to improve school performance. This means that teaching materials improve the academic achievement of quantitative economics students. Based on the findings of this study, Higher Education stakeholders should take appropriate steps to force all teachers to use teaching materials during the teaching and learning process and provide teaching materials to all universities in Nigeria to reduce student poverty to a minimum.

Kimalel (2019) conducted a study on the impact of educational resources on children's performance in early literacy in public preschools in Kandui District, Bungoma County, Kenya and found that educational resources are human and non-human materials. These resources are

used by teachers in teaching and learning situations to enrich their teaching and achieve their goals. The training resources are divided into four main categories such as Visual Aids, Audio Aids, Audio-Visual Aids and Specific Materials.

In selected secondary schools in Mbarara Town, Mbarara District, Uganda, Amon (2017) performed study on learning resources and student academic achievement. n After discovering the research intent, 200 respondents received a questionnaire that provided data on the role of learning resources and the skills covered. Interviews were conducted with high school students, respondents as well as principals and classroom teachers on questions related to the topic. The study found that insufficient and insufficient use of resources was therefore the reason for student disability and poor performance.

According to Kimalel (2019), visual aids require the use of visual aids such as tables, photos, and flashcards. Audio-visual devices produce sound and images such as televisions and videocassettes. Hearing aids that produce sound such as radios, tape recorders, and concrete materials that can be manipulated such as letter and word quotes, picture quotes, books, models, etc. Learning resources are used to enhance learning, stimulate curiosity and create an atmosphere that engages all of the learner's senses. Thus, learners are fully immersed in the learning activities of their structured learning environment and make a difference in the achievement of learners in different preschools. The availability of teaching materials has a strong positive relationship with the development of students' literacy skills. This indicates that the availability of educational materials allows preschool children to acquire more reading skills than writing skills.

### **2.2.2 Pupil-Teacher Ratio and Performance**

The number of primary school students divided by the number of primary school teachers yields the student-teacher ratio. Learning basically describes the number of students visited by a teacher

in the classroom. According to Chunk (2019), on the differences in FPE systems, the increase in enrollment as a result of FPE has had a major impact on schools. Between 2003 and 2008, primary school enrolment increased by 2.3 million kids, a 39 percent rise across the country. This has put a lot of pressure on the schools' ability to provide high-quality education. First, a significant teacher shortage has resulted from the flood of children into public primary schools. The number of teachers increases in tandem with the number of students. According to the government, no additional instructors should be hired. As a result, teachers are feeling overburdened. Sessions typically include 40 to 50 students, although some classes have as many as 100. According to Chunk (2019), there are not enough instructors, with a student-teacher ratio of 50:1 compared to the international standard of 40:1. Of rural places, class sizes have tripled as a result of a surge in older students finishing their school in 2003 who had previously missed out.

According to MOEST (2019), free primary education saw an influx in the number of new pupils' enrollment leading to congestion in classes and tremendous teachers' shortage in public primary schools. The World Bank promotes striking a better balance between increasing basic education enrollment and preserving minimal standards. He points out that many of the many young people who leave primary school do not know enough to read and write and become productive members of society, citing the cases of Morocco and Namibia as examples (WDR, 2007). Overcrowding, uneven PTR, and bad infrastructure have all had an affect on education quality, with some parents opting to send their children to private schools where teachers are available and quality teaching and learning is offered (Tooley, 2014). Chunk (2019) argues that the main idea behind FPE is to provide opportunities and access to classroom corridors for disadvantaged students.

However, the policy came with increased challenges occasioned by overcrowding in classrooms. Due to the enormous number of children to supervise, several public elementary schools,

particularly in rural regions, adopt a multi-shift system. Some pupils arrived in the morning, while others arrived in the afternoon. Because of the high number of students, teachers are less able to respond to individual student needs. Additionally, the learner teacher contact is reduced and therefore effective learning and teaching is hindered. Teachers also conduct lessons in a lecture format that does not attract the attention of elementary school children, less homework given because the teacher cannot proofread more than 70 reports each night. The quality of education has declined as teachers work too hard and fail to give the attention they need to students on an individual level, resulting in poor performance at KCPE.

### **2.2.3 Teaching-learning methods and Performance**

Teaching and learning refers to the principles, strategies, and methods used by teachers to enable students to learn and present. The strategy used by the teacher is determined partly by the subjects being taught and partly by the nature of the learner. Therefore, the instructional services provided by teachers in the classroom play an important role in students' academic achievement as well as in their cognitive development. Chunk (2019) says FPE registrations are flooding school facilities. When the program starts, the number of students increases, but the number of classrooms does not increase as the number of students increases. Classrooms built to comfortably accommodate 30 students are now three times that number. Due to a scarcity of desks, two or three pupils are forced to snuggle together on little stools. Even during class, the learning atmosphere becomes unsettling, which irritates students and teachers.

Research conducted by Brown (2006) provides premise and experiential support for the usefulness of holistic teaching and learning methods, with many Kenyan parents placing great emphasis on quality learning and education as the only way to escape the poor academic performance of their students. . free students. In today's schools, the trend is that teaching and learning methods promote

quality education because they inspire creativity and reflection. Efforts are increasingly being made to develop teaching methods that take into account not only the nature of the subject matter but also the way students learn. When teachers teach classes in lecture format and students are given less homework, then the quality of education is really compromised, which leads to poor results at KCPE.

Several African countries had tried and failed to implement free education policies before Kenya, with varying degrees of success, difficulties, and challenges. Several countries have questioned the concept, branding Nigeria as a promising education system that has yet to be realized due to the difficulties they encounter in obtaining quality education in accordance with international standards (MOEST, 2019). Nigeria introduced and exported FPE from the 1950s and in 2003 the literacy rate was still 55% (Ajetomobi & Anyanwale, 2005). In the subject of education, the EFA World Conference in Jomtien, Thailand, and the Dakar Conference in Senegal (2000) ushered in a paradigm change. Barriers to education include teaching methods, educational quality, and gender inequality (Boyle et al., 2002).

In Kenya, school enrollment rates increased by 90% following the introduction of the FPE policy in 2003 (MOEST, 2019). Although the government continues to mention this success rate, the dropout rate in public primary schools has increased due to the unsupportive learning environment and teaching and learning methods offered in public primary schools (Ayieke, 2005). While governments are praised for expanding enrollment and school availability, the EFA Global Monitor indicates that education quality is inadequate in most countries, with student-to-textbook ratios as high as 2:1 in some schools (MOEST, 2019). Kenya is located in Sub-Saharan Africa. Given the World Bank's focus on achieving a better balance between boosting basic education enrollment and preserving minimum standards. The researcher is interested in finding out whether

the minimum standard based on teaching-learning methods for pupils' performance has been met in Laikipia West Sub- County.

Ndayisaba (2017), when examining the relationship between student-teacher ratios and student academic achievement in public primary schools in Kikukiro District, Rwanda, found that classes with low student-teacher ratios tended to perform better than classes with high student-teacher ratios. Small courses can be utilized as a predictor of student success in addition to being used to boost the likelihood of academic success. This study shows that a student whose class has a low student-teacher ratio has a high chance of doing well. The results of this study indicate that student achievement increases with decreasing class size. The study's findings suggest that smaller classes are related with higher educational quality and more optimistic views. This study also draws conclusions about the relationship between class size and student performance and student behavior. The results showed that school performance in smaller classes (lower student-teacher ratios) improved significantly in regular classes.

The main result of the research according to Ndayisaba (2017) is that the utility of small classes is greater than large classes on all achievement tests in all subjects as well as on achievement tests related to norms and criteria. According to a different study, teachers spend less time managing students and more time actually teaching in small classrooms. According to other studies, teachers' attitudes improve in small courses. Smaller classes had fewer interruptions and disciplinary issues, which was a conclusion that was supported by additional research.

According to Waita and Mulei (2022), student-teacher ratio and its impact on academic achievement in public elementary schools in the Central Division, Machakos County, Kenya. The research design for this study was a survey-descriptive design. Data from the survey was gathered via questionnaires. To ascertain whether PTR necessitates conducting a national audit, the study

was conducted using simple regression. According to this study's findings, PTR and productivity are negatively correlated, meaning that as PTR rises, so does productivity and vice versa.

Simiyu (2019) investigated the difficulties associated with implementing free basic education in primary schools in Kenya's Bungoma District. This study employed a descriptive survey design. Principals, instructors, school boards, and students are the target demographics. Sample stratification was done to get a more representative sample because there are rural and urban schools. Questionnaires, interview strategies, document analysis, and monitoring plans are all examples of data gathering instruments. The study found that the trend of increasing enrollment since FPE began in 2003 has led to overcrowded classes and the opening of more schools. He also found that there were not enough teachers to cope with the growing number of students.

In Makueni County, Kenya, Gathumbi et al. (2017) conducted a study on the effect of student-teacher ratios on the performance of Basic Education Certificates. The poll results indicate that the majority of principals and teachers feel that there are not enough teachers in their schools. High student-teacher ratios in classrooms are also said to have an impact on academic performance. The limited number of teachers who are still available encounter significant challenges when attempting to manage overcrowded classes in the presence of such sets. This record high results in low efficiency in schools, which is one of the main causes of the poor quality of education provided in many elementary schools in developing countries. In schools with limited resources, a high student-teacher ratio brought on by crammed classrooms affects the standard of instruction.

In South Kakamega District, Kakamega District, Kenya, Mulinya and Orodho (2017) performed study on the Free Basic Education Policy: Coping Strategies in Public Elementary Schools. The study's descriptive design was chosen. A total of 117 people made up the sample, including 23 principals, 92 teachers, and a Ministry of Education worker who worked in the study area.



Questionnaires and interview procedures were the most crucial survey tools. The fundamental conclusion of this study is that, despite the fact that the policy of free primary education has resulted in an exponential rise in the number of primary school students, the amount of material and human resources that can be used to deal with this number is insufficient.

Malitano and Chobomba (2019) conducted a study to assess the impact of student-teacher ratios on the performance of prospective 9th graders: a case study in selected Ndola schools. From their research, they found that mission schools and private schools had better staffing rates than public schools. As a result, well-resourced schools perform better academically. Most public schools are understaffed and have inadequate infrastructure at all levels of our education system. The consequences of today's high student-teacher ratio are low individual student attention, lack of textbooks and other teaching materials, inability to conduct practical classes effectively, lack of student attention due to distraction from multiple classmates, and much more. The study also shows that public schools have the highest teacher-student ratios and therefore do not have enough time for student-teacher contact. This has a negative impact on students, especially children who are slow learners. The results showed that there was a significant relationship between the teacher-student ratio and student academic achievement. Students who receive poor grades are most impacted when students in large classrooms receive too much general instruction from the teacher rather than individualized attention on assignments. The significance of student-teacher ratios and class sizes is becoming more and more obvious as public schools across the nation continue to be impacted by government budget cuts.

According to Kalemba and Mulauzi's (2020), investigation of the effects of high student-teacher ratios on the caliber of the mathematics teaching and learning process in a sample of public secondary schools in Lusaka Regency, Zambia. The outcomes demonstrated that the teaching and

learning process was impacted by the teacher-student connection. The results of Kalemba and Mulauzi (2020) show that class size affects the teaching and learning process. This study identified the impact of the student-teacher relationship on the learning process, including the following; The first is the teacher's inability to give individual attention to students in the classroom. This leads to poor student development and ultimately poor performance.

Another effect of the high student-teacher ratio, according to a study by Kalemba and Mulauzi (2020), is the inability of teachers to assess student performance. Therefore, student progress is unknown and therefore tends to result in poor performance. Regarding class size and discipline, the study found that maintaining discipline in larger classes was difficult. Indiscipline has a negative impact on student achievement. Regarding the ratio of students and teachers and classroom space for mobility, the results show that due to the large class size, there is not enough space in the classroom for teacher and student mobility for group activities and therefore for supervision of group activities to be poor, which has an impact negative on the quality of learning. Insufficient resources for teaching and learning are identified as a significant issue influenced by big class size in relation to class size and teacher burnout, according to another finding of this research study. Large classes can cause teacher fatigue, according to teacher respondents in particular.

Oluyinka et al. (2021) did a study on the statistical treatment of student-teacher ratios as a measure of academic competence in mathematics for African development. The findings demonstrate that student-teacher ratios and students' math ability differ significantly, and this can always be one of the determinants of the trustworthy performance of private secondary schools in comparison to public secondary schools. The survey results show that when class sizes are small and the number of students in one class is much smaller, it is very easy for teachers to assess, teach, and receive

positive feedback. Most experts believe that lower student-teacher ratios produce better results than higher student-teacher ratios. In many cases, a higher student-teacher ratio results in higher scores. In general, the teacher-student relationship plays an important role in improving the quality of education. Actual class size may be much larger than the student/teacher ratio due to teacher absenteeism and specialization.

In a study by Ancho et al. (2021) that looked at student-teacher ratios as a factor in kids' reading achievement, it was discovered that nations with lower student-teacher ratios outperformed nations with greater student-teacher ratios. In the PISA reading test, Singapore, Malaysia, and Brunei Darussalam received scores of 408 to 549 points per teacher, whereas Thailand, Indonesia, and the Philippines had scores of 340 to 36 students per instructor, or -393 points. According to the context provided in this study, the demographics of the students in the classroom unquestionably have a favorable influence on the teaching and learning process, particularly reading.

Bello et al. (2019) studied the effect of Student-Teacher Ratio on Student Achievement in State Elementary Schools in Odeda District, Ogun. Results of research on student academic achievement and student-teacher ratios in Ogun public elementary schools suggest that the education system needs to be adapted to the general student ratio in the public school system. This requires an immediate focus by education planners and government politicians on improving the quality of education by increasing student-teacher ratios in all schools. Therefore, this study recommends, among other things, that the government immediately recruits more teachers through the Ministry of Education to reduce the weekly workload of teachers and subsequently lead to higher productivity of students' academic achievement.

The findings of a study by Obiakor and Oguejioffor (2020) which examined the effect of class size on secondary school students' academic performance in North Enugu Province of North Enugu,

Nigeria, show that the size of the class has a negative impact on academic performance. High student-teacher ratio leads to poor teaching methods. A high student-teacher ratio will also lead to excessive use of insufficient teaching materials, because it is very difficult for teachers to show teaching materials to students, especially those who are late.

The solution to the high proportion of students and teachers with inadequate teaching materials, according to Obiakor and Oguejioffor (2020), is for politicians to prioritize increasing funding for secondary education in Nigeria. Secondary school academic performance issues will be helped by additional financing, and school administrators and regulators need to pay closer attention to the number of pupils in each class to prevent overcrowding. The study came to the conclusion that large class sizes are associated with poor academic performance, ineffective teaching strategies, and inappropriate use of instructional materials because it is very challenging for teachers to demonstrate learning materials to students, especially those in the back. Also, most of the time, the teacher is tired after walking around the class, and the management of the class is always difficult.

According to Saavedra (2019), free primary education has seen an influx of new students enrolled, leading to class overcrowding and a huge shortage of teachers in public primary schools. The World Bank is promoting a better balance between increasing primary school enrollment and maintaining minimum standards. Saavedra (2019) using the examples of Namibia and Morocco, demonstrates that many children who graduate from primary school lack the knowledge necessary to become literate and contributing members of society. Because of overcrowding, unequal PTR, and inadequate facilities, some parents choose to enroll their children in private schools where teachers are more readily available and where high-quality instruction is offered. Based on the

research results, the main idea behind FPE is to provide opportunities and classroom corridor access for underprivileged students.

Teaching approaches are the key to enhancing student performance, according a research study by Ganyaupfu (2013), that focused on teaching strategies and students' academic achievement. Teachers must employ the most effective teaching strategies for the particular goals and results at the level in order to enable the transfer of knowledge. Additionally, since every learner interprets and responds to questions differently, teaching approaches work best when they are tailored to the needs of the student. A teacher-centered approach is one that will be implemented in the classroom. By using this approach, teachers merely impart knowledge to the class without encouraging student engagement. The least practical, more theoretical, and easiest to memorize strategy is this one. A student-centered approach to instruction is another technique. Many academics are increasingly employing more adaptable and student-centered techniques to encourage active learning as a result of the development of the concept of discovery learning. To promote curiosity, critical thinking, analytical inquiry, and enjoyment of learning, the majority of teachers nowadays employ a student-centered approach. The teacher-student interactive method is the final teaching strategy identified by this research. Both the teacher-centered approach and the student-centered approach are used in this teaching method. When students present information about a subject, it is more likely to be remembered than when lecturers do the same.

Kathare (2020) studied the impact of instructional strategies on deaf children' academic achievement in mathematics in Meru County, Kenya. The results of the study reveal the following findings. The use of different teaching methods was found to improve the academic performance of deaf students in mathematics. The study also discovered that teachers' primary methods of communication when instructing deaf pupils in mathematics were sign language and everyday

conversation. The study also discovered that the academic mathematics performance of deaf students in schools and special units is influenced by good communication, the availability of resources for teaching and learning, effective teacher preparation, and student attitudes. The study also discovered that interactive teaching and learning strategies between teachers and students, such as tailored peer teaching and learning, can help children who are having trouble with math.

Another study conducted by Munawaroh (2017) examined the impact of teaching methods and learning environment on students' academic achievement in vocational subjects and entrepreneurship in vocational high schools. The world of education includes various learning methods. Teaching methods are an important factor in learning and without learning methods, learning will not be effective. Therefore, an effective teaching method is needed so that the learning process can run well. Every teacher must have their own method in conveying material to students, but not all students can accept the teacher's method. Therefore, teachers must master the teaching methods that best suit the individual needs of students. There are several teaching methods applied by the teacher in the classroom such as lecture method, question and answer method, discussion method, task management method, demonstration method, training method, social drama method and role method, group work method, problem solving method and method in the workplace while traveling. The application of teaching methods requires a special environment and atmosphere. In this way, a conducive learning atmosphere can be created to achieve good student achievement. Particular attention should be paid to the types of teaching methods that need to be used to maximize learner potential and improve performance.

There are other studies that have been conducted to explain the teaching methods that teachers use to improve performance. A study on the effect of teaching strategies on the academic performance of secondary school pupils in Nigeria was undertaken by Isa et al. (2018). The results showed that

the teacher's teaching method determines the extent to which students present their scientific knowledge. The results of this study also show that most of the teacher's teaching methods have a great influence on students' academic achievement. Isa et al. (2018) list three types of teaching techniques: teacher-centered methods, student-centered strategies, and teacher-student interactive techniques. The teacher-centered approach limits the information that students receive from the teacher while failing to increase their interest in the subject being taught. This approach is the least practical because it does not encourage discussion; it is more theoretical because the teacher only provides direction and memorization to students. In the student-centered method, this method is more comprehensive and assesses the individual needs and possibilities of students in learning. Many academics are increasingly employing more adaptable and student-centered techniques to encourage active learning as a result of the development of the concept of discovery learning. To promote curiosity, critical thinking, analytical inquiry, and enjoyment of learning, the majority of teachers nowadays employ a student-centered approach. A teaching strategy that combines elements of both teacher-centered and student-centered techniques is known as the interactive teacher-student method. This approach promotes conversation between instructors and students. This teaching approach can help students reach their full potential and boost both individual student performance and school wide achievement. Most teachers today use an interactive teacher-student approach to encourage student interest, analytical inquiry, critical thinking, and enjoyment. In *Kinematic Motion: Graphical Interpretation and Conceptual Understanding*, Mvula (2020) looked at instructional strategies and learners' academic achievement. A quasi-experimental design was employed in this investigation (non-randomized control group design before and after testing). As a survey tool, the questionnaire was employed. According to the one-way ANOVA approach and Tukey's HSD post hoc results, there was no appreciable difference in the efficacy of the three

training methods. According to the average results, which showed that the group using the method, the teacher-student interactive approach was the most effective teaching strategy, followed by the student-oriented approach, and the teacher-oriented approach was the least effective.

In Kenya's Dadaab District, Garissa Regency, public secondary schools, Muema et al. (2018) examined the connection between instructional strategies and math students' performance. Although the data collecting and analysis methods for this study are mixed, it adheres to a quasi-experimental research design. All of the principals, all of the math teachers, and two students from the ten secondary schools in the Dadaab sub-district made up the target group. According to this study, there is a link between effective teaching strategies and students' math proficiency. Teaching through information and communication technology is more related to student achievement than traditional teaching methods.

There are several factors that cause the ineffectiveness of the teaching and learning process in elementary schools (Mupa, & Chinooneka, 2017). Mupa and Chinooneka (2017) tried to examine the factors that contribute to effective teaching and learning in primary schools. Mixed methods were used for data collection. This study indicated that teachers didn't employ a variety of instructional strategies. They don't prepare various media for use in the process of teaching and learning. Textbooks and curricula are the only teaching resources available to teachers. The learning and teaching atmosphere for students is severe and unpleasant, and teacher morale is low. Parental support for additional materials such as textbooks and book reviews is very low. Some parents teach their children to do homework. They don't offer their kids any extra classes. Schools lack textbooks, test books and textbooks to increase children's knowledge.

The academic accomplishment of Swahili pupils in public and private secondary schools in Lang'ata District was the focus of a research study by Atandi et al. published in 2019. The study's



findings suggest that a teacher's choice of instructional strategy has a significant impact on the efficiency of various teaching and learning processes. Teaching methods affect the academic performance of Swahili students. It is very important to have trained teachers who understand each student's needs and abilities and can deal with them individually. According to study by Atandi et al. (2019), group projects, demonstrations, and question-and-answer sessions are the next most popular teaching techniques among Swahili language instructors. According to this survey, the lecture-based technique of instruction predominated in classrooms. The purpose of this study is to evaluate the efficacy of various teaching strategies. Teachers must understand that giving pupils tasks to accomplish rather than simply having them memorize facts will increase learning effectiveness. Students create knowledge through activities that are experience-based rather than those that are instructor-led.

A study conducted by Oke (2020) on teaching methods and student academic achievement middle School Teachers in the East Ibarapa Regional Government. The teacher-student interactive learning method was found to be the most effective teaching strategy, followed by the student-oriented approach, and the teacher-oriented approach was found to be the least effective, according to the average score. Additionally, most traditional teaching techniques are instructor-directed and devoid of any kind of student involvement, leaving students to passively take instruction from the teacher without becoming interested in the subject. The teacher-centered method is theoretical rather than practical and promotes memorizing. The teaching methods available to teachers in teaching situations can be divided into four broad areas. These methods include teacher-centered methods, student-centered methods, content-oriented methods, and interactive or participatory methods.

In the teacher-centered method, the teacher is given the role of a master. Teachers are seen by students as experts or authorities. Learners, on the other hand, are meant to be passive and abundant recipients of knowledge from the teacher. These methods include presentation or lecture methods. The second method is a learner-oriented method. In a learner-centered method, the teacher or trainer is both a teacher and a learner. According to Oke (2020), the teacher also acts as a learner. This method encourages student participation and thus improves student performance. The third method is content-oriented. In the content-oriented method, both the teacher and the students must match the content being taught. Content-oriented methods argue that the information and skills to be conveyed are considered sacred or very important. This method is also effective for improving student achievement. Great importance attaches to clarity and careful content analysis- interactive or participatory methods. The interactive content or participatory method borrows slightly from the other three methods without undue emphasis on the learner, content, or teacher. These are four methods that can be used in training.

Vrioni (2019) conducted a study that focused on the effect of group learning on students' academic performance. According to the author, there are two approaches that teachers use in the classroom. These methods include a lecture approach and a group or collaborative learning approach. This study presents an attempt to demonstrate that group learning provides opportunities for classroom participation between students and students and teachers, thereby creating a learning environment. The large-scale lecture technique, in contrast, provides uncommon chances for student engagement, information transfer to novel contexts, long-term memory, and incentive for additional learning.

Further, Vrioni (2019) claims that this study examines how group communication might enhance academic, social, and personal understanding. This study demonstrates that professors who switch

from lecturing solely to group instruction help their students achieve academic and cognitive brilliance, which enhances performance. This study shows that there are benefits to moving from a traditional teacher-centred classroom to a student-centred environment that encourages communication. Group learning requires building a better educational experience for all students and a better environment for teachers to become professional in order to improve students' academic performance.

A research study was conducted by Usmani and Dawani (2017) on teaching methods and their impact on student performance. The results showed that many teachers tried new teaching methods in the classroom to make the learning process more effective. The results showed that the learning achievement of students who were taught through distributed learning was better than that of mass learning. According to Usmani and Dawani (2017), the comparison between multimedia and teaching tools and speaking chalk shows that chalk and conversation are more effective tools in distributed learning and mass learning, and improve academic performance and student retention rates increase and improve.

According to Usmani and Dawani's (2017), study, pupils who received instruction through distributed learning performed better than those who received instruction through mass learning. This study makes the case that it is crucial to find and evaluate teaching strategies that can help students learn more in the long run and perform better overall. Massive and distributed classroom practice makes sense and has shown good results in identifying the real concerns of instructors in the classroom. The test findings demonstrate a striking improvement when students are observed using distributed learning, which is a review strategy in place of conventional review activities. Contrarily, a comparison of the teaching methods used in mass and remote education—chalk and

conversation versus multimedia—reveals that the latter is more effective in raising academic achievement and retaining students.

Mbia and Nsungo (2019) conducted a study on the impact of innovative methods of teaching physics on academic achievement of high school students in Akamkpa City. According to this study, there are different teaching methods, including peer education, problem-based learning, discovery learning, and collaborative methods. The results showed that students who were taught using peer, problem-based learning, discovery learning and collaborative methods achieved much better results than those taught using traditional methods. According to this study, teachers should aim to integrate as deeply as peer education; problem-based learning, discovery learning and collaborative approaches in physics education in secondary schools; and textbook authors should appropriately incorporate the use of these innovative instructional strategies to guide teachers and students in their use. In general, students taught using collaborative methods performed better than students taught using other innovative teaching methods. This means that the development and introduction of masculine and results-oriented learning approaches in physics education should be encouraged.

Welp (2021) examined the progress and potential of education in Kenya. In Kenya, school enrollment rates have increased by 90% since the introduction of the FPE policy in 2003 (MOEST, 2019). Although the government continues to mention this success rate, the dropout rate in public elementary schools has actually increased due to the unsupportive learning environment and teaching and learning methods offered in public elementary schools. While governments boast increased enrollments and school supply, the EFA Global Monitor points out that the quality of education is inadequate in most countries, with student-to-textbook ratios reaching 2:1 in some schools (MOEST, 2019). Kenya is located in sub-Saharan Africa. Given the World Bank's focus

on finding a better balance between increasing enrollment in basic education and maintaining minimum standards. Researchers are interested in knowing whether the minimum standards of teaching and learning methodology for student representation in West Laikipia County have been met.

#### **2.2.4 Teachers' Perception and Performance**

Teachers' perception relates to the teachers' attitude, morale and motivation which can affect their service delivery as well as in the pupils' performance. According to the World Bank (2016), the overcrowded classroom makes it difficult for a teacher to effectively manage the high number of pupils contributing to the challenges related to pupils' indiscipline. Indiscipline has a negative impact on effective learning hence poor academic achievement (World Bank, 2016). When pupils are undisciplined the teacher loses morale and gets demotivated in academic achievement. Kenya, Paul (2008) found out that large classes cause inefficiency on part of the teacher in addressing the pupils' needs. This poses stress to the teacher leading to low morale and ill-health further causing poor academic performance.

According to Paul (2008), the implementation of the FPE policy has opened the door for enthusiastic students who have been excluded from school. Therefore, the unexpectedly high participation rate is a major challenge for FPE host countries. According to UNESCO, it is difficult to discipline a class of 200 children in Malawi, which leads to aggressive conduct. Teachers face a significant problem in providing assistance and maintaining classroom discipline as a result of this behavior. In Kenya, dealing with tens of thousands of "elderly" and street children who want to return and finish their primary school is more challenging, and they frequently persecute younger and smarter people (UNESCO, 2018).

Mwai (2011) discovered that teacher credentials affect student accomplishment in a comparison study of low and high achievement between pupils in rural and urban schools. Faced with severe teacher shortages, several countries have employed underpaid and poorly trained “volunteer” teachers to fill gaps while impacting the quality of education offered to students. Therefore, the Kenyan government must act more quickly to address the teacher shortage by training and recruiting enough teachers to improve the quality of education in public primary schools.

Similarly a study conducted by Redding (2019) on a teacher like myself: A review of the impact of racial/ethnic student-teacher matching on student perceptions and academic outcomes and teacher behavior found that externalized problem behaviors were the only behavioral assessments made with grades different depending on the race of the teacher. According to the study, black and Hispanic students were less likely to be perceived as fighting, destructive, and controversial by same ethnic teachers than when they were assigned to teachers of a different race/ethnicity. In terms of student achievement, this study shows that hiring black teachers is associated with increased achievement of black students. This improvement has a negligible impact on the difference in black and white performance. This is noteworthy; this conclusion is the result not only of finding consistently zero, but also of the lack of attention paid to Latin students by Latin teachers in a number of studies. The main theory put up to explain these findings is that Hispanic students and teachers' capacity to establish a shared sense of culture is constrained by variations in nationality or immigrant generations.

At the Biology High School in Gilgil Nakuru County, Kenya, Kiarie (2017) did a study on the effect of teachers' perceptions on students' perceptions and performance in environmental education. According to the study's findings, biology teachers have a favorable opinion on environmental education. Although biology instructors are qualified, they still require in-service

training in environmental education. Teachers lack the expertise and abilities to successfully conduct environmental education, despite the fact that they believe it to be a crucial topic of study. They lack the practical skills and appropriate EE teaching materials such as audiovisual teaching aids.

Kiarie (2017) suggested that biology teachers need a variety of abilities and expertise to deal with it because the success of the environment is heavily dependent on a well-developed instruction system and consistency in presenting its varied difficulties. Teachers and the media should be more knowledgeable about environmental concerns because they are significant sources of environmental information and can help pupils learn more. According to the findings, teachers' opinions are crucial in determining how well students learn, retain, and use information to alter their attitudes and performance in environmental education. Therefore, environmental awareness needs to be fostered in secondary schools so that students can develop positive attitudes and care for the environment.

A study on the impact of teachers' perceptions and expectations on student achievement, conducted by Contreras (2019) the study found that teachers have specific perceptions and expectations of their Spanish-speaking students. Social constructivists would argue that teachers' cultural assumptions and social beliefs influence their practice, and therefore the abilities of their students. Without critical reflection and control, the education system will continue to adhere to its injustices. When we expect something to happen, our expectations and the resulting behavior become so. This concept of self-fulfillment prophecy was introduced into research by psychologist Pfungst in 1911 with the case of Clever Hans. This is one of the first studies to show that people can control and even create situations based on their preferences and expectations. The first stage involves a person's belief that an event will occur in the future. In the second stage, these beliefs

or expectations lead to new behaviors that would not have occurred without the new beliefs. In the last phase, the expected event occurs, as a result of which the prophecy is fulfilled. Without even realizing it, we can get the results we expect. Teachers' prejudices and expectations affect students' academic performance.

Campbell et al. (2020) conducted a study that focused on the perceptions of primary school teachers. Primary school teachers feel that introducing continuous assessment will improve performance. The results show that continuous assessment is an excellent program that offers students the opportunity to continuously improve over time by being assessed during the training period. The results showed that the program was critical and emphasized the importance of assessment in the teaching and learning process.

According to Campbell-Phillips et al. (2020), the benefits of adopting a continuous evaluation component will help children in other subjects of the primary school curriculum and their personal growth as persons. The implementation of this program must take into account the participants' suggestions for development, even though their views are directly tied to their schools. These educators' views also represent their understanding of how to carry out the program and how they believe they should be involved to make it more meaningful and fruitful. Students can benefit from a quality education, the development of inventiveness and a sense of competence, and chances for autonomous and lifelong learning by participating in ongoing teacher assessment as part of their learning.

Adeyemo (2017) carried out a research study with the main goal of determining the impact of teachers' and students' perceptions of the physics learning environment in the classroom on their performance in physics in secondary schools. Many existing studies confirm that the perception of physics teachers increases student achievement. According to the author, the teacher is the most



important educational factor that affects student learning achievement. In addition, the attitudes and interests of teachers can affect student performance, because the teacher is seen as someone who teaches students or directs them to do something. According to this study, the attitudes and interests of teachers play an important role in building good relationships with students for the advancement of education. Therefore, in order for a teacher to choose the right teaching media for physics class, the idea of what they want to teach and how they want to teach should be in their mind first before deciding on a medium that takes individual differences into account by students. The main purpose of teaching according to this study is to meet the needs and interests of students, because some of them can learn better with simple explanations in class, while others learn better by learning with machines.

A research study conducted by Williams (2017) focused on the impact of teacher expectations and perceptions on the reading achievement of third and fifth graders. According to the study's findings, there is no obvious connection between teacher expectations and perceptions of student equality, the classroom atmosphere, relationships between students and instructors, and demographic characteristics of teachers like age, race, or ethnicity. Experience, education, and degree. Teacher expectations often differ from student expectations, with student expectations influencing interpretations and perceptions.

In a study by Williams (2017) it was found that instructors' expectations had an impact on both perception and interpretation. Teachers' expectations influence perception by making them aware of what they expect and less likely to observe what they do not expect. Even if they don't match the realities, some expectations are true. In this way, even if a hope is unfounded, it might still exist. The findings also demonstrated that after a year, pupils who had teachers who anticipated them to develop intellectually outperformed kids who did not have such teachers. Students that are

more successful and do better in their academic studies are produced by teachers who have high expectations for student achievement and who communicate these expectations, as opposed to those who do not.

The relationship between teacher expectations and teachers' assessments of student quality was the subject of a research study carried out by (Timmerman et al., 2018). According to the study's findings, pupils tend to live up to professors' high expectations of them when they are expected to perform well. In both science and experimental contexts, Pfungst's (1911) self-fulfilling prophecy affects teachers' predictions about students' future performance. The study comes to the conclusion that self-fulfilling prophecies typically have a negligible effect on student achievement.

According to Timmermans et al. (2018), expectations are largely cognitive phenomena that teachers use to draw conclusions about potential future performance and behavior based on previous and current student performance and behavior. Most often, the correctness of teacher expectations is determined on the basis of the match between teacher expectations and students' past performance. When teachers routinely demand too much or too little from a certain group of students, prejudice against teacher expectations or different teacher expectations may result. These findings might imply that primary school teachers view good work habits and self-esteem as crucial characteristics for students' success in Dutch secondary school. On the other hand, students who believe they act more positively in class appear to have fewer expectations from professors.

The impact of teacher-student relationships on African American achievement was examined by Kenyatta (2019). According to the findings, teachers gave pupils with higher socioeconomic statuses greater ratings than those with lower socioeconomic statuses. Research has shown that IQ frequently differs from teacher forecasts. Additionally, research suggests that race has played a

deterministic role in instructors' "perceptions of student ability," with minority students being seen to be less capable even when their performance is on par with that of their non-minority peers.

This bias, Kenyatta (2019) argued, often affects the interactions between teachers and students, and impacts the curriculum and learning opportunities for students. According to this, students in primary schools are divided into different educational paths. The grouping based on these abilities largely reflects the teacher's assessment. Teachers orient themselves to the structure of the school, which requires control, homogeneity and the cultivation of socially approved behavior and language. School norms prioritize qualities such as consent and passivity in gender and racial minorities, and teachers are tasked with suppressing behaviors that conflict with these traits and replacing them with more favorable behavior. If students are less prone to this compliance, they will be tagged and given an alternative place. The teacher acts as a critical component in the termination process, and suspensions are often the result of biased classroom interactions. These prejudices shape student performance in schools.

According to a study by Ceroni et al. (2016), on teachers' perceptions of students' potential and difficulties, the results show that from the teacher's point of view, the effect of drugs has a positive effect on learning difficulties and inappropriate behavior is also significantly influenced by learning difficulties. The outcomes also demonstrated a detrimental impact on students' potential due to learning challenges and inappropriate behavior. This study intends to analyze how the teaching-learning profile of the new institution affects the underlying circumstances of students' prospective possibilities and challenges in the classroom.

According to Ceroni et al. (2016), it is important to examine the manifestations of these behaviors because, in the teacher's opinion, students are neither aggressive or immoral. The majority of educators said they had seen instances where pupils looked to be under the influence of alcohol or

other drugs. These findings show that teachers must pay close attention and receive training in how to act and mentor pupils in order to effectively handle circumstances like these in the classroom. This study also addresses instructional design, taking into account the characteristics of college freshman and the fundamental principles of the teaching-learning connection.

UNICEF (2018) examined the implementation of FPE policies and opens the door to enthusiastic students being expelled from school. Therefore, the unexpectedly high participation rate is a major challenge for FPE host countries. It is difficult to discipline a class of 200 children in Malawi, which leads to aggressive behavior, according to UNESCO. As a result of this behavior, teachers face significant problems in terms of supporting and maintaining discipline in the classroom. In Kenya, dealing with tens of thousands of "adults" and homeless children who want to go back and finish primary school is more of a challenge, and they often persecute younger and smarter people.

## **2.3 Theoretical Framework**

Theories are formulated to provide an explanation of various phenomena and challenging situations as well as increase the understanding of facts and assumptions of critical issues that affect humans. The theoretical framework is a framework that underpins a research study's theory and hence describes and explains the existence of the research problem being investigated (Gabriel, 2013). The study adopted the Cognitive Behavioral Theory, Systematic Approach to Instruction Theory and Maslow's hierarchy of needs theory. Their relevance to the study was also discussed.

### **2.3.1 Cognitive Behavioral Theory (CBT)**

Cognitive Behavioral Theory (CBT) was pioneered by Dr. Aaron Beck in 1963(Hupp et al., 2008). This theory is based on the idea that our thoughts (knowledge), feelings (emotions), and actions (behaviors) all work together (Hupp et al., 2008). Our thoughts, in particular, influence our feelings

and actions. As a result, unpleasant and unrealistic beliefs can cause us pain and suffering. When a person is under psychological stress, their perception of the situation becomes distorted, which has a negative impact on their behavior and, as a result, on the individuals who rely on them. The objective of cognitive behavioral theory is to increase awareness of behavioral patterns and unfavorable interpretations that support skewed thinking. In order to relieve psychological distress, cognitive therapy helps individuals create new thought patterns and behavioral patterns (Hayes, 2014). CBT is a treatment tactic that helps to recognize negative thoughts and behavior patterns. The main aim being able to identify and explore the ways emotions and thoughts affect actions. This theory is used in this study to explain how teachers conduct themselves in an unfavourable environment for learning. Hayes (2014) notes that most of the inappropriate behaviours observed among public primary school teachers in classrooms may be as a result of psychological distress that may lead to low morale and increased stress occasioned by overcrowding and poor class management. The limitation of this theory is that it justifies the advancement of negative conduct which can influence the behaviour of others. Psychological distress among teachers can result in teachers' demotivation leading to pupils' poor academic performance.

### **2.3.2 Systematic Approach to Instruction Theory (SATI)**

Systematic Approach to Instruction Theory originated from Gerlack and Ely in 1978 (Randell, 2008). This idea lays out specific rules for assisting people in their learning and development. It provides an idea of what might happen in relation to the different types of teaching and learning activities used in the classroom and how to assess them. It focuses on how best to structure learning materials and behaviors to facilitate learning. Benjamin Bloom's 1956 publication and the findings of his Taxonomy of Educational Goals, one of the earliest modern codifications of the learning

process, inspired a systematic approach to learning theory, according to Bowden and Randall (2008).

Robert M. Gann, who published *Conditions for Learning* (Bowden and Randell, 2008) in 1965, was one of the early learning theorists. SATI was influenced by three key educational theories: behaviorism, a theory that helps us understand how individuals conform to standards, and cognitive behaviorism, a theory that helps us understand how people think. This theory addresses the significance of human action as an important function of knowledge acquisition; cognitivism, the belief that learning occurs through mental associations; and constructivism, the theory that learning occurs via mental associations.

According to Phillips (2014), while learning theory explains how learning occurs, a systematic approach to learning theory determines how to help people learn better. Theory also helps people create conditions that increase the possibility of learning, understand learning systems, and enhance the learning process (Mayer, 1992). According to SATI, teachers should identify the objectives, content, behavior distribution while entering a space, resource selection, strategy description, and evaluation before performing training. Learning will not operate well without resources such as employees, textbooks, and space, in theory. Because the researcher feels that restricted resources and space are hurdles in the teaching and learning process at the free primary school, the theory is applicable for this study..

### **2.3.3 Maslow's Hierarchy of Needs**

Maslow's hierarchy of human needs theory was developed in the United States by psychologist Abraham Maslow in 1942 (Milheim, 2012). The hierarchy of needs theory is still valid today to understand motivation, leadership, and human personality development (Milheim, 2012). Physiological needs, safety requirements, belonging needs, respect needs, and self-actualization

needs are the five categories of need that Maslow believed should motivate people. According to him, these needs vary from the simplest to the highest and indicate that the needs are never fully met, and when the needs are met, behavior is no longer affected (Huitt, 2004). On the other hand, Gawel (2017) argues that people who barely fulfill their needs will not function effectively.

The first in Maslow's hierarchy is the biological/physiological needs which include the needs of food, air, drink, warmth, shelter, sleep and sex among others. In other concepts, they are referred to as existence needs and without them, one cannot exist. Safety needs come second and include the need for protection, security, law, order and stability among others. The third in line is the need for belongingness and love which comes with the feeling of being part of a family or workgroup, affection and relationships (Maslow & Lewis, 1987). Maslow and Lewis (1987) argue that once an individual satisfies the biological and safety needs, they would seek to satisfy the belongingness needs. At this level, people try to overcome feelings of alienation and loneliness. Esteem needs come at the fourth level of the hierarchy and include the needs of mastery, achievement, independence, prestige, status and managerial responsibility among others.

Maslow's theory is based on the premise that people are motivated by unmet needs, and that lower needs must be met before higher wants can be satisfied. According to Milheim (2012), biological, love and esteem are general needs and have to be satisfied before a person starts to act unselfishly. Three needs are also known as deficiency needs and as a person gets motivated by the desires of these needs, they move closer towards growth and finally self-actualization. The satisfaction of the needs contributes to the health of the individual and the art of inadequate satisfaction of the needs can lead to poor health or the individual engaging in anti-social behaviour. Therefore, for the adequate satisfaction of individuals or groups of people, group leaders need to understand the needs that are active for the individual members of the group.

In reference to the current study, and looking at Maslow's hierarchy of needs, it is recognized that once the lower need, the most basic is satisfied, a person focuses on satisfying the higher needs in the hierarchy. This includes the need to be accepted as part of a larger group of people and to have relationships with others. The concept of the hierarchy of needs applied in the classroom suggests that basic needs must be met for a teacher to teach well, because people need a place to live for food and clothing to do their work. Space, instructional materials, teaching aids, students, and a conducive learning atmosphere are the primary requirements of the classroom. In this example, space refers to a classroom, which is a structure that houses a learning environment. Books are teaching materials, teachers are teaching materials, and teaching materials are for teachers. Students are students, and a supportive environment is a setting that can help them study more effectively. Learning may be effectively carried out when all of the above variables are present, according to this concept. The question is whether or not this is included in free basic education.

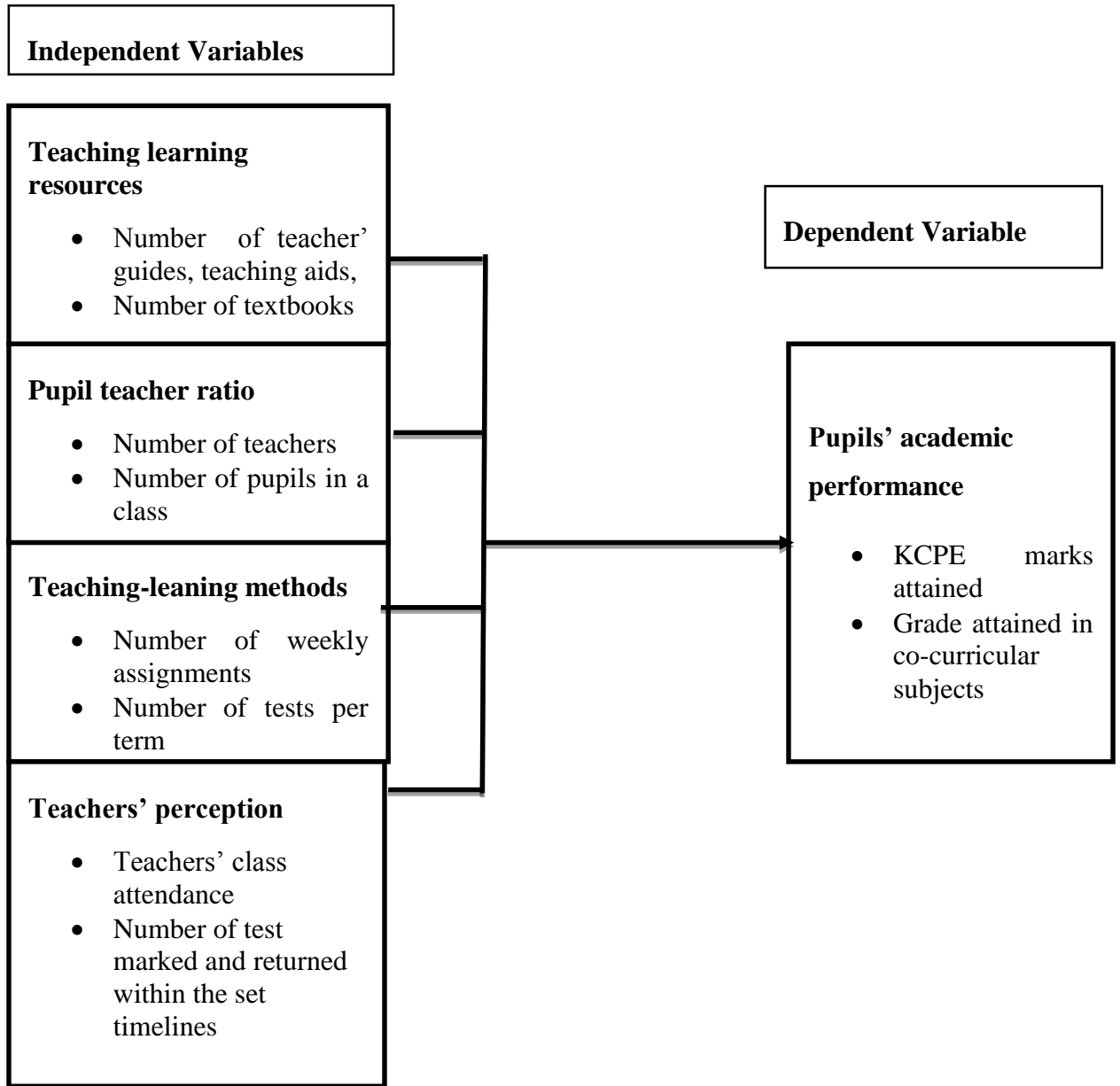
#### **2.4 Conceptual Framework**

A conceptual framework is an underlying structure that displays the link between the variables in a study and represents the core features of an idea (Jabareen, 2008). The dependent variable for the study was the pupils' academic performance which was likely to be affected by the independent variables which included teaching-learning resources, pupil-teacher ratio, teaching-learning methods and teachers' perception as demonstrated in Figure 2.1.



**Figure 2.1**

*Conceptual Framework*



(Source; Author, 2021)

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter outlined the measures that were taken to make research easier to undertake and meet the research goals. The research site, study design, target population, sample size and sampling strategy, research tools, research tool reliability and validity, data collection procedures, data processing techniques, and ethical issues are all factors to consider.

#### **3.2 Study Location**

Laikipia West Sub County lies between latitudes  $0^{\circ} 18''$  South and  $0^{\circ} 51''$  North and between Longitudes  $36^{\circ} 11''$  and  $37^{\circ} 24''$  East within Laikipia County in Kenya (IEBC, 2020). Laikipia West Sub County is one of the five Sub Counties in Laikipia County and is located approximately 186 kilometers by road from Nairobi, Kenya (IEBC, 2020). The population in Laikipia West Sub County is evenly distributed and some of the economic activities in this area are mainly tourism and agriculture. The location of the study was chosen based on the analysis of academic performance of the sub county for the last ten years which indicated the mean score was below two hundred and fifty out of five hundred marks in Kenya Certificate of Primary Education, refer to Table 1.1.

#### **3.3 Research Design**

The study's research design is a strategy for determining the solution to the study's problem (Mugenda & Mugenda, 2008). This study used a descriptive survey research design, with the goal of gathering relevant and reliable information regarding the current state of the phenomena and, when possible, drawing valid overall inferences from the findings. According to Kotari (2014), descriptive survey research is used to gather data on the current condition of a phenomenon in

order to describe what is known about the variables. Also in line with Cooper and Schindler (2008), descriptive survey design is used to help to determine whether there is significant association among variables existing at some point in time. Actually, Bryman (2012) purports that descriptive survey designs are relevant in a study when the purpose is to explain variables as they are in the current state and how they affect a phenomenon. Descriptive survey designs also allowed the researcher to collect both quantitative and qualitative data (Bryman, 2012). In this study the researcher dealt with issues that have happened or happening and as such had no control over variables in terms of being able to manipulate them, hence descriptive survey suffices. Therefore the research design was employed to gather accurate data on the current state of FPE in public primary schools in Laikipia West Sub County.

### **3.4 Target Population**

The target group is all cases of people or organizations that have certain characteristics; this is a larger group to sample (Sekaran, 2016). The target population of this study was 490 teachers in ten (10) public primary schools in West Laikipia District (Director of Education Laikipia County, 2021). All teachers in Laikipia West Sub County were considered as target population where the sample was drawn. Ten (10) principals from ten public primary schools in the sub county were also considered as a target population where a sample was drawn.

### **3.5 Sample Size and Sampling Technique**

Sampling is the process of choosing a certain number of subjects for a study in such a way that they best represent the largest group from which they were drawn (Mugenda & Mugenda, 2008). A systematic strategy for selecting individuals for research to represent the wider group from which they are recruited is known as sampling (Cooper & Schindler, 2011). The focus technique and basic random sampling were used in this study. Target sampling was conducted on selected

key informants, who were principals of the four selected schools. Random sampling method was used to select teachers from the selected schools. In this sampling technique, the research data is acquired from the participants of the study with each member having an equal chance of being selected. Using simple random sampling, subjects are selected without bias and this may give better characteristics of the population. Yamane (1967) formula was adopted in computation of the sample size.

$$n = \frac{N}{1 + N(e)^2}$$

Where:

‘n’ = sample size,

‘N’ = population

‘e’ = the confidence level

1 = constant.

This study assumed the level of precision of 5%

The sample size is:

$$n = \frac{490}{1 + 490(0.05)^2}$$

$$n = 220$$

This study sample size was therefore 220 teachers. The distribution table was as follows;

**Table 3.1***Sample Size*

<b>School (s)</b>	<b>Target Population</b>	<b>Sample Size</b>	<b>Percentage</b>
Teachers	490	220	44.9%
Principals	10	10	100%
<b>Total</b>	<b>500</b>	<b>330</b>	<b>66%</b>

**3.6 Research Instruments**

This study is descriptive survey that seeks to collect the opinions of the people according to their own understanding and beliefs in their existing contexts. In order to collect data, the study used a semi-structured questionnaire and an interview guide as research instruments. The instruments were built around the research objectives as well as the demographic data of the respondents. Both open-ended and closed questions were included in semi-structured questionnaires. Questionnaires, according to Mugenda and Mugenda (2008), are commonly used to acquire population data in a short amount of time and are simple to handle. The research data was collected from the selected teachers using a semi-structured questionnaire. The interview guides contained open-ended questions. Kothari (2011) asserts that interview guides are used to get in-depth information about the study research questions. The interview guides were used to collect in-depth information from the selected head teachers, who were the key informants.

**3.7 Pilot of the Research Instruments**

According to Cooper and Schindler (2003), pilot testing involves a prior data collection before the actual data collection process takes place. This activity acts as a guide for examining the research questions and determining whether the research instruments produce the expected results. A pretest is meant to enhance the understanding of the question and yield relevant results. The size of the

pilot sample ranges from 1-10% of the sampled population (Mugenda & Mugenda, 2009). This pilot test was conducted on 7 respondents making up 5% of the sample size. The validity and reliability of research tools were assessed during pilot testing.

### **3.7.1 Validity**

Validity is the degree to which a research instrument measures study attributes for a particular group (Kothari, 2011). For this study validity of the questionnaire was determined through constant consultation with the University's supervisors.

### **3.7.2 Reliability**

The constancy of a measurement is referred to as reliability. When the same results are produced frequently, a test is considered dependable (Cooper & Schindler, 2003). Using Cronbach's alpha, often known as the reliability coefficient, the validity of the questionnaire responses was evaluated. A high level of internal consistency and the ability to aggregate the data to reflect the opinions of all respondents in the target group are implied by an alpha coefficient of better than 0.7, according to Cherry (2013). The reliability of the instrument was achieved by randomly selecting four teachers and three principals from randomly selected public primary schools in the Laikipia West sub county and publishing them with a questionnaire. The information gathered was analyzed to ensure that the questions are correctly answered and to establish the sequence and structure of the questions. The results of the responders, on the other hand, were not included in the final results. This is because the obtained results focused on the statistical outcome rather than the feasibility of the study.

### **3.8 Data Collection Procedure**

Data collection refers to gathering empirical evidence to form a picture of the situation and enable the researcher to answer questions that involve conducting research (Kothari, 2011). Primary data

was used in this study. Data collection methods for this survey involved filling out questionnaires and administering interview guidelines. The researcher distributed 220 questionnaires to randomly selected teachers in 49 public primary schools in Laikipia West Sub-county with the assistance of research assistants. The research assistants helped in making follow up and collecting the filled-in questionnaires. This was in strict conformity with Kothari (2011) assertion that a sample proportion of 30% is representative. The questionnaires were written in basic English to make it easy for respondents to answer to the survey questions.

The researcher also interviewed 10 selected head teachers from 10 randomly selected primary schools. The researcher booked appointments with the interviewees and agreed on best time that was convenient for them. The mode of conducting the interviews was face to face. In administering the interview guides, the researcher gave each participant a specific code such as P1, P2, and P3.

### **3.9 Data Analysis**

Data collected using questionnaires was both qualitative and quantitative. On the other hand, data collected using interview guides was qualitative. In the data analysis, descriptive and inferential statistics were used. Thematic content analysis was used to examine qualitative data. The responses were gathered into transcriptions, analyzed methodically for easy interpretation, and comments on related themes were grouped and interpreted using emerging themes. Quantitative data from the questionnaires was first edited and coded. The coded data was entered into Statistical Package for Social Science (SPSS version 24) and then processed to generate frequency tables, means, correlation coefficients and regression analysis. The information was summarized in accordance with the study's goals. The study also utilized a multiple regression model to perform inferential analysis. The regression model was as follows

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Y- Pupils' performance

$\beta_0$  –y-intercept or the constant

$\beta_1 - \beta_4$  –regression coefficients

$X_1$  –Teaching learning resources

$X_2$  – Pupil-teacher ratio

$X_3$  – Teaching-learning methods

$X_4$  –Teachers' perception

$\epsilon$  – Error Term.

### **3.10 Ethical Considerations**

Mugenda and Mugenda (2003) opined that ethics involves making a judgment about right and wrong behaviour. Before collecting the data, the researcher sought permission from the relevant ethical board. Researcher also received a cover letter from the Kenya Methodist University Research Council and submit it to the NACOSTI for approval. The submission letter attached to the questionnaire was used to invite respondents to participate. During the data collection exercise, the questionnaires were provided to respondents through manual submission of a sample population selected by a programmer managed by the researcher. The researcher also assured respondents that no harm would befall them for participating in the study and the exercise was voluntary. All were informed of right to anonymity and confidentiality. Therefore, respondents' names were not required in the questionnaires. The respondents had the right to refuse to answer certain questions and the right to refuse to be interviewed or to respond to the questionnaires.

After collecting the data, the researcher had a moral obligation to treat the information acquired in this study with the utmost care due to the sensitivity of the information to be obtained.



Researcher adhered to professionalism, respecting integrity, thereby avoiding plagiarism and data alteration.

## CHAPTER FOUR

### RESULTS AND DISCUSSION

#### 4.1 Introduction

This chapter summarizes the findings in accordance to the research objectives. The results are also discussed with reference to empirical literature review in chapter two. The purpose of this study was to determine the influence of free primary education on pupils' academic performance in public primary schools in Laikipia West Sub-County, Laikipia County. The chapter starts by presenting the reliability results as well as the response rate. This is followed by background information and then descriptive statistics results. Further, correlation and regression analysis outcome are provided.

#### 4.2 Reliability Test

A reliability test was conducted to determine the dependability of the questionnaire. In particular, Cronbach's Alpha, which measures the internal consistency of the instrument was computed. The findings are indicated in Table 4.1.

**Table 4.1**

*Reliability Results*

Constructs	No. of Items	Cronbach's Alpha ( $\alpha > 0.7$ )
Teaching Learning resources	6	0.721
Pupil Teacher Ratio	6	0.767
Teaching-learning methods	6	0.896
Teachers Perception	6	0.724
Pupils' Academic Performance	6	0.812

Table 4.1 shows that the Cronbach's coefficient alpha value was more than 0.7, ( $\alpha > 0.7$ ) for each variable. A reliability coefficient that is above 0.7 is regarded as reliable in social sciences

(Bhattacharjee, 2012). Therefore, the research data was considered dependable and fit for further analysis.

### **4.3 Response Rate**

The researcher distributed 220 questionnaires to public primary school teachers in West Laikipia Sub-County. Out of this, 172 (78.2%) questionnaires were returned and used in the analysis. As for principals, the researcher had intended to interview 10 of them, but only six were available during the interview period. This represented a 60% response rate. A response rate above 50% was considered adequate for statistical analysis (Saunders et al., 2009).

### **4.4 Background Information Results**

The background information of respondents was key to this study. This helped to explain the characteristics of teachers which further informed the interpretation of the findings of each variable. The background information aspects which were of interest to this study were age, gender, subject, working duration, highest education level, number of teachers in school, number of pupils in class, and satisfaction with the number of pupils in class. Table 4.2 shows the background information results.

**Table 4.2***Background Information Results*

<b>Characteristics</b>	<b>Frequency (f)</b>	<b>Percent (%)</b>
<b>Age</b>		
18 - 25	10	5.8
26 - 35	57	33.1
36 - 45	73	42.4
46 - 55	32	18.6
Total	172	100
<b>Gender</b>		
Male	71	41.3
Female	101	58.7
Total	172	100
<b>Subject taught in school</b>		
Mathematics	23	13.4
Languages	26	15.1
Science	28	16.3
Social Science	62	36
Religion	33	19.2
Total	172	100
<b>Working duration</b>		
Less than 5	46	26.7
5-10	58	33.7
11-15	43	25
15-20	25	14.5
Total	172	100
<b>Highest education level</b>		
Volunteer	4	2.3
Certificate	68	39.5
College Diploma	100	58.1
Total	172	100
<b>Number of teachers in school</b>		
Less than 20	139	80.8
20-30	33	19.2
Total	172	100
<b>Number of Pupils in class</b>		
Less than 40	76	44.2
40-50	89	51.7
Over 50	7	4.1
Total	172	100

The findings in Table 4.2 reveal that (73, 42.4%) of the respondents were aged 36-45 years, and (57, 33.1%) were aged 26-35 years. Results also indicate that female respondents (101, 58.7%) were more than the male (71, 41.3%). The researcher considered the gender composition to be fair given that the one-third rule was adhered to according to Kenya Constitution. Further, (62, 36%) of the respondents noted that they teach social science and (58, 33.7%) had worked for 5-10 years in their schools. This suggested that the respondents had sufficient knowledge of and experience with how free primary education affected students' academic achievement.

The respondents (100, 58.1%) had college diploma, and (68, 39.5%) had certificate level education. This was the expected education level for most primary school teachers. Additionally, (139, 80.8 % of the respondents mentioned that their school had fewer than 20 teachers. Having adequate teachers is considered essential in enhancement of learners' academic performance. In addition, (89, 51.7%) of the respondents cited that the average number of pupils they can handle in a class was 40-50, while (76, 44.2%) noted less than 40. Finally, (112, 65.1%) of the respondents indicated that they were not satisfied with the number of pupils they teach in class. This suggested that the number of pupils in a class was a challenge to most teachers. It is worth noting that a number of external factors influence teachers' effectiveness such as the number of students per teacher. This formed a part of the goal of this study had intended to identify if there is a significant correlation between number of students per teacher and students' performance.

#### **4.5 Teaching Learning resources and Pupils' Performance**

The study sought to assess the influence of teaching-learning resources on academic performance among public primary schools in Laikipia West Sub-County. The respondents were asked to rate the statements on teaching Learning resources. The scale used was as follows: Strongly disagree

(1), Disagree (2), Not sure (3) Agree (4), and Strongly agree (5). Descriptive statistics results are captured in Table 4.3.

**Table 4.3**

*Descriptive Statistics on teaching learning resources*

<b>Statements on Teacher Learning Resources</b>	<b>Strongly disagree f(%)</b>	<b>Disagree e f(%)</b>	<b>Not sure f(%)</b>	<b>Agree f(%)</b>	<b>Strongly agree f(%)</b>
There is sufficient teacher guides in the school	75(43.6)	76(44.2)	6(3.5)	9(5.2)	6(3.5)
The test books are enough to be shared one between two pupils	68(39.5)	83(48.3)	6(3.5)	12(7)	3(1.7)
There are enough teaching aids to serve all classes	78(45.3)	66(38.4)	1(0.6)	16(9.3)	11(6.4)
There are enough chalks to be used in all classes	4(2.3)	20(11.6)	3(1.7)	68(39.5)	77(44.8)
Classes are not congested with pupils sharing desks	67(39)	72(41.9)	4(2.3)	15(8.7)	14(8.1)
Sometime the school run out of chalks in the middle of lessons	72(41.9)	68(39.5)	7(4.1)	9(5.2)	16(9.3)

The findings in Table 4.3 shows that majority of the respondents disagreed with the statement that there was sufficient teacher guides in the school (87.8%), the test books were enough to be shared one between two pupils (87.8%), and there are enough teaching aids to serve all classes (83.7%). The respondents further disagreed with the claims that classes were not congested with pupils sharing desks (80.9%), and sometime the schools run out of chalks in the middle of lessons (81.4%). On the other hand, most of the respondents agreed that there were enough chalks to be used in all classes (84.3%). The findings imply that most of the respondents felt that teaching-learning resources were not adequate in schools. According to Okongo et al. (2015), utilization of resources in education brings about fruitful learning outcomes since resources stimulate students learning as well as motivating them hence high levels of academic performance. These resources include material resources, physical facilities and human resources (DFID, 2007). Studies done in

the past with regard to availability of TLR in education reveal that TLR are not always available in schools. This inadequacy of TLR has been of serious concern to educators.

According to Lyons (2012), learning is a multifaceted activity that involves interchange of physical facilities, students' motivation, teaching resources, and skills of teaching and curriculum demands. Accessibility of TLR therefore enhances the effectiveness of schools as they are the fundamental resources that bring about good and improved academic performance in the students. The necessary resources that should be available for teaching and learning include material resources, human resource such as teachers and support staff and, physical facilities such as laboratories, libraries and classrooms.

These findings also agreed with Musyoka (2018) observation that inadequate library and laboratory facilities characterized most schools. Further, the study findings supported a study by Abubakar (2020) that found that public schools have inadequate educational resources, leading to poor student performance. When asked whether the ministry of education was doing enough in terms of providing resource to support free primary education, four principals indicated that the ministry of education was not doing enough to ensure sufficient resources are available in schools. They cited classrooms, text books and teachers as some of the resources that were not adequately provided. On the other hand, three principals acknowledged the governments efforts to provide resources to support free primary education. One of the participants , P1 observed that ...*“the government has made effort to construct new classrooms as well as improve the existing ones”* This supported a study by Livumbaze and Achoka (2017) who identified the importance of adequate libraries, classrooms and laboratories to improve performance of public schools.

The principals were also asked to explain the significance of teaching-learning resource on pupils' performance given the effect of free primary education. All the participants were in agreement that

teaching-learning resources were critical in ensuring the success of free primary education through improved learners' performance. One of the participants, P4 opined that "...having adequate and relevant teaching-learning resources is fundamental to achieving the objective of free primary education program" The findings agreed with a study by Kimalel (2019) who argued that learning resources are used to enhance learning, stimulate curiosity and create an atmosphere that engages all of the learner's senses.

#### 4.6 Pupil Teacher Ratio and Pupils' Performance

The study sought to determine the influence of pupil-teacher ratio on academic performance among public primary schools in Laikipia West Sub-County. The respondents were asked to rate the statements on pupil-teacher ratio. The scale used was as follows: Strongly disagree (1), Disagree (2), Not sure (3) Agree (4), and Strongly agree (5). Descriptive statistics results are illustrated in Table 4.4.

**Table 4.4**

*Descriptive Statistics on Pupil Teacher Ratio*

<b>Statements on pupil teacher ratio</b>	<b>Strongly disagree f(%)</b>	<b>Disagree f(%)</b>	<b>Not sure f(%)</b>	<b>Agree f(%)</b>	<b>Strongly agree f(%)</b>
The is no teacher shortage in the school	80(46.5)	72(41.9)	10(5.8)	7(4.1)	3(1.7)
At least every class has a minimum of 50 and a maximum of 70 pupils	4(2.3)	8(4.7)	4(2.3)	83(48.3)	73(42.4)
Teachers are able to attend to the needs of pupil in a single lesson	77(44.8)	69(40.1)	8(4.7)	11(6.4)	7(4.1)
Teachers can assess student assignments in a single day	63(36.6)	65(37.8)	9(5.2)	17(9.9)	18(10.5)
Teaching resources are never enough when shared among pupils	3(1.7)	17(9.9)	6(3.5)	77(44.8)	69(40.1)
Teachers can mark pupils' tests within the set timelines	3(1.7)	16(9.3)	16(9.3)	83(48.3)	54(31.4)

The findings in Table 4.4 indicated that most of the respondents agreed with the statements that at least every class had a minimum of 50 and a maximum of 70 pupils (90.7%), teaching resources



were never enough when shared among pupils (84.9%), and teachers can mark pupils' tests within the set timelines (79.7%). Further, majority of the respondents disagreed with the assertions that there was no teacher shortage in the school (88.4%), teachers were able to attend to the needs of pupil in a single lesson (84.9%), and teachers can assess student assignments in a single day (74.4%). The findings imply that in most public primary schools, the ratio of teachers to pupils was very high. According to MOEST (2019), free primary education saw an influx in the number of new pupils' enrollment leading to congestion in classes and tremendous teachers' shortage in public primary schools. Nevertheless, some researchers established that academic achievement cannot exclusively be the result of the small class size. They suggest that number of students in a classroom has an influence on the classroom process, course activities, students' engagement and consequently students' learning. However, the real reason behind the academic achievement is that; small class size actually gives teachers the opportunity to spend more time with each student which more directly affects their learning and academic success (Croll & Hastings, 1996). Further, the findings agreed with Waita and Mulei (2020) observation that pupil-teacher ratio negatively correlates with performance. This because such judgments reveal that other than class size, the student teacher ratio is an important aspect to look since that factor actually indicates the time the teacher spends with each student for meaningful learning to take place.

The principals were asked to explain how pupil-teacher ratio had implicated the pupils' performance considering increased pupils enrolment as a result of FPE. All the participants expressed concerns regarding the teachers' shortage, which was counterproductive in realizing the free primary education goals. They further observed that in most public primary schools, the pupil teacher ratio was extremely high making it difficult for teachers to effectively attend to all the learners' need. One of the participants, P6, noted that "*teachers are overwhelmed by the large*

*number of pupils in class*". Another participant, P4, reiterated that "...*teachers cannot manage to attend to each pupil given the huge number of students per class*". The findings concurred with a study by Gathumbi et al. (2017) that a high student-teacher ratio due impacts the quality of education in poorly resourced schools. Further, the findings supported Kalemba and Mulauzi (2020) assertion that teacher-student relationship had a negative impact on the teaching and learning process.

#### **4.7 Teaching-Learning Methods and Pupils' Performance**

The study sought to evaluate the influence of teaching-learning methods on academic performance among public primary schools in Laikipia West Sub-County. The respondents were asked to rate the statements on teaching-learning methods. The scale used was as follows: Strongly disagree (1), Disagree (2), not sure (3) Agree (4), and strongly agree (5). Descriptive statistics results are illustrated in Table 4.5.

**Table 4.5***Descriptive Statistics on Teaching-learning methods*

<b>Statements on Teaching-learning methods</b>	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Not sure</b>	<b>Agree</b>	<b>Strongly agree</b>
	<b>f(%)</b>	<b>f(%)</b>	<b>f(%)</b>	<b>f(%)</b>	<b>f(%)</b>
Teacher-learning method depends on subject matter taught	11(6.4)	26(15.1)	16(9.3)	58(33.7)	61(35.5)
The teacher can adequately get in touch with each pupil	62(36)	67(39)	4(2.3)	18(10.5)	21(12.2)
Teachers give sufficient assignments to the pupils	5(2.9)	13(7.6)	7(4.1)	78(45.3)	69(40.1)
Teachers provide test to pupils as required.	6(3.5)	9(5.2)	4(2.3)	70(40.7)	83(48.3)
Teachers attend to pupil' tests and assignments in time	5(2.9)	18(10.5)	6(3.5)	65(37.8)	78(45.3)
It is rare for the teacher to meet learning objectives	56(32.6)	70(40.7)	8(4.7)	19(11)	19(11)

The findings in Table 4.5 indicated that most of the respondents agreed with the statements that teacher-learning method depends on subject matter taught (69.2%), teachers give sufficient assignments to the pupils (85.2%), teachers provide test to pupils as required (89%), and teachers attend to pupil' tests and assignments in time (83.1%). On the other hand, majority of the respondents disagreed with the claims that the teacher can adequately get in touch with each pupil (75%), and it is rare for the teacher to meet learning objectives (73.3%). The findings imply that most of the respondents supported the importance of having appropriate teaching-learning methods. Boyle et al. (2002) highlighted barriers to education to include teaching methods (Boyle et al., 2002). According to Ganyaupfu (2013), to facilitate the transfer of knowledge, teachers need to use appropriate teaching methods that best suit the specific goals and outcomes at the level. However, El-Zraigat and Smadi (2012) also indicated that most teachers don't receive sufficient in-service training, support and supervision. In addition, El-Zraigat and Smadi (2012) indicated that most teachers are not aware of validated and effective teaching practices used with students

with various learning needs. This could be hampering effective teaching and learning in our schools.

When asked their opinion on the teaching-learning methods adopted in schools given the overcrowding occasioned by increased enrolment of the pupils in the institution, the principals noted that they encourage teachers to adopt different teaching-learning methods. One of the participants, P1, stated that “... *given the increased enrolment of learners, there was need to devise different teaching-learning mechanisms*”. The findings agreed with a study by Kathare (2020) that different teaching methods improve the academic performance of students.

According to the participants, providing learners with sufficient assignments is one of the ways of engaging them and assessing their understanding of the specific subjects. Another participant, P5, observed that “...*having a one on one interaction between teachers and learners would be the most effective teaching-learning method; however, this is not realistic given the scarcity of resources*”. The findings were consistent with Munawaroh (2017) assertion that variety of teaching methods are an important factor in learning and without learning methods, learning will not be effective. The finding also point that use of many teaching aids, assignments impact on academic performance. This corroborates Herold (2008) findings which indicated that engaging varied and meaningful interaction that incorporate basic mathematics concepts such as number counting, quantity, time/sequence and categorization into day-to-day routine enhances performance in mathematics. This implies that teachers should strive to use variety of teaching methods to ensure that all learners learn effectively. This is based on Morgan (1998) argument that the use of a combination of teaching methods, that is, the use of hands-on-materials and the use of traditional methods, ensure that both struggling learners and brighter students learn effectively.

#### 4.8 Teachers Perception and Pupils' Performance

The study sought to find out the influence of teachers perception on academic performance among public primary schools in Laikipia West Sub-County. The respondents were asked to rate the statements on teachers perception. The scale used was as follows: Strongly disagree (1), Disagree (2), Not sure (3) Agree (4), and Strongly agree (5). Descriptive statistics results are illustrated in Table 4.6.

**Table 4.6**

*Descriptive Statistics on Teachers Perception*

Statements on Teachers Perception	Strongly disagree f(%)	Disagree f(%)	Not sure f(%)	Agree f(%)	Strongly agree f(%)
Teachers attend the classes during their respective lessons	7(4.1)	17(9.9)	9(5.2)	73(42.4)	66(38.4)
Teachers mark tests and are returned within the set timelines	7(4.1)	12(7)	11(6.4)	58(33.7)	84(48.8)
Teachers are demoralized by the scarcity of crucial resources	8(4.7)	17(9.9)	7(4.1)	71(41.3)	69(40.1)
I get stressed when I fail to meet syllabus coverage and deadlines	9(5.2)	18(10.5)	13(7.6)	63(36.6)	69(40.1)
Indiscipline cases among pupils lead to my loss of morale	70(40.7)	68(39.5)	12(7)	11(6.4)	11(6.4)
I feel handling overcrowded classroom is demoralizes my efforts	7(4.1)	22(12.8)	13(7.6)	61(35.5)	69(40.1)

The findings in Table 4.6 showed that majority of the respondents agreed with the statements that teachers attend the classes during their respective lessons (80.8%), teachers mark tests and are returned within the set timelines (82.5%), teachers are demoralized by the scarcity of crucial resources (81.4%), teachers get stressed when they fail to meet syllabus coverage and deadlines (76.7%), and teachers feel handling overcrowded classroom demoralizes their efforts (75.6%). Further, the respondents disagreed that indiscipline cases among pupils lead to their loss of morale (80.2%). The findings suggested a positive perception of most teachers towards free primary

education. According to the World Bank (2016), the overcrowded classroom makes it difficult for a teacher to effectively manage the high number of pupils contributing to the challenges related to pupils' indiscipline. The findings also concurred with a study by Kiarie (2017) that established that teachers have a good perception of education. Further, the findings Mirrored a study by Campbell-Phillips et al. (2020) that school teachers' perception enhances performance. In the same vein, De Laet et al. (2016) examined how teacher-student relationships, as observed by students, was related to their learning engagement. The results of the cross-lagged examination indicated that students who showed behavioral problems and less behavioral engagement had increased dissatisfaction with their teachers, thereby leading to an increase in issues with adjusting in class. The results indicated a positive relationship between students and teacher could lead to positive student learning. These findings showed the important role that teachers' perceptions had in influencing their students' engagement in learning.

The principals were asked whether overcrowding in classes had affected teachers' morale and perception. All the participants were in agreement that overcrowding in classes had adversely influenced teachers' morale and perception. One of the participants, P3 observed that most teachers are demoralized since they are unable to meet their teaching objectives due to the large number of pupils in a classroom, in cases there is no connection with the teacher, they may have learning issues that are not being addressed adequately enough in the classroom. Some students need one on one engagement, or a situation where a teacher sits down with them and go through an assignment one by one and one on one. The participants also mentioned scarcity of resources such as classrooms and text books as a major setback that interferes with teachers' morale and attitude. According to Adeyemo (2017), the attitudes and interests of teachers play an important role in building good relationships with students for the advancement of education.

#### 4.9 Pupils' Academic Performance

The respondents rated statements on dependent variable, which was pupils' academic performance. The scale used was as follows: 1=Not at all, 2=Less Extent, 3=Moderate Extent, 4=Great Extent, 5=Very great Extent. Descriptive statistics results are illustrated in Table 4.7.

**Table 4.7**

*Descriptive Statistics on Pupils' Academic Performance*

Statements on Pupils' Academic Performance	Not at all	Less Extent	Moderate Extent	Great Extent	Very great Extent
	f(%)	f(%)	f(%)	f(%)	f(%)
Pupils KCPE performance is above average	53(30.8)	51(29.7)	34(19.8)	26(15.1)	8(4.7)
There is high transition and graduation rate	42(24)	40(23.3)	57(33.1)	29(16.9)	4(2.3)
The is increased indiscipline cases with crowded classrooms	5(2.9)	32(18.6)	7(4.1)	60(34.9)	52(30.2)
Pupils attend school everyday	40(23.3)	40(23.3)	3(1.7)	43(25)	46(26.7)
There is low dropout cases among the pupils	8(4.7)	24(14)	11(6.4)	57(33.1)	72(41.9)
There is high absenteeism among teachers	59(34.3)	80(46.5)	5(2.9)	13(7.6)	15(8.7)

The findings in Table 4.7 revealed that 30.8% of respondents refuted the assertion that pupils KCPE performance was above average, 29.7% agreed to a small extent, while 19.8% agreed to a moderate extent. The respondents, 33.1% moderately agreed that there was high transition and graduation, while 24.4% refuted the claims. Further, 34.9% of the respondents greatly agreed that there were increased indiscipline cases with crowded classrooms, while 30.2% confirmed this assertion. In addition, 26.7% of the respondents noted to a very great extent that pupils attend school every day, 25% agreed to a great extent, while 23.3% refuted this claim. The respondents, 41.9% agreed to a very great extent that there were low dropout cases among the pupils. Finally, 46.7% of the respondents refuted the statement that there was high absenteeism among teachers.

The findings imply that there was a serious challenge in the pupils' performance within public primary schools in Laikipia West Sub-County.

When asked to explain the policies they had put in place in order to increase pupils' performance in this school, the principals cited that they encourage peer to peer support among the learners. Learners are encouraged to work together and support each other in areas of weakness and strength. Teachers are also instructed to ensure fair distribution of learning materials among the learners. The participants also noted that they encourage collaboration between teachers, learners and parents. One of the participants, P4 noted that it is important to involve all stakeholders if there is to be any meaningful improvement in pupils' performance.

The participants were asked to give their opinion on whether rolling of free primary education was timely and that the ministry of education had prepared the schools adequately to effect the policies. All the participants agreed that despite the challenges, free primary education was and still remains to be a great program that has enabled so many needy children to go through education. The ministry of education needs to focus on improving the quality of free primary education through provision of required teaching-learning resources such as classrooms, teachers, and textbooks among others.

Finally, the principals were asked to give their view on the effectiveness of free primary education. All the participants appreciated the impact that free primary education has had in ensuring that children acquire basic education. However, moving forward, there is need for the stakeholders to discuss and provide recommendations on areas that require improvement to further enhance the effectiveness of free primary education. One of the participants, P6 observed that having adequate classrooms, trained teachers and relevant teaching and learning materials would be a good start.



#### 4.10 Correlation Analysis

This section provides results on the correlation between the independent and dependent variables. The study sought to determine the relationship between teaching-learning resources, pupil-teacher ratio, teaching-learning methods and teachers perception and academic performance among public primary schools in Laikipia West Sub-County. Results are shown in Table 4.8.

**Table 4.8**

*Correlation Results*

		Academic Performance	Teaching Learning resources	Pupil Teacher Ratio	Teaching- learning methods	Teachers Perception
Academic Performance	Pearson Correlation Sig. (2-tailed)	1				
Teaching Learning resources	Pearson Correlation Sig. (2- tailed)	.689** .000	1			
Pupil Teacher Ratio	Pearson Correlation Sig. (2- tailed)	-.584** .000	-.544** .000	1		
Teaching-learning methods	Pearson Correlation Sig. (2- tailed)	.732** .000	.733** .000	-.650** .000	1	
Teachers Perception	Pearson Correlation Sig. (2- tailed)	.696** .000	.659** .000	-.573** .000	.783** .000	1

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 4.8 indicates that teaching-learning resources ( $r = .689^{**}$ ,  $P < .05$ ), had a positive and significant correlation with pupils' academic performance. This denoted that teaching-learning resources were significantly associated with pupils' academic performance. The findings agreed

with a study by Julius and Ronald (2021) which found that learning resources such as appropriate textbooks, writing materials, e-learning materials and teacher manuals improve student performance.

The null hypothesis (Ho1) predicted that teaching learning resources have no statistically significant influence on academic performance among pupils in public primary schools in Laikipia West Sub-County. Based on the correlation results ( $p < .05$ ), the null hypothesis was rejected suggesting that teaching learning resources have a statistically significant influence on academic performance among pupils in public primary schools in Laikipia West Sub-County.

Findings also indicates that pupil teacher ratio ( $r = -.584^{**}$ ,  $P < .05$ ), had a negative and significant correlation with pupils' academic performance. This denoted that pupil teacher ratio was significantly associated with pupils' academic performance. The study supported Ndayisaba (2017) assertion that a student whose class has a low student-teacher ratio has a high chance of doing well. Similarly, the findings agreed with the work of Malitano and Chobomba (2019) that showed a significant negative relationship between student-teacher ratio and academic achievement.

The null hypothesis (Ho2) predicted that pupil teacher ratio had no statistically significant influence on academic performance among pupils in public primary schools in Laikipia West Sub-County. Based on the correlation results ( $p < .05$ ), the null hypothesis was rejected implying that pupil teacher ratio had a statistically significant influence on academic performance among pupils in public primary schools in Laikipia West Sub-County.

The results further reveal that teaching-learning methods ( $r = .732^{**}$ ,  $P < .05$ ), had a positive and significant correlation with pupils' academic performance. This denoted that teaching-learning methods were significantly associated with pupils' academic performance. The findings supported

a study by Isa et al. (2018), which showed that most of the teacher's teaching methods have a great influence on students' academic achievement.

The null hypothesis (Ho3) predicted that teaching-learning methods had no statistically significant influence on academic performance among pupils in public primary schools in Laikipia West Sub-County. Based on the correlation results ( $p < .05$ ), the null hypothesis was rejected implying that teaching-learning methods had a statistically significant influence on academic performance among pupils in public primary schools in Laikipia West Sub-County.

In addition, results showed that teachers perception ( $r = .696^{**}$ ,  $P < .05$ ), had a positive and significant correlation with pupils' academic performance. This denoted that teachers perception was significantly associated with pupils' academic performance. The findings were consistent with the work of Adeyemo (2017) who established that teacher is the most important educational factor that affects student learning achievement.

The null hypothesis (Ho4) predicted that teachers' perception had no statistically significant influence on academic performance among pupils in public primary schools in Laikipia West Sub-County. Based on the correlation outcome ( $p < .05$ ), the null hypothesis was rejected implying that teachers perception had a statistically significant influence on academic performance among pupils in public primary schools in Laikipia West Sub-County.

#### **4.11 Multiple Regression Model**

The purpose of this study was to determine the influence of free primary education on pupils' academic performance in public primary schools in Laikipia West Sub-County, Laikipia County. To do this, the researcher started by testing statistical assumptions and thereafter undertaking conceptual framework hypothesis testing.

### 4.11.1 Findings on Statistical Assumptions

To conduct regression analysis tests the researcher started by testing whether the four statistical assumptions were met as recommended by (Cohen, Manion & Morrison, 2011). The assumptions included normality test, linearity test, multicollinearity test, and heteroscedasticity test.

#### 4.11.1. 1 Normality

The results on Table 4.9 showed that data for academic performance, teaching learning resources, pupil teacher ratio, teaching-learning methods, and teachers' perception was normally distributed. This is indicated by p values  $> 0.05$ .

**Table 4.9 Normality Test using Shapiro-Wilk test**

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	<b>Statistic</b>	<b>df</b>	<b>Sig.</b>
Academic Performance	.974	172	0.053
Teaching Learning resources	.961	172	0.065
Pupil Teacher Ratio	.968	172	0.071
Teaching-learning methods	.976	172	0.101
Teachers Perception	.970	172	0.151

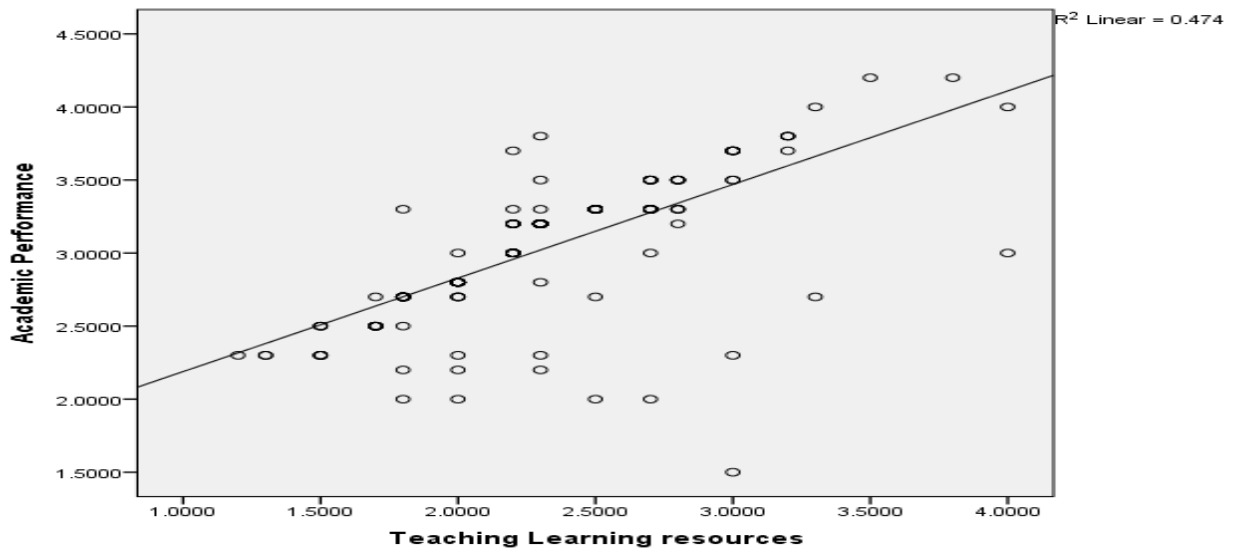
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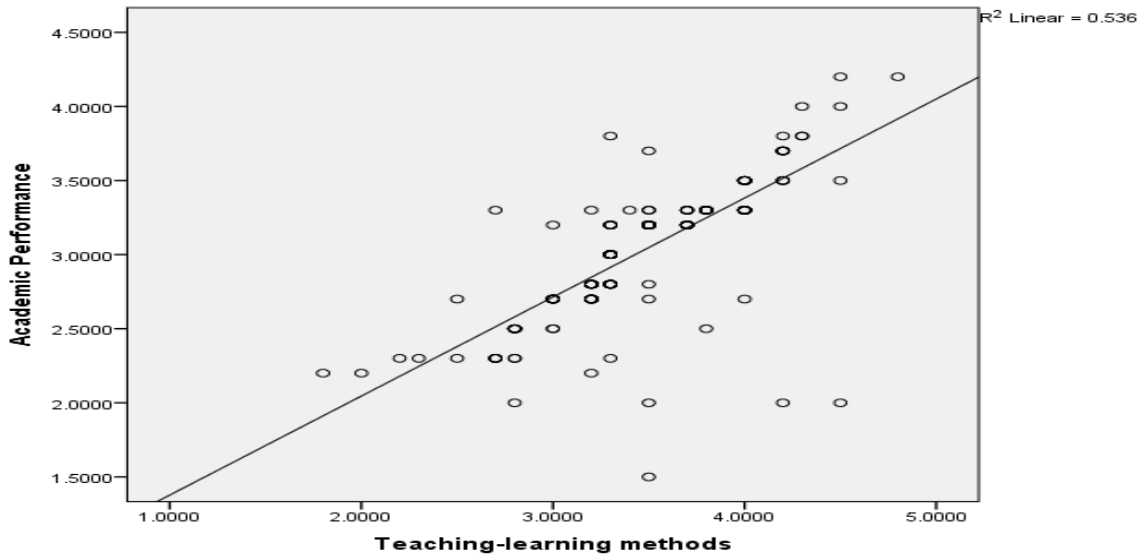
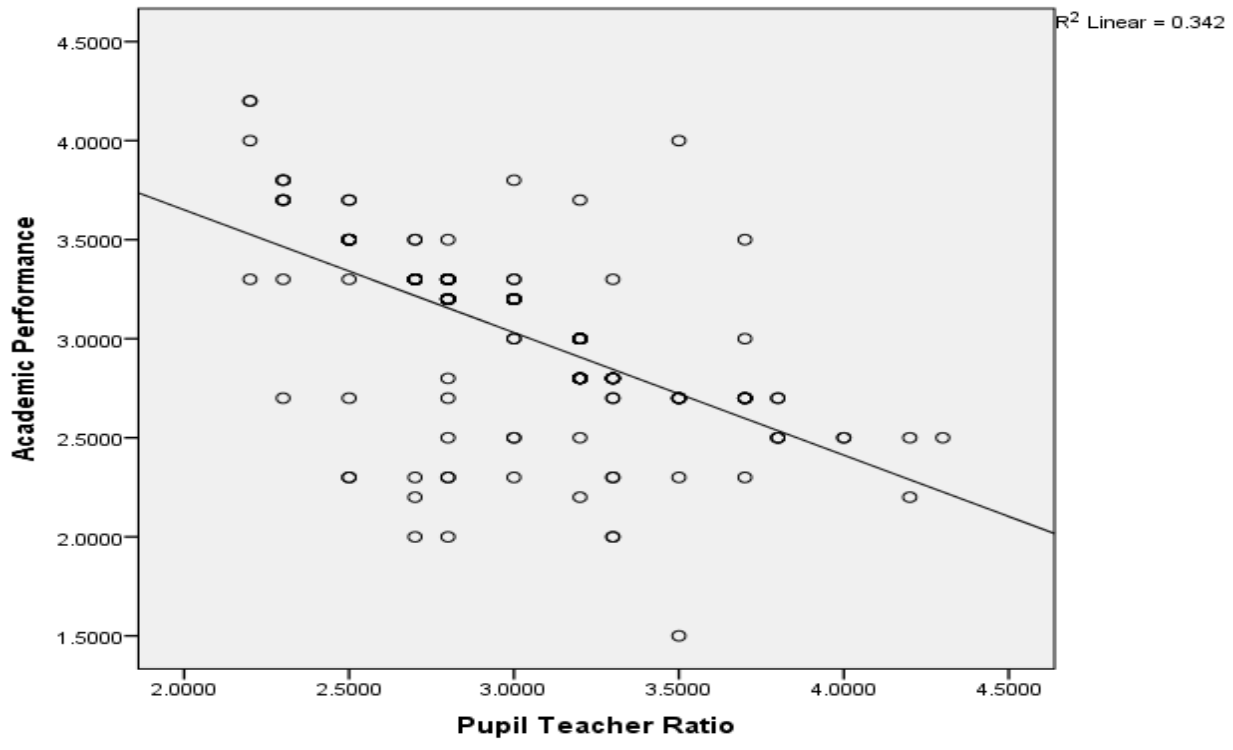
#### 4.11.1. 2 Linearity Test

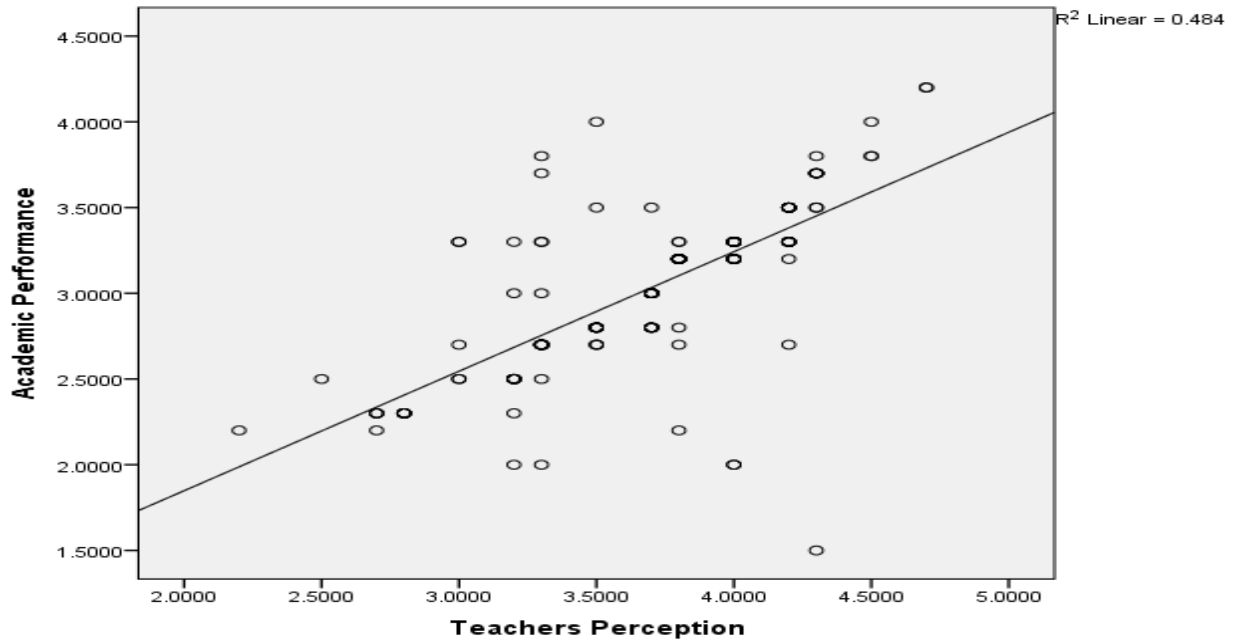
Linearity of the data means that the values of the outcome variable for each increment of prediction variable lie along a straight line. In this study, linearity was tested using scatter. Figure 4.1 presents the findings of the linearity.

**Figure 4.1**

*Linearity tests plots*







#### 4.11.1. 3 Multicollinearity Test

According to the multicollinearity statistics in Table 4., the VIF value for all the variables is less than ten. In this case, Hence,  $VIF < 10$ , there was no multicollinearity between the independent variables.

**Table 4.10*****Multicollinearity Test Results***

	Tolerance	VIF
Teaching Learning resources	0.438	2.281
Pupil Teacher Ratio	0.561	1.784
Teaching-learning methods	0.273	3.662
Teachers Perception	0.366	2.729
Overall		<b>2.614</b>

**4.11.1. 4 Homoscedasticity Test****Table 4.11*****Levene's Test of Equality of Error Variances***

Dependent Variable: Y			
F	df1	df2	Sig.
2.159	72	99	0.071

Tests the null hypothesis that the error variance of the dependent variable is equal across groups. P value >0.05, therefore, null hypothesis of constant variance of error terms was accepted.

**4.8.2 Conceptual Framework Hypothesis Testing**

After testing the assumptions of linear regression and found them appropriately satisfying the study, a multiple regression model was run to determine the predictive ability of the independent variables on the dependent variable. Tables 4.12, 4.13, and 4.14 provide model summary, Analysis of variance (ANOVA), and regression coefficients results respectively.



**Table 4.12***Model Summary; Free Primary Education and Pupils' Academic Performance*

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
1	.787 <sup>a</sup>	.620	.610	.2869349

a Predictors: (Constant), Teachers Perception, Teaching-learning methods, Teaching Learning resources, Pupil Teacher Ratio

Table 4.12 indicates that the four predictor variables in this study explain 62% of overall changes in pupils' academic performance ( $R^2=.62$ ). The remaining 38% can be attributed to other factors not included in this study model. These results support Table 4.8 findings that all predator variables and the dependent variable have a positive and significant correlation. The model was also validated using Analysis of Variance (ANOVA) and results are shown in Table 4.13.

**Table 4.13***ANOVA; Free Primary Education and Pupils' Academic Performance*

<b>Model</b>		<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
1	Regression	22.389	4	5.597	67.985	.000 <sup>b</sup>
	Residual	13.749	167	.082		
	Total	36.139	171			

a Dependent Variable: Academic Performance

b Predictors: (Constant), Teachers Perception, Teaching-learning methods, Teaching Learning resources, Pupil Teacher Ratio

Table 4.13 shows an F statistic of 67.985 and a p-value of 0.000. The proposed model is statistically significant (excellent fit) in predicting the dependent variable due to the p value being less than the traditional value ( $p<0.05$ ). The regression weights of each variable in the model are presented in Table 4.14.

**Table 4.14***Regression Coefficients; Free Primary Education and Pupils' Academic Performance*

Mode 1		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.156	.389		2.972	.003
	Teaching Learning resources	.247	.067	.266	3.689	.000
	Pupil Teacher Ratio	-.139	.068	-.131	-2.053	.042
	Teaching-learning methods	.243	.083	.267	2.918	.004
	Teachers Perception	.237	.079	.237	3.004	.003

a Dependent Variable: Academic Performance

The independent variables of teaching learning resources, pupil teacher ratio, and teaching-learning methods and teachers' perception had similar (Likert) scales and the constant-coefficient is significant, therefore, unstandardized B-coefficients were preferred. The multiple regressions result in Table 4.14 showed that teaching learning resources ( $\beta_1 = 0.247$ ,  $p = .000$ ); teaching-learning methods ( $\beta_3 = 0.243$ ,  $P = .004$ ); and teachers perception ( $\beta_4 = 0.237$ ,  $P = .003$ ) are significantly and positively related to pupils' academic performance. On the other hand, pupil teacher ratio ( $\beta_2 = -0.139$ ,  $P = .042$ ) was significantly and negatively related to pupils' academic performance.

Thus, the hypothesized model [ $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$ ] becomes;

$$Y = 1.156 + 0.247X_1 - 0.139X_2 + 0.243X_3 + 0.237X_4$$

Where;

Y- Pupils performance

$X_1$  –Teaching learning resources

$X_2$  – Pupil-teacher ratio

$X_3$  – Teaching-learning methods

#### X<sub>4</sub> – Teachers' perception

The model implied that pupils' performance is significantly determined by teaching learning resources, pupil teacher ratio, and teaching-learning methods and teachers' perception. This suggested that free primary education was critical in enhancing pupils performance. The regression weights (Table 4.11) revealed that all the independent variables significantly determine the dependent variable to varying degrees. The most significant predictor of pupils performance was teaching learning resources ( $\beta=0.247$ ), followed by teaching-learning methods ( $\beta=0.243$ ), followed by teachers' perception ( $\beta=0.237$ ), and lastly pupil-teacher ratio ( $\beta= - 0.139$ ).

The findings indicated that teaching learning resources contributes positively to pupils performance. According to Sifuna (2015), teachers need to have a supportive environment and resources in order to work effectively. The findings also supported a study by Julius and Ronald (2021) which found that learning resources such as appropriate textbooks, writing materials, e-learning materials and teacher manuals improve student performance. Further, results mirrored Livumbaze and Achoka (2017) study that identified the importance of adequate libraries, classrooms and laboratories to improve the performance of public schools.

The findings also indicated that teaching-learning methods contribute positively to pupils performance. The findings concurred with Brown (2006) premise on the usefulness of holistic teaching and learning methods in enhancing learners' performance. Ayieke (2005) asserts that the unsupportive learning environment and instructional strategies used in public primary schools are to blame for the rise in the dropout rate in these institutions. The results also supported a study by Isa et al. (2018) that found the majority of teachers' instructional strategies have a significant impact on their students' academic progress. Additionally, Muema et al. (2018) discovered a favorable correlation between instructional strategies and math students' achievement. A study by

Mvula (2020) which revealed no appreciable variation in the efficacy of several training methods, disagreed with the findings.

The findings further indicated that teachers' perception positively contributes to pupils performance. In a comparison study of low and high achievement between students in rural and urban schools, Mwai (2011) found that teacher credentials affect student accomplishment. The results confirmed Adeyemo's (2017) assertion that the most significant educational factor influencing students' learning achievement is their teacher. However, the findings disagreed with a study Williams (2017) which found no relationship between teacher perceptions and performance.

Finally, the findings indicated that pupil-teacher ratio negatively contributes to pupils performance. The findings supported Chunk (2019) observation that the differences in FPE systems, the increase in enrollment as a result of FPE has put a lot of pressure on schools' ability to provide high-quality education. Further, the learner teacher contact is reduced and therefore effective learning and teaching is hindered. Additionally, the findings mirrored those of Malitano and Chobomba (2019) who concluded that there was a negative and significant relationship between the student-teacher ratio and academic achievement.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS**

#### **5.1 Introduction**

The study findings, conclusions, and recommendations are summarized in this chapter. This is done in line with the objectives of the study. The goal of this study was to ascertain how the free primary education program affected students' academic performance in Laikipia West Sub-public County's primary schools.

#### **5.2 Summary of Major Findings**

This section presents a summary of the findings from the analysis.

##### **5.2.1 Teaching-learning resources and pupils performance**

The first objective of the study was to assess the influence of teaching-learning resources on academic performance among public primary schools in Laikipia West Sub-County. The respondents refuted claims that there was sufficient teacher guides in the school (87.8%), the test books were enough to be shared one between two pupils (87.8%), there were enough teaching aids to serve all classes (83.7%), and classes were not congested with pupils sharing desks (80.9%).

From the qualitative responses; four principals indicated that the ministry of education was not doing enough to ensure sufficient resources are available in schools. They cited classrooms, text books and teachers as some of the resources that were not adequately provided. On the other hand, three principals acknowledged the government's efforts to provide resources to support free primary education. All the participants were in agreement that teaching-learning resources were critical in ensuring the success of free primary education through improved learners' performance.

The correlation results revealed that teaching-learning resources had a positive and significant correlation with pupils' academic performance ( $r = .689^{**}$ ,  $P < .05$ ). Regression results revealed that teaching-learning resources had a positive and significant influence on pupils' academic performance ( $\beta_1 = 0.247$ ,  $p = .000$ ). The null hypothesis that teaching learning resources have no statistically significant influence on academic performance among pupils in public primary schools in Laikipia West Sub-County was rejected.

### **5.2.2 Pupil-Teacher Ratio and pupils performance**

The second objective of the study was to determine the influence of pupil-teacher ratio on academic performance among public primary schools in Laikipia West Sub-County. The respondents agreed that at least every class had a minimum of 50 and a maximum of 70 pupils (90.7%), teaching resources were never enough when shared among pupils (84.9%), and teachers can mark pupils' tests within the set timelines (79.7%). Further, majority of the respondents disagreed with the assertions that there was no teacher shortage in the school (88.4%), and teachers were able to attend to the needs of pupil in a single lesson (84.9%).

From the qualitative responses; all the participants expressed concerns regarding the teachers' shortage, which was counterproductive in realizing the free primary education goals. They further observed that in most public primary schools, the pupil teacher ratio was extremely high making it difficult for teachers to effectively attend to all the learners' need.

The correlation results revealed that pupil-teacher ratio had a negative and significant correlation with pupils' academic performance ( $r = -.584^{**}$ ,  $P < .05$ ). Regression results revealed that pupil-teacher ratio had a negative and significant influence on pupils' academic performance ( $\beta_2 = -0.139$ ,  $P = .042$ ). The null hypothesis that pupil-teacher ratio has no statistically significant

influence on academic performance among pupils in public primary schools in Laikipia West Sub-County was rejected.

### **5.2.3 Teaching-learning methods and pupils performance**

The third objective of the study was to evaluate the influence of teaching-learning methods on academic performance among public primary schools in Laikipia West Sub-County. The respondents agreed with assertions that teacher-learning method depends on subject matter taught (69.2%), teachers give sufficient assignments to the pupils (85.2%), teachers provide test to pupils as required (89%), and teachers attend to pupil' tests and assignments in time (83.1%). Further, the respondents disagreed that the teacher can adequately get in touch with each pupil (75%), and it was rare for the teacher to meet learning objectives (73.3%).

From the qualitative responses; the principals noted that they encourage teachers to adopt different teaching-learning methods. According to the participants, providing learners with sufficient assignments is one of the ways of engaging them and assessing their understanding of the specific subjects.

The correlation results revealed that teacher-learning methods had a positive and significant correlation with pupils' academic performance ( $r = .732^{**}$ ,  $P < .05$ ). Regression results revealed that teacher-learning methods had a positive and significant influence on pupils' academic performance ( $\beta_3 = 0.243$ ,  $P = .004$ ). The null hypothesis that teacher-learning methods have no statistically significant influence on academic performance among pupils in public primary schools in Laikipia West Sub-County was rejected.

### **5.2.4 Teachers perception and pupils performance**

The fourth objective of the study was to find out the influence of teachers perception on academic performance among public primary schools in Laikipia West Sub-County. The respondents agreed

with the statements that teachers attend the classes during their respective lessons (80.8%), teachers mark tests and are returned within the set timelines (82.5%), teachers were demoralized by the scarcity of crucial resources (81.4%), teachers get stressed when they fail to meet syllabus coverage and deadlines(76.7%), and teachers feel handling overcrowded classroom demoralizes their efforts (75.6%). From the qualitative responses; all the participants were in agreement that overcrowding in classes had adversely influenced teachers' morale and perception. The participants also mentioned scarcity of resources such as classrooms and text books as a major setback that interferes with teachers' morale and attitude.

The correlation results revealed that teachers perception had a positive and significant correlation with pupils' academic performance ( $r = .696^{**}$ ,  $P < .05$ ). Regression results revealed that teachers perception had a positive and significant influence on pupils' academic performance ( $\beta_4 = 0.237$ ,  $P = .003$ ). The null hypothesis that teachers' perception has no statistically significant influence on academic performance among pupils in public primary schools in Laikipia West Sub-County was rejected.

### **5.2.5 Summary based on the overall model**

The main objective of the study was to determine the influence of free primary education on pupils' academic performance in public primary schools in Laikipia West Sub-County, Laikipia County. The regression results indicated that all the four independent variables jointly explained sixty-two percent of overall variation in the dependent variable. These results confirmed the output of the correlation that demonstrated that significant relationships between all the independent variables and the dependent variable. Further, the most significant predictor of pupils performance was teaching learning resources, followed by teaching-learning methods, followed by teachers' perception, and lastly pupil-teacher ratio.



### **5.3 Conclusion**

This section provides a conclusion based on the study findings.

#### **5.3.1 Teaching-learning resources and pupils performance**

The study concluded that teaching-learning resources had a positive and significant influence on pupils performance. This has the implication that teaching-learning resources contribute positively to pupils performance in public primary schools. The key aspects regarding teaching-learning resources were teacher guides, test books, teaching aids and classrooms.

#### **5.3.2 Pupil-Teacher Ratio and pupils performance**

The study concluded that pupil-teacher ratio had a negative and significant influence on pupils performance. This has the implication that pupil-teacher ratio contribute negatively to pupils performance in public primary schools. The key aspects of pupil-teacher ratio were number of learners per class, teaching resources, teacher's efficiency, and teacher shortage in the school.

#### **5.3.3 Teaching-learning methods and pupils performance**

The study concluded that teaching-learning methods had a positive and significant influence on pupils' performance. This has the implication that teaching-learning methods contribute positively to pupils' performance in public primary schools. In particular, the study concluded that teacher-learning method depends on subject matter taught, teachers give sufficient assignments to the pupils, teachers provide test to pupils as required and teachers attend to pupil' tests and assignments in time.

#### **5.3.4 Teachers perception and pupils performance**

The study concluded that teacher's perception had a positive and significant influence on pupils' performance. This has the implication that teachers' perception contributes positively to pupils'

performance in public primary schools. The key aspects of teachers' perception were teachers' class attendance, teachers' responsiveness, syllabus coverage and overcrowded classrooms.

## **5.4 Recommendations**

This section presents recommendations on study results, implications on policy, practice, and theory.

### **5.4.1 Recommendations on study results**

The findings showed that teaching-learning materials had a favorable and significant impact on students' performance. The report recommended that appropriate teaching-learning materials be provided to public elementary schools by the Kenyan government through the ministry of education. Some of these resources should include teacher guides, test books, teaching aids and classrooms. The results established that pupil-teacher ratio had a negative and significant influence on pupils' performance. The study recommended the need for the government of Kenya through the ministry of education to provide sufficient teachers to public primary schools.

The study also proved that the effectiveness of teaching-learning strategies in influencing students' performance was good and significant. The report advised the Kenyan government to improve teaching-learning strategies in public elementary schools through the ministry of education. In particular, key emphasis should be on subject matter, learner's assignment, and assessment test.

Finally, the study established that teachers' perception had a positive and significant influence on pupils' performance. The study recommended the need for the public schools management and ministry of education to improve teachers' perception in public primary schools. In particular, the focus should be on the following aspects: teachers class attendance, teachers' responsiveness, syllabus coverage and overcrowded classrooms.

#### **5.4.2 Implications on Theory, Policy and Practice**

In the area of educational leadership and management, this study is anticipated to significantly advance theory, policy, and practice. The study adds to the corpus of knowledge regarding the connection between free primary education and students' academic achievement in public primary schools from a theoretical standpoint. The study also supports the numerous ideas that served as the foundation for the variables and verifies the theoretical framework. In terms of policy, the study offers guidance to decision-makers like the government of Kenya, the ministry of education, and the administration of public schools on how to enhance the free primary education program. In particular, the focus should be on teaching learning resources, teaching-learning methods, teachers' perception and pupil-teacher ratio in that order. The study provides managers of public schools with practical guidance on how to improve student performance while utilizing the free primary education program.

#### **5.5 Suggestions for Further Research**

The study investigated how students' academic performance in public primary schools in Laikipia West Sub-County, Laikipia County, was affected by free primary education. The focus was on four components (teaching-learning resources, pupil-teacher ratio, and teaching-learning methods and teachers perception). The four constructs explained 62% of changes in the outcome construct. Future studies should consider other aspects that account for the remaining 38%.

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## APPENDICES

### Appendix 1: Introduction Letter

Josphine Muthoni Thurania  
Kenya Methodist University,  
P. O. Box  
Nairobi, Kenya

Dear Respondent,

#### **RE: RESEARCH DATA COLLECTION.**

I am a student at Kenya Methodist University pursuing a master of education in leadership I am undertaking a research study on the **Influence of Free Primary Education on Pupils' Academic Performance among Public Primary Schools in Laikipia West Sub-county.**

You have been selected to be one of the respondents of this study. Kindly assist me to collect data by filling out the accompanying questionnaire where appropriate. The information provided on the questionnaire would be treated with uttermost confidentiality and will be used for academic purposes only. Your co-operation will be highly appreciated.

Thanking you in advance.

Yours Faithfully,

Josphine Muthoni Thurania

Cellphone: .....

Email: .....

### Appendix 2: Research Questionnaire

#### **A. Background information**

Please answer the following questions by placing a tick [√] where appropriate in the spaces provided.

1) What is your age?

18 - 25 [ ] 26 - 35 [ ] 36 - 45 [ ] 46 - 55 [ ] 56 and above [ ]

- 2) What is your gender?  
 Male  Female
- 3) Which category of subject do you teach in your school?  
 Mathematics  Languages  Science  Social Science  Religion
- 4) How many years have you worked in this school?  
 a. Less than 5   
 b. 5- 10   
 c. 10-15   
 d. 15-20   
 e. Over 20
- 5) What is your highest education level? (*Tick as appropriate*).  
 Volunteer  Certificate  College Diploma  university Degree  Post graduate

6. How many teachers are in your school?  
 a) Less than 20  b) 20- 30  c) Over 30

7. How pupils on average do you handle in a class?  
 a) Less than 40  b) 40-50  c) Over 50

8. i. Please tell us whether you are satisfied with the number of pupils you teach in your class

Yes  No

ii. If no, in question 8(i)above, Please give justify your choice.....

For each statement given in parts **B,C, D** and **E** below, please read each carefully and indicate the degree to which you agree with the statement by placing a tick [] in the appropriate space using a rating scale of 1-5 where;

**B. Teaching Learning resources and Pupils' Performance**

To what extent did each of the following factors influence pupils' performance?

**5=Strongly Agree, 4=Agree, 3=Not sure, 2=Disagree, 1=Strongly Disagree**

Statements	1	2	3	4	5
1. There is sufficient teacher guides in the school					

2. The test books are enough to be shared one between two pupils					
3. There are enough teaching aids to serve all classes					
4. There are enough chalks to be used in all classes					
5. Classes are not congested with pupils sharing desks					
6. Sometime the school run out of chalks in the middle of lessons					

### C. Pupil Teacher Ratio and Pupils' Performance

To what extent did each of the following factors influence pupils' performance?

**5=Strongly Agree, 4=Agree, 3=Not sure, 2=Disagree, 1=Strongly Disagree**

1. There is no teacher shortage in the school					
2. At least every class has a minimum of 50 and a maximum of 70 pupils					
3. Teachers are able to attend to the needs of pupil in a single lesson					
4. Teachers can assess student assignments in a single day					
5. Teaching resources are never enough when shared among pupils					
6. Teachers can mark pupils' tests within the set timelines					

### D. Teaching-learning methods and Pupils' Performance

To what extent did each of the following factors influence pupils' performance?

**5=Strongly Agree, 4=Agree, 3=Not sure, 2=Disagree, 1=Strongly Disagree**

Statements	1	2	3	4	5
1. Teacher-learning method depends on subject matter taught					
2. The teacher can adequately get in touch with each pupil					
3. Teachers give sufficient assignments to the pupils					
4. Teachers provide test to pupils as required.					
5. Teachers attend to pupil' tests and assignments in time					

6. It is rare for the teacher to meet learning objectives					
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### E. Teachers Perception and Pupils' Performance

To what extent did each of the following factors influence pupils' performance?

**5=Strongly Agree, 4=Agree, 3=Not sure, 2=Disagree, 1=Strongly Disagree**

Statements	1	2	3	4	5
1. Teachers attend the classes during their respective lessons					
2. Teachers mark tests and are returned within the set timelines					
3. Teachers are demoralized by the scarcity of crucial resources					
4. I get stressed when I fail to meet syllabus coverage and deadlines					
5. Indiscipline cases among pupils lead to my lose of morale					
6. I feel handling overcrowded classroom is demoralizes my efforts					

### F. Pupils' Academic Performance

Using a scale of **1=Not at all to 5=Very large extent**, give your opinion on Pupils' performance in terms of the following: *Instruction: please tick [✓] only one option on the scale of 1-5*

**1=Not at all, 2=Less Extent, 3=Moderate Extent, 4=Great Extent, 5=Very great Extent**

Statements	1	2	3	4	5
1. Pupils KCPE performance is above average					
2. There is high transition and graduation rate					
3. There is increased indiscipline cases with crowded classrooms					
4. Pupils attend school everyday					

5. There is low dropout cases among the pupils					
6. There is high absenteeism among teachers					

### **Appendix 3: Interview Guide**

- 1) What is your position in this primary school?
- 2) How long have you worked in this institution?
- 3) Kindly give me an overview of this institution in terms of the number of pupils and the teachers as well.
- 4) Do you believe that the ministry of education is doing enough in terms of providing resource to support free primary education?
- 5) Talk to us about the significance of teaching-learning resource on pupils performance given the effect of free primary education
- 6) How pupil-teacher ratio has implicated the pupils' performance considering increased pupils enrolment as a result of FPE?
- 7) What can you make of the teaching-learning methods adopted in this school given the overcrowding occasioned by increased enrolment of the pupils in the institution?
- 8) How has the overcrowding in classes affected teachers' morale and perception?
- 9) What should the ministry prioritize in orders to increase the quality of services in the institution?



- 10) Which policies have you put in place in order to increase pupils' performance in this school?
- 11) Do you feel the rolling of free primary education was timely and that the ministry of education had prepared the schools adequately to effect the policies?
- 12) What can you make of the effectiveness of free primary education going forward?


#### Appendix 4: Authorization Letter from Kenya Methodist University



## Appendix 5: Authorization Letter from Ministry of Education

**MINISTRY OF EDUCATION**  
STATE DEPARTMENT OF EARLY LEARNING & BASIC EDUCATION  
COUNTY DIRECTOR'S OFFICE - LAIKIPIA

Telegram: "Education" LKP.  
Telephone:  
Email: laikipiacitydirector@yahoo.com  
When replying please quote:



County Director of Education  
Laikipia County,  
P.O. Box 253,  
NANYUKI

Ref: LKP/C/A/94 VOL/1(165) 4<sup>th</sup> April, 2022


**TO WHOM IT MAY CONCERN**


**RE: RESEARCH AUTHORITY FOR JOSEPHINE THURANIRA MUTHONI NO.227283**

The National Commission for Science, Technology and Innovation letter ref. No. NACOSTI/P/22/16454 dated 22<sup>nd</sup> March, 2022 refers.

This is to inform you that the above named person has been authorized to carry out research on the topic: *"Influence of Free Primary Education of Pupils" Academic Performance in Public Primary Schools in Laikipia West Sub-County in Laikipia*, for a period ending 22<sup>nd</sup> March, 2023.


After completion of your research please furnish this office with a copy of the research findings.

  
**CHARLES O. NYAKUNDI**  
COUNTY DIRECTOR OF EDUCATION,  
LAIKIPIA.



C.C.  
National Commission for Science,  
Technology and Innovation,  
NAIROBI

The County Commissioner,  
LAIKIPIA



**Appendix 6: NACOSTI Permit**


**REPUBLIC OF KENYA**  
 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

**Ref No: 227283**  
**227283**  
**RESEARCH LICENSE**



**This is to Certify that Ms. JOSEPHINE THIRWANJA MUTHONI of Kenya Methodist University, has been licensed to conduct research in Laikipia on the topic: INFLUENCE OF FREE PRIMARY EDUCATION ON PUPILS' ACADEMIC PERFORMANCE IN PUBLIC PRIMARY SCHOOLS IN LAIKIPIA WEST SUB-COUNTY, LAIKIPIA COUNTY for the period ending - 22/March 2024.**

**License No: NACOSTIP/22/16454**  
**227283**  
 Applicant Identification Number

  
 Director General  
 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

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