

**BOARD OF MANAGEMENT EFFICACY, PRINCIPALS' LEADERSHIP AND
STUDENT'S ACADEMIC PERFORMANCE IN SELECTED PUBLIC
SECONDARY SCHOOLS IN KENYA**

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DECLARATION

Declaration by Candidate

This thesis is my original work and has not been presented for a degree in any other University. No part of this thesis may be reproduced without the prior written permission of the author and /or Moi University.

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DEDICATION

To my parents Justice B. K. and Mrs. Milka Tanui, my role models in so many ways and children Shan, Josh, Chero, Chel, Cherono and Chemu. May you become all you were created to be and impact your generation.

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ABSTRACT

School boards have a definitive role in school outcomes and effective leadership is essential if schools are to provide the best possible education for their learners. Boards of Management (BOM) exist to oversee the provision of quality education in schools but their efficacy has been questioned due to the persistent country-wide problem of low performance in national examinations. The purpose of the study was to assess the effect of BOM efficacy on student's academic performance and to establish the moderating effect of the principals' leadership on the relationship between BOM efficacy and student's performance in selected secondary schools in Kenya. The specific objectives were: to determine the extent of the BOM's efficacy in offering strategic direction, to assess the efficacy of the BOM in the monitoring of teaching and learning and to establish the efficacy of the BOM in creating a conducive environment for learning and their effects on student's performance in selected secondary schools in Kenya, to establish the effect of the principals' leadership on student's performance in selected secondary schools in Kenya and to assess the moderating effect of principals' leadership on the relationship between BOM efficacy and student's performance in selected secondary schools in Kenya. The Systems Theory and the Path-Goal Theory of Leadership Effectiveness guided the study. The study adopted the pragmatic philosophical paradigm. Convergent parallel mixed methods research design was employed. Data was collected using questionnaires and an interview schedule. The sampling techniques used were multistage, stratified, purposive and simple random to get 358 teachers and 12 principals of selected public secondary schools in Uasin Gishu, Elgeyo Marakwet and Nandi counties. Hierarchical and Multiple regression Models using PROCESS macro were used to analyze quantitative data and test the hypothesis while thematic analysis was used to analyze the qualitative data. The findings were that BOM efficacy in: setting the strategic direction ($\beta = .325$ $p < .001$), monitoring teaching and learning ($\beta = .232$ $p < .001$), creating conducive learning environment ($\beta = .304$ $p < .001$) and principals' leadership ($\beta = .350$ $p < .001$) are predictors of student's academic performance and that principals' leadership moderates the relationship between BOM efficacy and student's academic performance ($b = .07$, $p < .01$). The qualitative findings indicated that BOMs are generally effective in the way they: identify priorities in development projects, facilitate extra teaching time for syllabus coverage and have created quiet, orderly and suitable learning school environments and that school principals are highly visible in school and support teacher's efforts. The study concludes that principals' leadership plays a significant moderating role in strengthening the relationship between BOM efficacy and student's academic performance. The study recommends strengthening principals' leadership capabilities and promoting effective collaboration with BOMs in secondary schools to bolster student success and improve overall educational outcomes. These findings have implications for policy and practice, highlighting the need for targeted interventions aimed at developing and strengthening principals' leadership capacity and promoting effective BOM governance structures in secondary schools.

TABLE OF CONTENTS

DECLARATION	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
ABSTRACT.....	v
TABLE OF CONTENTS.....	vi
LIST OF TABLES	xi
LIST OF FIGURES	xii
ABBREVIATIONS AND ACRONYMS	xiii
CHAPTER ONE	1
INTRODUCTION TO THE STUDY.....	1
1.0 Introduction.....	1
1.1 Background of the Study	1
1.2 Statement of the Problem.....	9
1.3 Purpose of the Study	10
1.4 Research Objectives.....	11
1.5 Qualitative Research Questions	11
1.6 Mixed Method Research Questions	12
1.7 Research Hypothesis.....	12
1.8 Justification of the Study	13
1.9 Significance of the Study	14
1.10 Scope of the Study	14
1.11 Limitations of the Study.....	14
1.12 Assumptions of the Study	15
1.13 Theoretical Framework.....	15
1.13.1 Systems Theory.....	15
1.13.2 Path-Goal Theory of Leadership Effectiveness	18
1.14 Conceptual Framework.....	19
1.15 Operational Definition of Terms.....	21
CHAPTER TWO	22
LITERATURE REVIEW	22
2.0 Introduction.....	22
2.1 Conceptualization of Study Constructs.....	22

2.1.1 Concept of BOM Efficacy	22
2.1.2 Concept of Setting Strategic Direction	24
2.1.3 Concept of Monitoring Teaching and Learning.....	28
2.1.4 Concept of Creating a Conducive Learning Environment.....	30
2.1.5 Concept of Principals' Leadership.....	33
2.1.6 Concept of Academic Performance	40
2.1.7 Concept of Class Size	43
2.1.8 Concept of School Type.....	44
2.1.9 Concept of School Climate	46
2.2 Empirical Literature Review	47
2.2.1 BOM Efficacy and Student's Academic Performance	47
2.2.2 BOM Efficacy in Setting the Strategic Direction and Student's Academic Performance.....	53
2.2.3 BOM Efficacy in Monitoring Teaching and Learning and Student's Academic Performance.....	58
2.2.4 BOM Efficacy in Creating a Conducive Learning Environment and Student's Academic Performance	62
2.2.5 Principals' Leadership and Student's Academic Performance	70
2.2.6 Principals' Leadership as Moderator	76
2.3 Summary of Literature Review.....	80
CHAPTER THREE	89
RESEARCH DESIGN AND METHODOLOGY	89
3.0 Introduction.....	89
3.1 Study Area	89
3.2 Research Philosophy	89
3.3 Research Design.....	91
3.4 Target Population.....	91
3.5 Sampling Procedure and Sample Size	92
3.6 Data Collection Instruments	94
3.6.1 Questionnaire	95
3.6.2 Interview Guide	96
3.7 Measurement of Variables	96
3.7.1 Dependent Variable	96
3.7.2 Independent Variable	96

3.7.3 Moderating Variable	97
3.7.4 Control Variable.....	97
3.8 Pilot Study.....	98
3.9 Validity	98
3.9.1 Face Validity.....	99
3.9.2 Content Validity.....	99
3.9.3 Construct Validity.....	100
3.10 Reliability.....	100
3.10.1 Trustworthiness.....	101
3.10.2 Credibility	101
3.10.3 Transferability.....	102
3.10.4 Dependability.....	102
3.10.5 Confirmability/Objectivity.....	103
3.11 Data Processing.....	103
3.12 Data Analysis	104
3.12.1 Assumptions of Regression Model	105
3.12.2 Model Specification	106
3.13 Ethical Considerations	110
CHAPTER FOUR.....	111
DATA ANALYSIS, PRESENTATION AND INTERPRETATION	111
4.0 Introduction.....	111
4.1 Data Preparation and Screening.....	112
4.2 Descriptive Statistics of Respondent's Demographic Characteristics	113
4.3 ANOVA Test Results	117
4.4 Descriptive Statistics for Measurement Items	119
4.4.1 Descriptive Statistics for BOM Efficacy in Setting Strategic Direction.....	119
4.4.2 Descriptive Statistics for BOM Efficacy in Monitoring Teaching and Learning.....	124
4.4.3 Descriptive Statistics for BOM Efficacy in Creating a Conducive Learning Environment	131
4.4.4 Descriptive Statistics for Principals' Leadership.....	136
4.4.5 Descriptive Statistics for Student's Academic Performance	143
4.5 Data Reduction Using Factor Analysis.....	147
4.5.1 Assessment of Multivariate Outliers.....	147

4.5.2 Multicollinearity	149
4.5.3 Test for Normality of the Study Variables.....	151
4.6 Exploratory Factor Analysis	152
4.6.1 Exploratory Factor Analysis for BOM Efficacy	153
4.6.2 Exploratory Factor Analysis for Principals' Leadership	156
4.6.3 Exploratory Factor Analysis for Student's Academic Performance.....	157
4.7 Testing Assumptions for Regression Analysis	159
4.7.1 Testing for Normality of Residuals.....	159
4.7.2 Testing for Linearity	160
4.7.3 Homoscedasticity and Independence of Errors.....	161
4.8 Relationship between Covariates and Student Academic Performance	163
4.9 Hypothesis Testing.....	164
4.9.1 The Effect of BOM Efficacy in Setting the Strategic Direction on Student's Academic Performance	164
4.9.2 The Effect of BOM Efficacy in Monitoring Teaching and Learning on Student's Academic Performance	167
4.9.3 The Effect of BOM Efficacy in Creating a Conducive Learning Environment on Student's Academic Performance	169
4.9.4 The Effect of Principals' Leadership on Student's Academic Performance	174
4.9.5 The Moderating Effect of Principals' Leadership on the Relationship between BOM Efficacy and Student's Academic Performance	177
CHAPTER FIVE	181
SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS	181
5.0 Introduction.....	181
5.1 Summary of the Findings.....	181
5.1.1 BOM Efficacy in Setting Strategic Direction and its Influence in Student's Academic Performance	182
5.1.2 BOM Efficacy in Monitoring Teaching and Learning and its Effect on Student's Academic Performance	183
5.1.3 BOM Efficacy in Creating a Conducive Learning Environment and its Effect on Student's Academic Performance	184
5.1.4 Principals' Leadership and Student's Academic Performance	187

5.1.5 Moderating Effect of Principals' Leadership on the Relationship between BOM Efficacy and Student's Academic Performance	188
5.2 Conclusion of the Study	189
5.3 Recommendations of the Study	193
5.4 Implications of the Study	195
5.4.1 Theoretical Implications	195
5.4.2 Policy Implications	197
5.4.3 Practical Implications.....	198
5.5 Contribution to Knowledge.....	200
5.6 Suggested Areas of Further Research	201
REFERENCES	203
APPENDICES	218
Appendix 1: Questionnaire for Teachers	218
Appendix 2: Interview Schedule for Principals	222
Appendix 3: Sample Size of a Known Population.....	223
Appendix 4: Mahalanobis Distance D2 Multivariate Outliers' Analysis	224
Appendix 5: Skewness and Kurtosis of the Transformed Variables	225
Appendix 6: Exploratory Factor Analysis for BOM Efficacy	226
Appendix 7: Exploratory Factor Analysis for Principals' Leadership.....	229
Appendix 8: Exploratory Factor Analysis for Students Academic Performance ..	231
Appendix 9: Regression Results of the Direct Effects.....	233
Appendix 10: Moderation Results	236
Appendix 11: Letter of Introduction	238
Appendix 12: Research Permit and Other Letters of Approval.....	239
Appendix 13: Plagiarism Report.....	244

LIST OF TABLES

Table 1.1: Overall National KCSE Performance Summary 2016 to 2023	9
Table 3.1 Teacher Population per County	92
Table 3.2 Sample Size of Teachers per Sub- County	94
Table 3.3 Composite Results for Reliability Test – Pilot Study	101
Table 3.4: Steps for the Data Analyses	108
Table 4.1 Demographic Composition of Respondents (N=358)	114
Table 4.2 ANOVA Test Results	117
Table 4.3 Descriptive Statistics for BOM Efficacy in Setting Strategic Direction ...	120
Table 4.4: Descriptive Statistics for BOM Efficacy in Monitoring Teaching and Learning.....	125
Table 4.5 Descriptive Statistics for BOM Efficacy in Creating a Conducive Learning Environment	132
Table 4.6: Descriptive Statistics for Principals’ Leadership.....	137
Table 4.7: Descriptive Statistics for Student Academic Performance	143
Table 4.8: Correlation Analysis of the Study Variables	150
Table 4.9: Tolerance and VIF Values	151
Table 4.10: Skewness and Kurtosis Coefficients of the Original Variables (N=358)	152
Table 4.11: KMO and Bartlett’s Test for BOM Efficacy	153
Table 4.12: Exploratory Factor Analysis Results for BOM Efficacy	155
Table 4.13: Total Variance Explained for BOM Efficacy	156
Table 4.14: KMO and Bartlett’s Test for Principals’ Leadership.....	156
Table 4.15: EFA Results for Principals’ Leadership	157
Table 4.16: KMO and Bartlett’s Test for Student Academic Performance	158
Table 4.17: EFA Results for Student Academic Performance	159
Table 4.18: Test for Independence of Errors	162
Table 4.19: Pearson Correlation Results for Study Covariates.....	163
Table 4.20: Results for Covariates and Direct Effects.....	176
Table 4.21: Regression Coefficients	176
Table 4.22: Moderated Regression Results (N=358).....	178
Table 4.23: Summary Results of Hypotheses Tests.....	180

LIST OF FIGURES

Figure 1.1: Conceptual Model	20
Figure 3.1: A Representation of the Thematic Analysis Process.....	109
Figure 4.1: Normality Test Histogram.....	160
Figure 4.2: Normality and Linearity Plot.....	161
Figure 4.3: Scatter Plot	162
Figure 4.4: Graphic Presentation of the Moderating Effect of Principals' Leadership on the Relationship between BOM Efficacy and Student's Academic Performance.....	178

ABBREVIATIONS AND ACRONYMS

BOG	–	Board of Governors
BOM	–	Board of Management
CEB	–	County Education Board
CLE	–	Creating Conducive Environment
DOS	–	Director of Studies
KCPE	–	Kenya Certificate of Primary Education
KCSE	–	Kenya Certificate of Secondary Examinations
MTL	–	Monitoring Teaching and Learning
PA	–	Parents Association
PL	–	Principals’ Leadership
SAP	–	Student’s Academic Performance
SBM	–	School-Based Management
SGB	–	School Governing Body
SMC	–	School Management Committee
SSD	–	Setting Strategic Direction
TPAD	–	Teacher Performance Appraisal Development

CHAPTER ONE

INTRODUCTION TO THE STUDY

1.0 Introduction

The chapter introduces the nature of the study by placing it in its context. Background information was presented from the global, regional, and local environments from prior studies. It also introduced the research problem in the statement of the problem, the purpose of the study, the study objectives, research questions, hypothesis, justification and significance of the study, the scope of the study, the study limitations, the theoretical and conceptual frameworks and the operational definition of terms.

1.1 Background of the Study

Student's performance remains a major concern for educators (Farooq, Chaudhry, Shafiq, & Berhanu, 2011). In the globalization age where a technological explosion has been witnessed, education's role is vital, its contribution to economic growth is significant and promises better prospects for employment and a rise in income (MoEST, 2005; OECD, 2015). Academic performance is a crucial factor in determining student success and plays a key role in evaluating the learning process (Sanchez II, Soraino, Ande & Fajardo, 2022).

Academic performance is crucial for determining student's success in their desired careers (Khusaini, Sinaga & Elizabeth, 2022). Academically successful students are more likely to be employed in stable firms, have more employment chances, earn better salaries, are more likely to have health cover, are less dependent on social benefits and less likely to engage in crime, are more vibrant citizens, engage in charitable engagements and live healthier and more fulfilled lives (Regier, 2011).

There is an increasing acknowledgment that school boards play the definitive role in school outcomes, that schools require effective leadership and management if they are to deliver the best probable learning for their students (Bush, 2007; Adeolu & Williams, 2013), and that having an effective board is the most critical aspect to a school (Lee, 2015; NGA, 2018). A former Secretary of Education famously said ... “School boards are close enough to communities and schools to see what needs to be done and powerful enough to do it” (Rod Paige, as cited in Plough, 2014). School boards exist to provide ... “effective community oversight of the school system” (Hess, 2002).

According to ASCL (2012), governors play a significant role in schools and decent governance is fundamental to having an exceptional school. They reiterate that effective governance is indispensable for the well-being and accomplishment of any organization. They further point out that when any division of the organization fails, it is the failure of the governance and therefore, it is paramount to ensure that the governance is robust so that top performance is achieved and maintained.

Boards occupy a central place in educational governance in schools and should therefore warrant quality, monitor performance, and arbitration whenever required (Honingh, Ruiter & van Thiel, 2018). The main function of an effective school board is to improve school results by winning over and motivating the abilities of all the actors in the school, as well as harnessing the school culture and environment (Pont, Nursche, & Moorman, 2008). Although school boards exist to ensure that every child has the opportunity to learn, they face the difficulty of representing the needs of their communities while also being careful not to infringe on the jurisdiction of professional educators by micromanaging the school. It implies that boards should do

a balancing act of being representative and democratic on the one hand while striving to remain explicitly apolitical on the other (Hess, 2002).

From the business perspective, corporate boards are groups of independent, knowledgeable people who add to the boardroom debate by bringing their expertise, experiences, and diverse outlooks to perform control and advisory functions, and operate in the interest of stakeholders. They are expected to scrutinize the top executives' actions and be proactive in monitoring firm performance to satisfy the expectations of stakeholders. Therefore, board control is gradually being considered a basic measurement tool for board effectiveness and is increasingly the focus of public scrutiny. At the same time, boards are expected to be at the forefront in sourcing additional resources for the organization (Minichilli, Zattoni, Nielsen & Huse, 2012).

School Board Management (SBM) is over two hundred years old in America having roots in their colonial past (Hess, 2002; Land, 2002). The process of acquiring membership to the board is through an elective process. The National School Boards Association is charged with establishing the national standards for best practices and keeping the school district records. Each state also has a school board association that establishes the functions and goals of the boards in that state. In the state of California for instance, the school board's major function is ... "to work to improve student achievement in their local public schools" (California School Board Association, 2017). The school boards and the school leadership share the responsibility for student education and are answerable for their performance (ibid).

In England, the School Governing Body (SGB) consults and collaborates with the county Local Education Authorities (LEAs). SGBs came into being following the groundbreaking report, "A New Partnership for Our Schools" in 1981. Section 21 of

the 2002 Education Act affirms the board's role as mainly to conduct the school to promote high standards of educational achievement and to continually seek its improvement (Balarin, Brammer, James & McCormack, 2008). In Australia (as in the US and UK), education is also decentralized to the state level. By law, School Councils are not obliged to interfere with the management of the school by the principal. The department appoints a principal for each school to act as the Chief Executive in the day-to-day running of the school (State of Victoria, 2018).

In the African region, South Africa, Ghana, Nigeria, Senegal, Madagascar, Uganda, Burkina Faso, Tanzania, Rwanda, and Zimbabwe have all embraced the school-based management (SBM) approach in their education systems. The education sector in many democratic countries is run by different policies and legal frameworks. The guiding document is the South Africa Schools Act No. 84 of 1996 (SASA). It lays down the duties and responsibilities of all the stakeholders including the School Governing Body and the school principal in the pursuit of offering a quality education for learners (Mohapi & Netshitangani, 2018).

Management of secondary schools in Kenya is the responsibility of the Board of Management (BOM) within the legislative framework of the Basic Education Act No. 13 of 2014. The BOM is a group of volunteers with a ministerial appointment to work in coordination with the County Education Board (CEB) to manage schools on their behalf, in the form of decentralized power (Caldwell, 2005; Mojtahedzadeh & Sayadmanesh, 2013; Wing Ng, 2013). Board members are selected from the surrounding community because they are thought to be closer to the schools and therefore understand local problems and needs better, to improve democracy and

incorporate diverse local talents and interests (Nungu, 2010). Their efficacy is therefore seen as extremely vital in the running of schools.

Principals' leadership is also seen as a very important predictor of student outcomes (Robinson, Lloyd & Rowe, 2008; World Bank, 2018; Wu, 2020; Tedla & Kilango, 2022; Okoro, 2022). Its influence is said to be only second in importance to teacher instruction in the classroom in comparison to other school factors that construe to fine-tune improved standards of achievement (Leithwood, Louis, Anderson & Wahlstrom, 2004; World Bank, 2018). It does so by indirectly enhancing the quality of teaching and ensuring the utilization of teaching and learning materials (World Bank, 2018).

In the majority of school systems, the system authorities expect the principal to improve student performance and are held responsible for building commitments in inculcating a common vision to motivate and energize both teachers and students (Tedla & Kilango, 2022). Heads of institutions are usually held responsible for poor academic performance, as society expects the performance of schools to be high continually (Okoro, 2022). Principal leadership is a vital component for the improvement of school management and raising education standards. It also determines the quality of education based on his or her capacity to control, direct, and guide teachers and students (Dabesa & Cheramlak, 2021).

The principal is expected to maintain a close collaboration with the school board and maintain academic standards in the school, embrace teamwork through collaboration with the staff in school, serve as the accounting officer of the institution and as secretary and technical advisor to the Board of Management (Robinson *et al*, 2008; Waters, Marzano & McNulty, 2003).

China's education system is largely examination-oriented and the secondary school cycle is absorbed entirely in preparation for exams. The National Entrance Exams, done after three years is an important examination determining admission to the next level. The principal's leadership is evaluated by the success rate of the school (Tedla & Kilango, 2022).

In the vast continent of India, principals of all schools are expected to be a uniting factor as they work alongside the government in managing schools as well as meeting the set educational objectives. The education system is uniform across all states, which is the 10+2+3 format i.e., ten years of primary, upper primary, and high school, two years of higher secondary, and three years of college education (Thomas & Jharel, 2019).

Ethiopia is faced with the persistent challenge of low quality in its education system. The government, in a bid to solve the problem, came up with the Education and Training Policy to strengthen the professional skills of school leaders, a move that showed remarkable improvement. The endeavor was a recognition that school leaders' effectiveness has a direct bearing on student's academic achievement (Dabesa & Cheramlak, 2021).

In South Africa, the principal is seen as the key delivery agent in the education system, the most important partner in education, and the biggest driver for better education outcomes whose abilities and commitment correlate highly with student academic performance. The government has a published Standard for principalship that pinpoints the key areas of principalship. According to the Standard, the core purpose of principalship is to provide leadership and management in all school areas, to facilitate the formation of supportive conditions under which high-quality teaching

and learning occurs, and to encourage the highest possible standards of learner achievement (Republic of South Africa, 2014).

Ofsted has distinguished between the roles and significance of school board management and leadership. They point out that the role of leadership is to provide the drive and direction for attaining achievement whereas the role of the management is to make the best use of resources and to assist and facilitate the principal and that both ought to be evaluated by their impact on the quality and standards of the school (Ofsted, 2003a, as cited in Early, 2004).

Several studies have looked at the influence of the school board and principals' leadership on academic performance. Some of these include a study by Lord, Martin, Atkinson & Mitchel (2009) who investigated the relationship between leadership and governance in narrowing the gap for school outcomes. Their study found that the role of effective leaders is to think creatively and incorporate the governors in the "... shared participation, shared responsibility and shared accountability".

Mahlangu (2005) also carried out a study to determine the relationship between the school principal and the school governing body. His findings were that the problems in their relationship were due to the undemocratic behavior and domineering attitude of the principals particularly concerning the parent governors. The study also established that the relationship challenges between the principal and the school governing body are related to a lack of trust, sound decision-making, and accountability. There was also a lack of coherent collaboration and empowerment. The substantial extent of the problem had created a negative effect on the quality of teaching and learning in the school.

The current study is based in Kenya where the education system is examination oriented. It means that a vast amount of time spent in secondary education is used predominantly to prepare learners for national examinations. At the lapse of the four-year cycle, students sit for the Kenya Certificate of Secondary Education (KCSE) which is a requisite for admission into the next level of education. Schools are judged based on the mean score attained which carries huge significance for the stakeholders (Tedla & Kilango, 2022).

Student's academic performance is based on KCSE examination results. One's performance in KCSE not only dictates whether a candidate can proceed to join the university or a polytechnic but also a particular program of study. It therefore a huge determinant of career pathways. Students who attain grades C plus and above qualify for direct admission to university education. Those who attain a C or C minus qualify for diploma education and those below, for certificate programs. Schools throughout the country through the school principal and BOM harness all their resources to ensure that as many of their candidates as possible attain or surpass C plus, the pass mark.

Student's performance in KCSE at the national level has been poor for many years (Kiptum, 2016). For example, data from the Kenya National Examination Council (KNEC) shows that in 2023, a total of eight hundred and ninety-five thousand, five hundred and thirty-three candidates sat for KCSE examinations. Out of that number, only two hundred and one thousand, one hundred and thirty-three candidates (22%) attained grade C+ and above and therefore qualified to pursue a university education. The majority of the candidates (78%) attained grades C and below and did not meet the minimum entry grade for university education. The national mean grade was D

minus. The state of affairs is replicated in the eight previous years, with only a slight improvement in the student's performance. A summary of student's performance in the country for the years 2016 to 2023 is presented in Table 1.1 below.

Table 1.1: Overall National KCSE Performance Summary 2016 to 2023

YEAR	Total No. Sat	Mean Grade	% Attained C+ and above
2023	895,533	D-	22
2022	881,416	D-	20
2021	826,807	D-	18
2020	747,161	D-	19
2019	697,222	D-	18
2018	660,204	D-	14
2017	611,952	D-	12
2016	521,125	D-	16

Source: **KNEC**

1.2 Statement of the Problem

Attaining a good grade in KCSE examinations is the most sought-after outcome of secondary school education for both individual learners and schools in Kenya. However, this has not been the case for the majority of the form four candidates. The national performance has chronically been at the low mean of D- for the last several years as indicated in Table 1.1. The problem persists despite the pivotal role of the Board of Management (BOM) mandated in the Basic Education Act No. 13 of 2014 to ensure the provision of quality education in schools. Quality education is measured by academic performance.

The problem of underperformance is critical, given the significant government funding and parental contributions allocated to education for teaching materials, infrastructure, staffing, and student well-being. The amount of government expenditure on education is one of the highest in the region. Of importance is also the

fact that KCSE examination results carry crucial implications for the learner's future career aspirations.

Given the key role mandated by the BOM to promote educational excellence in schools, there is concern about the extent of BOM's effectiveness in addressing this academic underperformance. Although previous research has focused on the role of the school board and leadership in improving academic results (Honingh *et al*, 2018; Linguluka & Onyango, 2020; Tabu & Lekule, 2022; Hess, 2002; Ozdemir, Gumus, Kilinc & Bellibas, 2022; Grissom, Egalite & Lindsay 2021; Tan, Dimmock & Walker, 2021; Wu, 2020; Robinson *et al* 2008; Johnson, 2006; Tatlah, Iqbal, Amin & Qurashi, 2014), little attention has been given to the moderating effect of principal leadership on the relationship between BOM efficacy and academic performance (King'oina, Ngaruiya, & Mobegi, 2017; Lorentzen, 2013; Ojijo, Ajowi, & Aloka 2020; Tshiuza, Xin & Garcia, 2017).

The study sought to address the gap by employing mixed methods and controlling for potentially confounding variables of class size, school type, and climate. In so doing, the study hoped to offer detailed insights and suggestions for creating policies and programs to enhance academic achievement in secondary schools.

1.3 Purpose of the Study

The study sought to assess the effect of BOM efficacy on student's academic performance in selected secondary schools in Kenya and the role of principals' leadership in moderating the relationship using a mixed research methodological framework.

1.4 Research Objectives

The study was guided by the following objectives:

- i. To determine the extent of BOM efficacy in setting the strategic direction and its influence on student performance in selected secondary schools in Kenya.
- ii. To assess BOM efficacy in monitoring teaching and learning and its influence on student's academic performance in selected secondary schools in Kenya.
- iii. To establish the efficacy of the BOM in creating a conducive learning environment and its effect on academic performance in selected secondary schools in Kenya.
- iv. To establish the effect of the principals' leadership on student's academic performance in selected secondary schools in Kenya.
- v. To assess the moderating effect of principals' leadership on the relationship between BOM efficacy and student academic performance in selected

1.5 Qualitative Research Questions

- i. How does BOM efficacy in setting the strategic direction influence student's academic performance in selected secondary schools in Kenya?
- ii. What is the relationship between the BOM efficacy in monitoring teaching and learning and student's academic performance in selected secondary schools in Kenya?
- iii. What is the relationship between the efficacy of the BOM in creating a conducive learning environment and student's academic performance in selected secondary schools in Kenya?
- iv. How does the principals' leadership affect the student's academic performance in selected secondary schools in Kenya?

- v. How does principals' leadership moderate the relationship between BOM efficacy and student academic performance in selected secondary schools in Kenya?

1.6 Mixed Method Research Questions

- i. How do the interviews with Principals help to explain the moderating effect of Principals' leadership on the relationship between BOM efficacy and academic performance?
- ii. How do the themes emerging from the interviews help to explain the moderating effect of Principals' leadership on the relationship between BOM efficacy and academic performance?

1.7 Research Hypothesis

The following hypotheses were tested while controlling for class size, school type, and school climate.

- i. **H₀₁** There is statistically no significant effect of BOM efficacy in setting the strategic direction on student's academic performance in selected secondary schools in Kenya.
- ii. **H₀₂** There is statistically no significant effect of BOM efficacy in monitoring teaching and learning on student's academic performance in selected secondary schools in Kenya.
- iii. **H₀₃** There is statistically no significant effect of BOM efficacy in creating a conducive learning environment on student's academic performance in selected
- iv. **H₀₄** There is statistically no significant effect of the principals' leadership on student's academic performance.

- v. **H₀₅** Principals' leadership does not significantly moderate the relationship between BOM efficacy and student's academic performance.

1.8 Justification of the Study

The study was prompted by the concern for the persistently low level of academic performance output in Kenyan schools. The average annual national pass rate of 20% in KCSE is very low. What could be the reasons for that? The Baccalaureate - in France, which is said to be the toughest examination in the world, has a pass rate of 88%. The study targeted the highest accounting officers in the school – the BOM and the school principal, to assess their efficacy, leadership, and influence on student's academic performance in secondary schools in Kenya.

The study was also prompted by the amount of funding the education sub-sector enjoys from the government. The sector remains a priority investment for the government. There is therefore need to ensure more focus is placed on strengthening the link between inputs, transformation, and outputs. Government funding is input while the BOM and the principals' leadership and collaboration are among the transformation process while student academic performance is the main output.

The role of BOMs has been brought to the fore by the recently introduced one hundred percent transition policy which mandates all KCPE candidates to transit to secondary school despite the entry behaviour. Although the policy is a move towards achieving Education for All (EFA), it came with a myriad of challenges for managers of schools such as overcrowding in the inadequate infrastructure and unmanageable class sizes which had the potential to lead to mass indiscipline and ultimately poor performance *en masse* if the problems went unchecked.

1.9 Significance of the Study

It was hoped that the findings of the research would be of benefit to all the education stakeholders as the empirical basis for decision-making. The Government through the Ministry of Education and its agencies, CEB, schools, BOMs, the Parents Association (PA), sponsors, and the larger community could appreciate the way BOMs and the school principal work so that they can support them for the betterment of the school, as ... "an education system of good quality is a shared responsibility between multiple actors" (Antoninis, 2019). Scholars with academic interests in the field of school management, leadership, and governance could benefit from the contribution to debate and a reference.

1.10 Scope of the Study

The study confined itself to public secondary schools in Elgeyo Marakwet, Uasin Gishu, and Nandi counties. The three counties were chosen because they have features found in schools all over the country such as arid and semi-arid areas, urban schools, semi-urban schools and top-performing schools nationally, and thus can represent the schools in the whole country. It focused on the BOM functions of setting strategic direction, monitoring teaching and learning, and creating a conducive learning environment for learners and the moderating effect of the principals' leadership on the relationship between BOM efficacy and student academic performance using the concurrent parallel mixed methods research design. Data was collected in July and August 2023.

1.11 Limitations of the Study

The study had a few limitations such as: the use of principals to give information concerning their leadership and their BOM may have been influenced by their

prejudice. To overcome the self-assessment by principals, the researcher diversified the sources of data to include teachers so as to validate the information collected from the principals. The principals were also assured that the information shared would only be used for the stated purpose and that the identity of their schools would not be disclosed.

Another was that in two schools, the researcher interviewed two deputy principals who were acting as school principals because their schools had no substantive principals at the time. The researcher did not find them deficient in any way. They were able to provide all the required information about their schools, just like any school principal.

1.12 Assumptions of the Study

The assumptions of the study were; that the respondents have enough knowledge of the study constructs, that they are willing to share the necessary information, and that their responses are truthful and unbiased for all the items and represent the views of their schools. Secondly, the sampled population adequately represents the whole population.

1.13 Theoretical Framework

The study was guided by two theories: The Systems Theory proposed by Ludwig Von Bertalanffy in 1968 and the Path–Goal Theory of Leadership Effectiveness by House (1971).

1.13.1 Systems Theory

The study was guided by the Systems Theory as proposed by Ludwig Von Bertalanffy in 1968. The systems theory views organizations as systems whereby a system is an interrelated set of elements functioning as an operating unit (Senge, 2006). As a

system, an organization is composed of many sub-systems where all the sub-systems function in a relationship that is interdependent and interactional. The purpose of the interconnection of the various components is to accomplish certain aims. The theory states that the various subsystems or components are linked to each other in various ways including: communication, decisions, authority, responsibility, relationships, objectives, policies, procedures, and other aspects of coordinating mechanism.

According to Senge (2006), human activities are systems that are held together by "invisible fabrics of interconnected actions" and because we too are a part of the tapestry it is difficult to see the complete pattern, and yet "the whole can exceed the sum of its parts". He argues that people get surprised that their inmost challenges go unsolved because of the focus on a snapshot view of isolated parts of the whole. He recommends systems thinking so that whole patterns are made more visible and for equipping with the tools to change circumstances effectively.

The theory further proposes that systems are open and therefore interact with the environment outside them. The environment provides key resources that sustain the organization and lead to its survival. The environment consists of other organizations that exert various forces of an economic, political, or social nature. As open systems, organizations are thus highly reliant on the environment.\

According to Scott (2008), an open system consists of five basic elements; inputs, a transformation process, outputs, feedback, and the environment. Inputs are the diverse manner of resources from the environment that the organization works on in the production process. At the transformation process stage, the organization creates new products, develops materials, educates individuals, or delivers services. The outputs are consequently transferred back to the external surroundings. They become inputs

for other systems or the system itself. The cycle renews itself as the course begins all over.

Schools are living systems because they are made up of people (Schmuch, 1977, as cited in Oyeade, 2008). As living systems, therefore, interaction is the mainstay with the public. The systems theory emphasizes the interactions that go on between the school and its environment and the interactions within the school. The school organization, though a comprehensive system on its own, is a sub-system of a larger national educational system which also lives within the wider collective supra system called the environment.

The study was modeled on the systems theory because in schools, as in other organizations, has inputs, outputs and the transformation process. The school's inputs as adopted in the study, include among others the students, teachers, and the syllabus. The transformation process is the actual teaching and learning, both curricular and co-curricular, and the school routine. The output is the student's achievements. The BOM forms a part of the environment. There is also constant exchange and interaction with the larger society.

Therefore, based on the foregoing discussion, the systems theory helps in explaining the multi-faced nature of school management. Through systems thinking, the school board can appreciate the school stakeholders as being part of a common system and work harmoniously together with them to realize the schools' common target. The BOM originates from the school's external environment but brings ideas and resources to add value to the transformation process and consequently to the academic performance of a school. The Principals' Leadership can heighten, pacify, or reduce their influence during the transformation process, depending on how open he or she is

to the interaction with the BOM. The theory was adopted by the study because the propounded tenets are relevant in discussing the research objectives.

1.13.2 Path-Goal Theory of Leadership Effectiveness

The Path-Goal Theory of Leadership Effectiveness by House (1971) proposes that there is no one best way to lead, but that the leader's behavior is contingent on the performance of their followers and the task at hand. The leader's job is seen as continuously opting for the best possible path in directing their staff to attain the set targets. The leadership style motivates the subordinates because while on the path, the goal is clarified making the journey seem effortless. The leader gives clear instructions frequently along the way and eliminates barriers, ensuring that the attainment of the goal is not the only achievement experienced, but also the nature of the work itself is satisfying (House and Mitchel, 1974).

According to Northouse (2019), the path-goal theory sees the leader as the one with the responsibility to formulate and facilitate a working environment that is vibrant and functional to drive subordinates toward goal achievement. They do that by purposely selecting activities that match subordinates' interests as well as the work context. In so doing, the leaders increase not only their expectations but also their overall performance (ibid). Leaders also need to provide rewards along the path to motivate the followers when they meet the set targets. Thus, the focus of the path-goal theory is on leadership behavior which is seen as the main source of influence that can change the attitude and commitment of the followers because every leader's behavior has a different influence on subordinates.

The path-goal theory of leadership effectiveness helps to explain the role of the BOM and principal because as school leaders, they must not only rally all the subordinates

together toward a shared goal, but more importantly, it is their responsibility to design the path that will lead to the attainment of those goals and remove obstacles along the path. They therefore must select the behaviours that can help achieve the goal such as teamwork and collaboration, participation, and mutual respect so that no one is left behind, but all are motivated to do their part to reach the shared target.

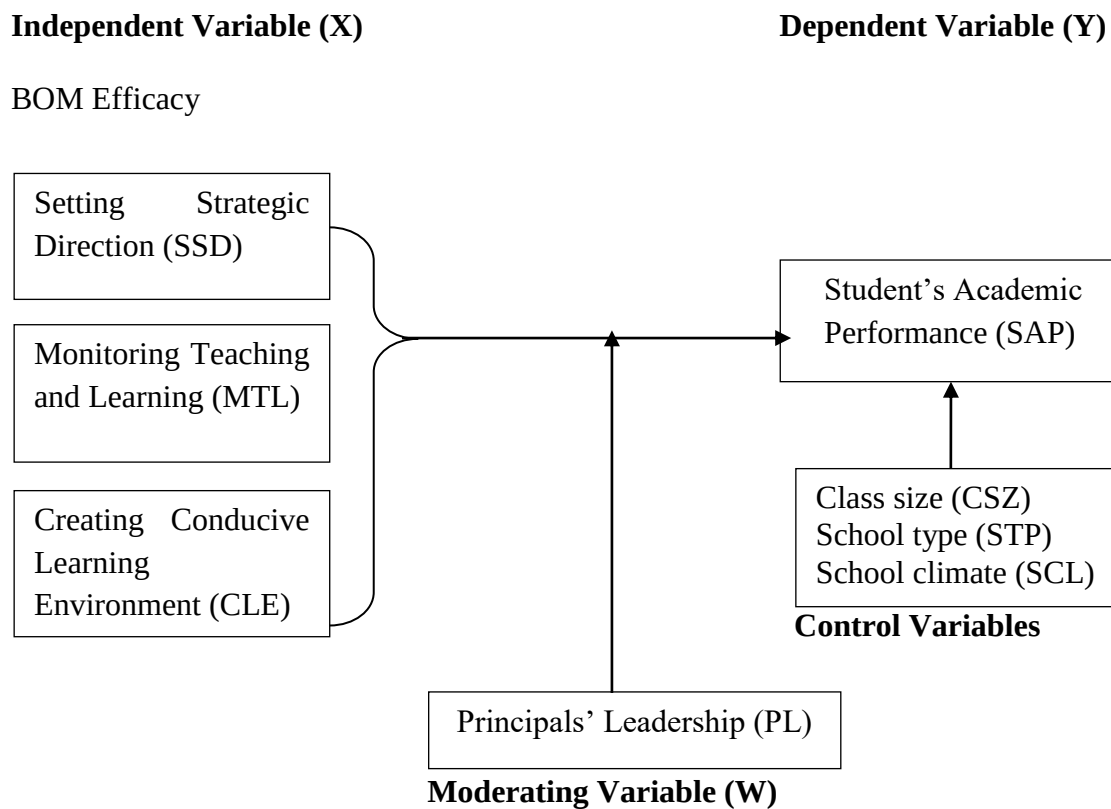
The theory was adopted because the views advocated for are relevant in discussing the research objectives on school leadership. The study agrees with the path-goal theory that there is no one best way to lead, but that leaders are to vary their behavior according to the situation at hand and its emphasis on leaders' role in influencing subordinates by setting the common targets, removing pitfalls that interfere with goal attainment, providing guidance and support and tying meaningful rewards to goal accomplishments. That it is the role of leaders to align individual's targets with that of the institution and by relating his/her behavior with the follower's characteristics and the situation for improved performance.

1.14 Conceptual Framework

Figure 1.1 below depicts the hypothesized interactions in the study based on the interaction between BOM efficacy, the principals' leadership, and student's academic performance. In the study, the independent variable is BOM efficacy while the dependent variable is the student's academic performance. The principals' leadership was the moderating variable.

The effect of the BOM's efficacy in setting the strategic direction and student's academic performance was hypothesized as H_{01} . The effect of BOM efficacy in monitoring teaching and learning on student's academic performance is hypothesized as H_{02} while the effect of the BOM's efficacy in creating a conducive learning

environment and student's academic performance as H_{03} . The relationship between the principals' leadership and student's academic performance was hypothesized as H_{04} while the moderating effect of the principals' leadership on the relationship between BOM efficacy and student's academic performance was hypothesized as H_{05} . The model depicts student academic performance as a product of BOM efficacy and principals' leadership.



Arrows indicate hypothesized effects

Figure 1.1: Conceptual Model

1.15 Operational Definition of Terms

BOM Efficacy/Effectiveness

The varying degree to which a school board achieves the mandate for which it was established. A highly effective BOM sets clear goals rallies all stakeholders to achieve them, monitors progress, harnesses school resources, and proactively enacts policies in response to challenges encountered, possesses knowledge of the school, and creates a collaborative working relationship with the school principal based on the common aim of improving school performance.

Principals' Leadership

Principal leadership refers to the type of leadership exhibited by the school principal as the main implementer of BOM resolutions and decisions. Some principals are proactive in carrying out the BOM directions, capturing their vision, and inspiring staff and learners to greatness, others do just enough to manage the situation at hand while others are slow, passive, indifferent, and uninvolved with whatever is happening in school. The study claims that the type of leadership exhibited by the principal affects the relationship between the BOM's efficacy and student's academic performance.

Student's Academic Performance

The outcome of four years of teaching and learning input process in secondary education in Kenya is the grade scored during the KCSE examinations. It is a very important measurement tool as it forms the basis by which schools are categorized, teachers promoted and students placed into different degree/diploma programs.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The chapter provides a review of the literature conceptualizing the constructs of; BOM efficacy, setting strategic direction, monitoring teaching and learning, creating a conducive learning environment, principals' leadership, student academic performance, class size, school type and school climate. The second part presents a review of research studies done in the areas of BOM efficacy: BOM efficacy in setting strategic direction, monitoring teaching and learning and creating a conducive learning environment, principals' leadership and student's academic performance and the moderating role of principals' leadership on the relationship between BOM efficacy and student's academic performance.

2.1 Conceptualization of Study Constructs

2.1.1 Concept of BOM Efficacy

According to dictionary.com (retrieved 26th July, 2022), efficacy is the capability to produce the preferred outcome while according to the Collins English Dictionary, it is the ability to successfully elicit the planned outcome. It is therefore the capacity to succeed in creating the desired effect. Efficacy is synonymous with words like; effectiveness, effectualness, efficaciousness, efficacy, efficiency, and productive. BOM efficacy or BOM effectiveness is therefore the capacity of the BOM to succeed in creating or producing the desired outcome.

In literature, board effectiveness has been defined as “the board’s ability to effectively perform its control and service tasks” (Heeskerk, 2021, as cited in Loh *et al*, 2021) and “the board’s capacity to fulfil its role effectively” (Loh *et al*, 2021).

The concept of board of management falls under the area of organizational or school governance. The concept of governance has been defined by James Svara, 1990, as cited in Ford & Ihrke, 2016) as a process that is made up of four dimensions: the process of formulating the institutions' mission, formulating the guiding policies, performing administrative duties and managing, which is seen as not being a direct charge of the governing body.

In school, the school boards are seen as having one main mission – to enhance the academic output and achievement of the schools they serve. Schools with effective boards post better school outputs (Tshiunza, 2018; World Bank, 2018). Research has brought to light three qualities of effective school management: to plainly communicate challenges faced and offer categorical insight on how to overcome them, to harness human and economic means towards the common goals and build networks for their execution, and to attend to solving emergent problems that affect their school with local solutions (World Bank, 2018).

According to Wing Ng (2013), effective BOMs are those that are open, transparent, and publicly accountable for their educational accomplishments and good use of funds. He observes that the main role of the school board is to function within an alignment of set policies and duties so that they are in line with government regulations.

The Guide to the Law in South Africa states that while a good head teacher will discuss all the main aspects of school life with the governing body, it is the governing body that is expected both to challenge and support the school's operations. It should act "critical friend" by offering support and constructive advice (DCSF, 2010, as cited in Young, 2011). The effective school governing body is one to ask questions that

challenge assumptions and support effective decision-making and that when they do an excellent job, they reinforce the school leadership and contribute to improved results (Ofsted, 2011, as cited in Young, 2011).

Wing Ng (2013) asserts that it is the onus of the School Board to be open, transparent and publicly accountable for however the school performs and how funds are used. He further points out that the key function of School Boards is to operate within the outline set of laid down authorities and responsibilities and to fulfill the regulatory requirements of government, while Newton & da Costa (2016) opine that the school board should be “in tune” with local community needs and aspirations so that they can be in a position to decipher local data in the best way and make highly contextualized and informed decisions that uphold school-based initiatives.

According to Lipton *et al*, (2010)

... “the ultimate responsibility and objective of boards is not to ensure perfect compliance with the latest best practices and checklists, but rather to thoughtfully exercise their oversight role, promote a culture of excellence and integrity within the corporation and work with management to develop strategies for long-term value”.

According to Onderi & Makori (2012) effective School Boards are those that add value to the school life and own the schools they serve.

2.1.2 Concept of Setting Strategic Direction

The BOM role of setting strategic direction in schools not only covers aspects of the day-to-day operations of the school, but also the formulation of the total embodiment of the school’s aspirations for the present and future in the form of strategic direction.

Setting the schools’ strategic direction begins at the strategic planning phase when the strategic plan is formulated and the vision and mission of the school is documented

(Serero, 2016). It is the role of the school governance to determine not only the school policies including the religious observances and the dress code, but more importantly in relation to school management is the boards' mandate to set academic standards and learner targets by involving the institutions' stakeholders (ibid).

The BOM role of setting the strategic direction of the school is addressed in the Basic Education Act Number 13 of 2014 under the functions of:

- a) “promote the best interests of the institution and ensure its development;
- b) promote the spirit of cohesion, integration, peace, tolerance, inclusion, elimination of hate speech, and elimination of tribalism at the institution; and
- c) encourage the learners, teachers and non-teaching staff and other, parents and the community, and other stakeholders to render voluntary services to the institution.
- d) allow reasonable use of the facilities of the institution for the community, social and other lawful purposes, subject to such reasonable and equitable conditions as it may determine including the charging of a fee.”

Baker, Campbell & Ostroff (2015) have defined "strategic effectiveness" as ... "the degree to which school leadership is successful in identifying long-term or overall aims and interests while having the resources and focus to achieve them." To them, strategic effectiveness has to do with perceptions of how effective the school board is, the school's performance, and the school's survival ratings.

Bryson (2011) has defined a strategic plan as "a disciplined effort to produce fundamental decisions and actions that shape and guide what an organization is, what it does, and how it does it with a focus on the future." Schools as do all organizations

exist as open organizations and are affected by external conditions beyond their control which present them with opportunities and threats (Gode, 2009).

Owolabi & Makinde (2012) point out that a strategic plan is a tool for enterprises to survive and function well despite environmental forces that are unstable and uncontrollable. It is through the process of strategic planning that the changes in the external surroundings can be predicted and acted upon pro-actively or that strategic planning is the best way to anticipate the volatility of external effects (Bryson, 2011).

Brauer & Schmidt (2007) argue that their approach recommends that board involvement in strategy implementation should be a continuous process rather than being erratic events. Meaning that strategic planning should not be prompted by the leaving of the executive officer or any significant emergency, but the board should rather relentlessly examine and monitor the organization's resource allocation processes so as to assist it adapt to the changes in the environment. They can also facilitate the conversation by the firm's stakeholders to harmonize any divergence thus offering a meaningful contribution to organizational effectiveness (ibid).

Brauer & Schmidt (2007) argue further that boards which monitor the progress of implementation regularly maybe more effective than other boards. Generally, their recommended approach is that boards contribute direction and watchfulness not only in the coining of corporate strategies but also ensure decisions on resource allocation for the manifestation of these strategies.

Hence among the main purposes of strategic planning are to be able to confront the persistent changes in the school's environment that present both problems and prospects. The result is increased competition which requires that institutions effectively situate themselves to create a viable competitive gain. Through strategic

planning, institutions need to not only set high ambitions for themselves but also attend strongly to their implementation. Through the process of strategic planning, all the matters about the school can be deliberately dealt with (Schlebusch & Mokhatle, 2016).

Strategic planning confers numerous benefits to the practicing institution including; the achievement of clarity of future direction, the ability to develop priorities, the ability to deal effectively with rapidly changing circumstances, expertise in developing and working as teams, the ability to solve major organizational problems, and to improve organization performance (Bryson, 2011).

A school strategic plan is therefore a tool used by management to chart the way forward and define the strategic direction for the school to follow to improve its productivity and increase its efficiency (Kirimu, Kathuri & Thuba, 2017) or an outline of the school goals and the strategies for attaining them. Strategic plans increase effectiveness by rallying together stakeholders in enhanced collaboration (van Wyk & Moeng, 2014). They also enable them to successfully react to change (Fullan, 2004; Xaba, 2011).

Strategic plans help resolve competing organizations' resource allocation priorities and tie performance to resource allocation. They add that it aligns activities within the environment and provides continued survival and effectiveness. They warn that without strategic planning, organizations can become susceptible to becoming reactionary instead of pre-emptive (Long & Franklin, 2004, as cited in Gode, 2009).

According to Business in the Community (2008),

"taking a strategic role in the running of the school includes setting up a strategic framework for the school, setting its aims and objectives, setting policies and targets for achieving the objectives,

reviewing progress, and reviewing the strategic framework in the light of progress."

2.1.3 Concept of Monitoring Teaching and Learning

Monitoring teaching and learning is an oversight function of the board that occurs only if the institution has proper internal control processes to stand by. It has been defined as the "gathering of relevant information on learner performance at various stages to ascertain whether academic gains have been made" (Glasgow Educational Services, 2013) whose main objective is to keep a close check on performance. The BOM role is mandated in the Basic Education Act Number 13 of 2014 under the functions of, to: (b) promote quality education for all pupils in accordance with the standards set under the Act or any other written law; and (e) advise the CEB on the staffing needs of the institution;

According to Dean (1993), the following are the tasks of the school management; to ensure that the school adheres to relevant teaching and learning practices within the provisions of the national curriculum, to monitor the teaching in class, to make staff accountable for the results and to provide many opportunities for discussing teaching and learning to ensure improvement in standards. She adds that school boards should always seek to involve parents in evaluating learner's performance.

The South African Task Team report, 1996 as cited in Bush, 2007, emphasize the importance of school management as it offers the necessary support required for teaching and learning saying that ...

"Management in education is not an end in itself. Good management is an essential aspect of any education service, but its central goal is the promotion of effective teaching and learning ... The task of management at all levels in the education service is ultimately the creation and support of conditions under which teachers and their students are able to achieve learning ... The extent to which effective

learning is achieved therefore becomes the criterion against which the quality of management is to be judged”.

York, Gibson & Rankin (2019) differentiate the concepts of academic success and meeting learning objectives and acquisition of skills and competencies, whereby one is a product of the other. They argue that ideally, learning objectives ought to be met before academic success can be realized in all its forms while academic performance is always referenced in summative form in terms of grades at the end of a course.

The World Bank (2018) in its flagship report entitled "Learning to Realize Education's Promise" emphasizes the crucial importance of differentiating between schooling and learning. Among the several recommendations on how to enhance learning is that the school management and governance system in school ought to be effective in enhancing the standard of teacher-learner relationship so that they can achieve more learning otherwise more learning inputs will only heap up with no apparent effect on learning. It also points out that the role of competent school governance is to rally together the three requirements for learning; ready learners, quality teaching, and student-inclined materials.

Ates & Artuner (2013) highlight the importance of the school board in a school pointing out that it is *they* who not only shape the teacher's development but also determine the educational goals of the school, direct educational applications to achieve educational objectives, make recommendations on the regulatory practices of teachers' methodology, find solutions for the problem between teachers and the classroom and take measures to ensure motivation of teachers to improve the quality of education offered.

Delagardelle (2014) attests to the description in the ground-breaking study on school boards:

"The linkages between school boards and teaching and learning are often misunderstood. School boards do not directly cause student learning. However, it would appear from the findings of the Lighthouse research, as well as from the work of others...that the beliefs, decisions, and actions of school boards directly impact the conditions within schools that enable district efforts to improve achievement to either succeed or fail".

IASB (2001) also agree that school boards in their nature as school managers are not directly involved in the learning process in school, but they work through others by necessitating the requisite conditions that promote learning. They argue that the scope of influence of school boards is vast, encompassing several factors that enhance student learning. Among them is the learning environment that affects teaching and learning.

Bowring-Carr & West-Burnham (1997) suggest three strategies that the school board can use to enhance performance in school; in curriculum provision schools can fast track for national examinations by the use of materials and offering both central and individual study programs to provide for individual abilities, talents and interests in topics. Delivery can also be enhanced through visits, workshops, and competitions. On teaching methodology, teachers should be advised to diversify the repertoire of open-ended tasks and individual work, projects as well as varying learning styles and resources in formal teaching. Organizational strategies should enable pupils to interact, discuss and peer teach each other.

2.1.4 Concept of Creating a Conducive Learning Environment

The role of creating conducive learning environment is spelt out for the BOM in the Basic Education Act No. 4 of 2013 under several functions. These are to: (c) ensure

and assure the provision of proper and adequate physical facilities for the institution; (d) manage the institution's affairs in accordance with the rules and regulations governing the occupational safety and health; (f) to determine cases of pupils' discipline and make reports to the CEB; (h) facilitate and ensure the provision of guidance and counseling to all learners; (i) provide for the welfare and observe the human rights and ensure safety of the pupils, teachers and non-teaching staff at the institution; (j) encourage a culture of dialogue and participatory democratic governance at the institution.

According to the UNESCO Institute of Statistics (2012), a learning environment is the total physical, social, and pedagogical setting in which learning is anticipated to take place. The physical aspect entails not just the classrooms, but includes all other earmarked areas of learning such as the science laboratory, libraries, gymnasiums, music rooms, staff room, and other non-formal learning areas. They further direct that the constituents and qualities of a learning environment have to be conceptualized relative to its influence on the methods and outcomes of learning that cover the cognitive and affective dimensions.

Ibem, Alagbe & Owoseni (2017) opine that the learning environment also encompasses governance structures, school policies, sitting arrangements, physical conditions like temperature, noise, and acoustics that affect learning and a place that enables effortless attention from learners and entices them to coherent thoughtfulness (Chan, 1996, as cited in Ibem *et al*, 2017). They define the learning environment to include the policies and codes of conduct that enhance the physical and emotional health of learners and teachers, the educational context and practices that lead to knowledge, attitudes, values, and the life skills required to build self-esteem, good

health, and personal safety. It is also said to be the area where formal education takes place and where school-going children devote most of their time (Quarcoo, 2021).

With the achievement of EFA and out of the acknowledgment that learning environments are crucial in facilitating quality learning, The Dakar Framework for Action Strategy 8 (UNESCO, 2012) called for a concerted strategy to improve the learning environments. They urged all education stakeholders: teachers, parents, members of the community, and officials of local government to rally together to create conducive environments for learning mainly because offering quality education requires that learning materials be not only adequate and equitable but also safe, easily accessible alongside competent and well-inspired teachers. New approaches and use of technology should be contextualized, cost-effective, and obtainable to all learners. In the school environment, stakeholders are invited to prioritize the health and safety of all individuals involved.

It encompasses several key aspects: first, ensuring there are adequate water and sanitation facilities available for both genders. Second, guaranteeing accessibility to health and nutrition amenities is essential. Third, implementing policies and regulations to oversee the overall health of both staff and students is crucial. Lastly, developing a curriculum that not only imparts knowledge but also practical skills in areas such as attitudes, values, information, and life skills is necessary. The holistic approach aims to promote self-worth, encourage a healthy lifestyle, and enhance individual safety within the school community.

Education stakeholders around the globe are soliciting evidence on how the learning environment may positively or negatively impact learning. This is occasioned by the

call by The United Nations' Sustainable Development Goals and other development parameters requiring nations to...

"build and upgrade education facilities that are child, disability, and gender-sensitive, and provide safe, non-violent, inclusive, and effective learning environments for all" (Barrett, Treves, Shmis, Ambasz & Ustinova, 2018).

Singh, Malik & Singh (2016) categorized factors that influence academic performance to include the learning environment. These are factors when put in place enhance the concerted efficacy in the actual learning process (Dhanapala, 2021). Adequate learning facilities and instructional materials in the learning environment are vital variables that enable gains in effecting the teaching and learning process (Kilei 2012).

A teacher plays a significant role in influencing learning outcomes by the way they manage their class. When the teacher is harsh and unapproachable, these hurts learning, and the opposite is true when the teacher is inspirational and friendly, it reflects positively on learners' performance. Teachers are therefore called to understand their role and utilize it to create the best learning environment in their class to acquire the necessary knowledge and skills (Ryan, 2013, as cited in Quarcoo, 2021).

2.1.5 Concept of Principals' Leadership

Leadership can be defined as the process where individuals' influence a group of individuals' attitudes, motivations, and behaviors to achieve a common goal (Northouse, 2019; Pont *et al*, 2008). In the school setting, it is where the head teacher steers the school community made up of teachers, learners, and parents to achieve the

set goals and objectives by persuasion and participation until the targets become a reality (Northouse, 2019).

Leadership is when ... "intentional influence is exerted by one person of a group over other people or groups to structure the activities and relationships in a group or organization" (Yukl, 2002, as cited in Pont *et al*, 2008). He points out further that the word intentional is crucial because leadership is founded on expressed targets or achievements that the influence practice is anticipated to lead.

The concept of principal leadership is a multidimensional and complex concept that has been conceptualized in several ways. In general terms, it carries the notion that principals exercise influence over the major roles of teaching, learning, and how schools operate (Wu & Shen, 2022). Strong principal leadership can be defined as possessing the knowledge of teaching and learning procedures, and the ability to inspire stakeholders to achieve the common goal (Tedla & Kilango, 2022).

It has been broadly considered a significant factor and a strong predictor of student performance and is only second in place among all school-related dynamics that determine student learning after classroom instruction (Msila, 2005; Nzoka & Orodho 2014; Wu, 2020; Leithwood *et al*, 2004; Xu, 2018; Grissom *et al*, 2021; Manns, 2020; Worldbank, 2018). Undoubtedly, an exceptional school principal is the most important contributor to improved learning (Xu, 2018; Day & Sammons, 2016; Nettles & Herrington, 2009). The nature of the school principal is crucially important for achievements far above outcomes as studies indicate that some principals are better than others in decreasing cases of truancy and protracted truancy (Grissom *et al*, 2021).

Pont *et al* (2008) describe the crucial role played by school leadership as the mediator between the classroom, the school, and the national education system. They point out that within the school, effective leadership has the potential to enhance learning by creating a kind of setting and environment where the best instruction can occur. Outside school, they can make associations and acclimatize the school to fit the ever-changing external context, thus being a tie that links the procedures for growth and development within the school and the exterior source of change itself. They influence the stimulation, abilities, and operational environment of teachers who on their part mould classroom practice and learners' education.

Principals differ in the way they carry out their duties. There may be as many leadership styles as the leader's personalities (Amukua, 2007, as cited in Okwaro, Kathambi & Sitati, 2020). According to Smith (2011), no single leadership style is suitable all the time, but it is up to the individual principal to vary approaches to suit the needs of the moment, regardless of the style used earlier. He points out further that the characteristic of a good leader is the ability to maneuver through different styles without difficulty. It is corroborated by Day & Simmons (2018) who point out that effective school leaders choose from the array of different strategies to best suit the purpose at hand.

Principals' Leadership is conceptualized in several ways in literature e.g. by use of school leadership styles/ models or by leader characteristics and practices. The study accommodates both methods from the literature to broadly explain the tenets of principals' leadership. The two leadership styles that dominate empirical research on school leadership literature are transformational and instructional (Robinson *et al*, 2008). Transformational leadership is often related to leaders being inspirational and

visionary. Transformational leaders mainly deal with setting directions, reorganizing the organization, staff development, and involvement with the external community. Its main aim is the achievement of set goals in general and the achievement of student outcomes in particular (Wu, 2020; Day & Sammons, 2016).

Instructional or pedagogical leadership is also termed “leading for learning” (Day & Sammons, 2016). It has been defined as ... “the leadership function that supports classroom teaching and student learning” (Robinson *et al*, 2008). Its main concern is with formulating ambitious educational goals, extensive plans for implementation of the curriculum, and evaluating the process of teaching and learning. The focus of the leader's attention is mainly on promoting improvement in the performance of learners by emphasizing the importance of teaching and learning and how it can be constantly enhanced (Day & Sammons, 2016; Wu, 2020).

Instructional leadership is the most frequently studied model in literature that relates principals' leadership with student academic performance (Ozdemir *et al*, 2022) and is seen as important for student outcomes (Nettles & Herrington, 2009; Waters *et al*, 2003).

Hou, Cui & Zhang (2019) argue that principals who exemplify high-level instructional leadership tend to focus on the academic aspects of school. They tend to center on such activities as setting targets, evaluating the efficacy of teachers' instructional practices, and arranging for instances for enhancing instruction. The lower the level of observed instructional leadership in principals, the "narrow" the activities are about those that directly influence academics.

Nettles & Herrington (2009) came up with a synthesized summary of factors that are important for effective school leadership. Firstly, they placed significant emphasis on

the imperative task of establishing and nurturing a safe, harmonious, and well-organized learning environment. Principals, as the key orchestrators of educational settings, were fervently urged to accord top priority to fostering an atmosphere conducive to efficient teaching and learning, recognizing it as a foundational duty.

Secondly, the esteemed researchers underscored the paramount importance of stakeholder involvement. Principals were not only encouraged but indeed implored to proactively engage in seeking out external funding opportunities to bolster the school's resources and capacities, thereby amplifying its overall effectiveness.

Thirdly, Nettles & Herrington fervently underscored the critical role of instructional focus in the realm of school leadership. They passionately advocated for principals to personally and ardently prioritize meticulous planning, judicious time allocation, and vigilant protection of instructional periods to ensure optimal teaching and learning outcomes.

Moreover, the study steadfastly emphasized the indispensable need for school leaders to uphold high expectations for student performance. They contended that effective leaders were distinguished by their unwavering commitment to consistently communicate and reinforce their belief in both the capabilities of their teaching staff and the potential of their students, thereby cultivating a culture of excellence within the school community.

Lastly, Nettles & Herrington fervently stressed the profound importance of ongoing professional development initiatives being tailored specifically for teachers. They clearly argued that continuous training, guidance, and support were indispensable requisites to ensure that the quality of instruction imparted by teachers aligned

harmoniously with predetermined educational objectives, thus ultimately propelling the school toward overarching success and achievement.

Robinson *et al* (2008) point out that when the focus of principals' leadership's influence is on teaching and learning as well as on improving relations with teachers, there will be a marked improvement in learner outcomes. The principals' role is therefore to mastermind not only the capabilities of the learners but also to create conducive working conditions where teachers are empowered to carry out effective teaching of learners (Pont *et al*, 2008). Effective principals' leadership is crucial for improving standards, enhancing teacher quality, and responsible accounting for results (NEA, 2008).

Hitt & Tucker, 2016, as cited in Tan, Dimmock & Walker, 2021, define "leadership practices" as "what leaders do to improve teaching and learning in schools." In their analysis of a myriad of literature on principals' leadership and student outcomes, they sum up what constitutes leadership practices as including; the organization instruction, teacher professional development, administrative duties, and the involvement of all the stakeholders of the school. In the organization of instruction, the first role of principals is to; pay attention to improving teaching and learning by focusing on learner needs in teaching e.g., monitoring teaching and learning, guarding instruction time, motivating learners, and assisting them do well in their examinations and keeping a safe and organized learning environment. Secondly, school principals should create common learner-centered goals, set high-performance targets, communicate the goals, and practice the inspirational standards set personally to build up a culture of excellence.

On teacher professional development, school leaders should facilitate all staff learning and embrace continuous learning since professionally equipped teachers are more effective in supporting the schools' academic capacity. When teachers are empowered to make decisions, collaboration is fostered, shared accountability is enhanced and so is distributed leadership. Principals should also provide incentives to make teachers feel acknowledged and appreciated and thus boost their dedication to achieving set targets. Lastly, on administrative duties, principals are expected to acquire and manage school resources to facilitate the accomplishment of school goals. They should always inspire processes to ensure that there is improvement and change in school. In involving stakeholders, school leaders should walk hand in hand with parents and the community as they are sources of "diverse sources of strength".

According to the NEA (2008), the American Centre for Great Public Schools, the call to improve public schools comprises tackling several issues and involving several stakeholders such as policymakers and educators in the bid to help raise performance, to reduce class sizes, change the tools of assessment and create great public schools.

Yet, as the National Staff Development Council asserts,

"only one area of policy focus - strengthening school leadership - can exert control over all of these challenges simultaneously. Instructional leaders' shape the environment in which teachers and students succeed or fail...skillful leadership ensures that teachers can operate in an environment that values and takes advantage of what they know."

Principals are overburdened with heavy workloads (NEA, 2008; Pont *et al*, 2008). On any single day, they monitor teaching and learning, ensure the school environment is safe, take care of learner's interests and so many other roles. Principals are expected to be educational visionaries, instructional and curriculum leaders, assessment experts, disciplinarians, community builders, public relations/communications experts, budget

analysts, facility managers, special programs administrators, as well as guardians of various legal, contractual, and policy mandates and initiatives. A study concluded that for schools to make strides towards progress, the principal should not allow mundane duties to interfere with the leadership role of teaching and learning (Berlin, Kavanagh & Jensen, 1988, as cited in NEA, 2008).

In a Public Agenda report, 96% of practicing principals said their colleagues were of better assistance than their graduate studies in getting them ready for the job and two-thirds said that the program was "out of touch" with what principals ought to learn (Farkas & Duffett, 2003, as cited in NEA, 2008), the NEA recommends training for principals to enable them to learn how to shift the focus of their leadership to instruction. They also recommend that research on instructional leadership continue to inform those on the ground on best practices (ibid).

2.1.6 Concept of Academic Performance

Academic performance has been conceptualized as an amorphous and broad term that includes a wide range of scholarly outcomes from attaining a degree to development morally (York *et al*, 2019). According to Narad & Abdulah (2016), it is the knowledge acquired and evaluated by a teacher and /or goals, set by the teachers and learners for realization within a specified period and measured in terms of continuous assessment or examination results. Lamas (2015) echoes them on the view that academic performance is a collaborative outcome that results from student learning and the teachers' teaching, which is the total of what has been learned through the educative process.

Academic performance has to do with the degree of knowledge acquisition in a field or subject against the norm measured by grades (Torrez & Rodriguez, 2006, as cited

in Lamas, 2015. They argue that when a student is motivated to attain a personal target, an interest in the subject area develops and learning takes on a personal significance to the learner. The learner then interacts with the taught content and relates the concepts with the knowledge and experiences acquired previously. The mode of study is thought to achieve the best academic performance. They define academic performance as capturing a student's capacity to meet performance standards and grades are used to gauge whether learning objectives and acquisition of skills and competencies were met, it is meant to represent academic ability.

Of all the various categories of academic achievement, academic performance is top in the enormity of significance accorded it, trailed by knowledge and skill acquisition (York *et al* 2019; Singh *et al*, 2016). Grades directly convey a person's performance and are the most common measure of academic performance (Lamas, 2015; Willcox, 2011). Student's academic performance is a matter of significant concern to learners, teachers, and the authorities in several nations' world over (Alnawasreh, Noor & Suliman, 2019) due to the economic and social developments associated with it (Ali, Jusof, Ali, Mokhtar & Salamat, 2009).

In a World Development report (2018), a comparison was done between United Nations Relief and Works Agency (UNRWA) and public schools by use of multiple circles of international assessment tests. The result was that UNRWA schools performed better than the public schools and being ahead in learning by the equivalent of one year in spite of the lower socioeconomic standing of the UNRWA students and lower amount of spending. While pinpointing lessons from high-performing schools may be difficult, the following are the factors that have contributed to the better performance:

- *Greater parental participation* in school events and a close-knit corporation between schools, and families which adds to a sense of common purpose and collaborative means for monitoring and offering support.
- *More effective teacher support mechanisms.* The kind of training the teachers acquired that enabled them understand what students ought to know and do at each class. Although pre-service training is the same in the two kinds of schools, UNRWA teachers complete a two-year training program in classroom instruction, occasioning the mastery of teaching approaches that are better aligned with learning.
- *Assessment and evaluation.* There is more rigor in UNRWA schools, the tests are more and so are the teacher evaluations than public schools.
- *Effective school leadership.* UNRWA schools are devoted to cultivating qualified principals who support their teachers effectively.

The same report argues that education systems need to take learning seriously in order to have improved learning outcomes. The following strategies are fronted as being the enhancers of learning:

- (i) Assess learning—to make it a stern aim. Test and monitor learning well and utilize the data got to plan for further action.
- (ii) Act on evidence—to create schools that are functional for all learners. Any innovation and practice should be evidence based.
- (iii) Organize the actors—to ensure the whole system works for learning. Tackle the technical and social barriers to wholesale learning.

These three strategies are interdependent of each other such that the use of the learning metric without a credible way to realize learning goals will simply lead to frustration while school-level answers without a learning metric could divert schools off course, and minus the system-level support they could prove temporary. And

system-level pledge to learning devoid of school-level innovation, and without learning processes to lead the changes, is probable to become mere ambitious oratory. But together, the three strategies can generate amendments for the better.

2.1.7 Concept of Class Size

Enrolment in many developing countries far surpasses the provision for education. Shrinking resources and the low rate of classroom use has ensured that there is inadequacy of furnished classrooms (Kanyamwenge, 2017; Wang & Calvano, 2022) a scenario which has meant that classes are larger than required for a teacher to effectively manage.

Large classes arose from the Kenyan government's accommodation of the world's educational agenda such as EFA, the hundred percent transition and Subsidized Secondary Education. It is among the factors that are linked with underperformance in literature (Kanyamwenge, 2017). While several countries have taken strides to reduce their class sizes, the challenge of large class size continues to be a concern in several contexts, particularly in early grades and poorer communities (UNICEF, 2021).

A study on class size, student behaviors and educational outcomes found that student involvement and teacher interaction are influential factors on student learning outcomes and satisfaction regardless of class sizes. However, students perceived lower levels of teacher interaction and satisfaction in larger classes. Large classes often sacrifice quality of education unless teachers can create more chances for student–teacher interactions (Wang & Calvano, 2022).

2.1.8 Concept of School Type

The main determinant of success or failure at national examinations is not the mark attained at primary school, but the secondary school type a learner attended (Danflow, 2024).

Schools are broadly categorized as public and private schools where public schools are those that depend primarily on government funds while private schools are those supported by tuition payments. Public schools, also called maintained or government schools are known to face challenges such as lack of funding, inadequate infrastructure and lack of facilities. In Kenya, they are managed by the BOM on behalf of the Cabinet Secretary of Education in consultation with the CEB and are therefore subject to national or county regulations on education matters and staff.

Private independent schools rely on individuals or religious affiliations for their ethos. They usually represent some specialized disciplines such as the arts or sports. They are known to possess state of the art infrastructure and due to the advantage, they usually perform better in academics and other fields. The cost of education in such schools is far higher than in public schools and so attract students with a socio-economic advantage.

There are several types of public schools in Kenya: National, Extra- County, County and Sub- County schools. National schools are those that attract the best caliber of high performing learners from the whole country. They are few in number nationally, with every county housing only two national schools, one for each gender. Due to the level of government maintenance in these schools, they have all the necessary facilities in adequate amounts and enough teachers and charge a minimum amount for

school operations. National schools have an established school culture and a long tradition as many were established during the colonial days.

Extra-county schools are more in number than national schools. They admit learners from neighbouring counties of the above-average performance range. They have the advantage of large student numbers hence can afford to involve their students in activities of interest. The characteristics of extra-county schools include; boarding and single gender, adequate level of facilities such as laboratories, libraries and a fleet of school buses.

County schools are those schools who admit learners from within their home county. Their specific features include; boarding facilities, mixed or single gendered, lower number of students compared to extra-county schools. The learner-teacher ratio is also higher and the level of investment in facilities is low.

A Survey by Usawa Agenda (Danflow, 2024) whose main respondents were principals, indicated that there was unequal allocation of resources based on the type of school. The highest ranked are the national schools which enjoy great privilege compared to Sub county schools, which receive the least amount of resources both in staff numbers and funding. The reports showed that national schools have three times the number of teachers in sub county schools indicating a higher resilience to teacher transfers than other types of schools. National schools were seen to have who are more experienced, better functional libraries and laboratories.

The report further indicated that forty-eight per cent of secondary schools in Kenya are in the day category while seventy-three per cent of sub county schools are day schools. The report also indicated, based on the findings that sub county schools

afford the least chance for excelling while the national schools offer the best chance to excel.

2.1.9 Concept of School Climate

While there is no concise definition of school climate (Voight, Austin, & Hanson, 2013; Makewa Role & Role, 2011), there are identified recurring themes, among them: a) high expectations for students, caring relationships between teachers and students and school connectedness (Voight *et al*, 2013). School climate is a malleable factor that schools can manipulate to their advantage by fostering a positive school climate particularly in public schools as it has the potential to help them beat the odds in academic success (ibid).

School climate is among the essential factors that contribute to school success. It differentiates succeeding schools from those that do not (Voight *et al*, 2013). It is a significant element in improving academic performance (Makewa *et al*, 2011). It not only contributes to academic success but is also vital for fostering healthy social interactions and overall well-being among students, teachers, and parents (Shala & Shabani, 2024). It is unanimously agreed that school climate affects members of a school either positively or negatively (Voight *et al*, 2013; Makewa *et al*, 2011). Positive school climate has been linked with higher positive student motivation and engagement, less absenteeism and improvements in academic achievement across grade levels (Shala & Shabani, 2024).

Schools can enhance student well-being and satisfaction, empowering them to succeed academically and personally. Importance is placed on proactive management practices in school to cultivate a positive self-belief and setting high expectations for learners' academic outcomes is important and motivating (Shala & Shabani, 2024). In

two schools with identical staff in terms of roles, experiences, and education, the school with a better climate has a much greater probability of being successful (Voight *et al*, 2013). Importance is therefore placed on proactive management practices in school to cultivate a positive self-belief in the learners (Shala & Shabani, 2024).

2.2 Empirical Literature Review

2.2.1 BOM Efficacy and Student's Academic Performance

Studies have been done on the relationship between board effectiveness and performance as indicated in the studies below:

Cornforth (2001) did a study to explore the effect of board inputs, structures and processes on board effectiveness. The study was a survey and quantitative data was collected. Logistic regression analysis was used to analyze the data. The results got indicate that board inputs and three board processes are crucial in describing the effectiveness of boards which are; board members have the time, skills and experience to get the job done; categorical board roles and responsibilities, the board and organizational management have a shared vision of how their goals can best be attained and the board and management can periodically be evaluated on their work.

Honingh *et al* (2018) did a systematic review of international literature to provide an overview on the relationship between school boards and education quality and specifically on-board composition and behavior factors in major publications on educational governance. The methodology included a process of five step review protocol of selecting and refining literature to ascertain transparency and rigour in the selection. From an initial four thousand, nine hundred and thirty-nine databases, the search was reduced to sixteen empirical articles chosen to shed light to board

composition, board member behavior and their role in schools in relation to quality education. Twelve of the studies were on boards in the US, two from the UK and two from the Netherlands selected to ensure variety in the number of schools governed by one board. The findings of the review indicate that the selected studies all used different methodology, the boards under study also had different compositions and scope which made it challenging to general conclusions on how school boards relate with quality of education. The search also established that in the majority of studies, education quality is operationalized as results of student's tests and performance which according to the authors are a limited view of educational quality.

In Hess (2002), the National School Boards Association (NSBA) undertook extensive research to shed light on the nature and challenges faced by school boards across the country. It targeted two thousand board members across all school districts for a rare glimpse into the groups of men and women who govern the countries' fourteen thousand, eight hundred and ninety school systems. The most striking finding is that large-district boards are fundamentally different from their smaller counterparts in that the large districts with twenty-five thousand or more students are comparatively political in nature, take part in more expensive campaigns, their interest groups are more alert and the candidates more politically oriented and their elections are more hotly contested. The boards in the smaller districts are quite the opposite; they are more apolitical, attract minimal attention and run cheaper, uncontested campaigns. The similarities were that all school board members highly prioritized student achievement, put substantial amount of their time to school leadership and up to two-thirds were not remunerated for their work. The concerns of the large, urban districts were mainly school violence and teacher shortages which were less prevalent in the

smaller districts and yet it informed the image of school boards and school systems in the whole country.

Research by Minichilli *et al* (2012) sought to speak to the current requests to decrease the micro-macro gap in governance structure research by including a macro-level perspective variable (country level) to discover macro-level determinants of board effectiveness. The study utilized the integrated model propounded by Forbes & Milliken (1999) to pinpoint three board processes as micro-level contributors of board effectiveness. The factors on focus were effort norms, cognitive conflicts and the use of knowledge and skills as contributors of board control and advisory task performance. The study also considered whether the two diverse institutional backgrounds have any effect on board tasks, and how the two diverse institutional backgrounds moderate the relationship between board processes and tasks. A dataset of five hundred and thirty-five medium-sized and large industrial corporations in Italy and Norway were used to test the hypothesis in the survey as the two contexts were deemed to be considerably different on the legal and cultural dimensions. The research findings indicated that: (i) board processes are more probable to explain board task performance than demographic variables; (ii) the board task performance contrasts significantly in the boards operating in the two different contexts; and (iii) that the national context moderates the relationship between board processes and board task performance.

Pugliese, Nicholson & Bezemer (2015) undertook a study with the aim of offering an internal perspective of the interaction between board directors is in a bid to address calls for closer scrutiny of board dynamics. It utilized two video observations of three board meetings for each of the two selected Australian corporations. It also used

interviews with directors and secondary data that uncovered distinct trends in director interactions, the causes for the differences and the effect on perceived board effectiveness. The research findings indicate that: director interactions are multi-dimensional and dynamic, few directors lead the discussions and that those directors who participate in the discussions vary in different items, where directors' participation is inclusive and even, perceptions of board effectiveness go higher and that director interactions vary according to the nature of the items, board climate and board meeting arrangements. The study's contribution to literature is the moving beyond the individual-level analysis of directors' skills or independence, and the offering of a detailed perspective of how the joint group and individual dimensions of board dynamics affect board functioning and board effectiveness.

A study was done by Dean, Dyson, Gallannaugh, Howes & Raffo (2007) on governors' and principals' perceptions of their effectiveness. The research findings indicate that there was a general high level of perceived effectiveness of governing bodies with about six out of seven governors indicating that view. The head teachers were less positive regarding the effectiveness of the governing bodies. About three quarters of the school heads agreed that overall, their governing body's operations are very effective.

Ford & Ihrke (2016) in their study, examined whether observing the *Key Work of School Boards* an agreed set of board governance best practices, correlate with the district wide academic achievement indicators. As the first ever evaluation of the NSBA's *Key Works of School Boards* and academic outputs, the study found that the proper use of the set of best practices resulted in the improvement of district results. The findings confirm that board members behaviours have a bearing in student's

outcomes. The study therefore makes a case for the reinforcement of the use of the NSBA's *Key Works of School Boards* as the set of best practices by all board members as its probability in effecting school wide results has been established. Those board members wishing to enhance the performance of their schools through improved governance can focus their attention to strategic planning, accountability among the board members and increased community involvement, development of the board and stabilizing the board membership for a long period of time.

Loh, Unda, Gong & Benati (2021) did a study whose aim was to explore whether the inputs of board effectiveness such as board diversity, board practices and principals influence over board decision have an effect on board effectiveness in independent schools in Victoria, Australia and the degree to which board effectiveness is associated with academic performance. The survey design sampled selected a sample size of 159 board chairs. The findings were that: board diversity in terms of professional backgrounds, education qualifications, career experience, gender and number of years in the board were positively related with board effectiveness. The study also uncovered that board practices positively correlate with board effectiveness. The study further found that there ought to be a power balance between the principal and the board to ensure board effectiveness is maintained. In addition, the study found that of the personal characteristics of the board chair, age positively relates with board effectiveness and finally that board effectiveness is associated with academic performance.

Liguluka & Onyango (2020) did a study to examine the effectiveness of secondary school boards in the management of student's discipline among public schools in Ulanga District, Tanzania. The study utilized convergent parallel mixed methods

research design and a sample size of one hundred and fifty-one. The study established that although school boards engaged in dialogues regarding discipline matters in public secondary schools, they rarely took the requisite stern measures against students. They also failed to regularly consult with the disciplinary committee on matters of school discipline. The problems faced by the boards include: lack of harmony between the board and the Parent's Association, fund shortages, differences among the board on the form of punishment to give and a generally weak school leadership. The study recommended consistent communication with the committee in charge of discipline so that student discipline is maintained in school and that the principal and board members be trained on effective leadership so as to better discharge their duties.

A study by Tabu & Lekule (2022) sought to establish the main contribution of School Boards to effective teaching and learning in public secondary schools in Mbeya District, Tanzania. The specific objective was to find out the challenges faced by School Board members in carrying out their mandate and how to alleviate them. The study used the explanatory sequential mixed methods research design. Data was collected through questionnaires and interviews. The findings of the study indicate that School Board members perform a vital role by ensuring effective implementation of the core functions of the school by their regular monitoring of school plans and their implementation. In addition, the findings indicate that school boards face a number of challenges due to lack of experience and appropriate training as well as undue political influence.

2.2.2 BOM Efficacy in Setting the Strategic Direction and Student's Academic Performance

There are several studies that have been done to establish the relationship between setting the direction in school and academic performance. Some of these studies are as indicated below.

George, Walker & Monster (2019) undertook a study to assess whether successful strategic planning has positive effects on organizational performance. The study was a meta-analysis utilizing eighty-seven correlations from thirty-one empirical studies done over a period of twenty years. Results from the random effects analysis showed a positive, moderate significant effect of strategic planning on organizational performance while those from the meta-regression analysis indicated that the effect of strategic planning on organizational performance is greatest when strategic planning is represented as effectiveness and when organizational performance is seen as formal strategic planning in both the private and public sectors across the international divide.

The study substantiated that strategic planning “works” and should therefore be made a part of ordinary managerial tools in modern-day organizations. It also established that developing strategic plans formally are crucial for enhancing organizational performance and that strategic planning is important for increasing organizational effectiveness. It recommends that organizations not only incorporate formal strategic planning process in their organizations but be careful to ensure how to implement them.

Baker *et al* (2015) did a study to determine how effective school boards are in strategic thinking and the impact of the board on school performance in independent

schools. The place of strategic thinking is more crucial in independent or private schools because they have no recourse for public funding to run their schools but rely on income from the students. The numbers make the school viable or not, hence strategic thinking is more about survival in private schools where board effectiveness is critical.

Brauer & Schmidt (2007) did a study with the aim being to discover the potential function and the measurement of the effectiveness boards of directors in strategy formulation and implementation. The mixed methods study collected survey data from eight hundred heads of schools and board chairs and interviewed six heads of independent schools. The results showed that the schools that scored highly in strategic effectiveness pointers were those: whose membership included current parents, that guarded and preserved their board culture in the face of new members, that intentionally used committees to handle emergent and calculated concerns, that school boards whose rating was high in strategic effectiveness had a positive impact on school performance, and lastly that a strong and fruitful correlation between the board chair and the principal had a very concrete impact on board effectiveness.

Qualitative research by Miskell (2020) studied the effect of strategic planning on student's achievement. The study sampled principals of rural schools from eleven districts in the state New York. It was guided by the goal setting theory. The findings of the study were that: goals set during the process of strategic planning were usually in support of the school mission, vision and core values and that there was a positive effect of strategic planning on student achievement in rural public schools. The school leaders who took part in the study confirmed the significance of the process of strategic planning in boosting student achievement in their schools and that having

strategic plans in place was a vital resource worth all the expenses that go into their formulation.

Nkumbwa (2019) undertook a study to find out the function strategic planning plays in school improvement in selected public secondary schools in Solwezi District, Zambia. The study sample were head teachers, deputy head teachers and board chairpersons from six schools for the interviews. Results indicated that the rolling out of strategic planning in schools enhanced school performance and learning outcomes. It also showed that the process of strategic planning brought about other benefits to these institutions of learning such as sourcing and distribution of resources, it aided the internal and external environmental analysis and exposed some selected schools that lacked the requisite resources such as financial, human and inadequacy of trained personnel on strategic planning and implementation.

A study by Kwaslema & Onyango (2021) sought to find out the effect of strategic planning on academic performance in public secondary schools in Babati District, Tanzania. It aimed to establish teachers' perception on whether their schools were effective in strategic planning, whether strategic plans improved the academic performance and the factors that can be put in place to ensure that the process of strategic planning is done effectively. The study utilized convergent parallel mixed methods research design and selected a sample size of one hundred and eighty-five respondents from five schools. The findings were that schools were indeed effective in strategic planning, that there was participation of stakeholders and hence a sense of ownership in the formulation of strategic plans and that the implementation of strategic plans contributed to improved academic performance in the secondary schools by motivating the staff, setting the direction that should be followed.

A study was also conducted by Mwangi (2017) on the effectiveness of the strategic management process in the management of secondary schools in Nakuru County, Kenya. Specifically, the study sought to determine; whether strategic plans are used in the management of secondary schools in Nakuru County, whether stakeholders were involved the formulation of strategic plans, the effectiveness of strategic planning in school management, and the challenges faced by schools in the implementation of strategic plans. The study used the descriptive survey research design and sampled one hundred and fifty-four respondents from thirty-three schools across the county. The study findings were that; stakeholders were involved in varying degrees in the planning process, strategic planning positively and significantly influenced school performance in the quality of grades attained in KCSE as well as adequacy of teaching and learning resources and improvement in the school's discipline. It also established that implementation of strategic plans faced challenges in varied proportion from different stakeholders.

A study by Gode (2009) sought to determine the influence of strategic planning on the performance of schools in Kisumu East District in terms of academic improvement, infrastructure development, parent and pupil satisfaction, staff motivation, and student discipline. The findings of the quantitative study showed that fifty-one per cent of the sampled schools had not adopted use of strategic plans. It also found that the schools that had rolled out official strategic plans in their operations performed significantly better than schools that assumed informal strategic plans and that a large percentage of schools had adopted informal strategic planning.

Kobia (2017) did a study to determine the influence of strategic planning on the performance of schools in Limuru Sub County, Kenya. The finding showed that

eighty-nine per cent of public and fifty-nine per cent of private schools practiced formal strategic planning. It also established that strategic planning was positively correlated to performance. The current study sought to establish the effect of BOM efficacy in setting strategic direction on student academic performance in selected secondary schools in Kenya.

Inyanga (2013) undertook a study that sought to find out the challenges of formulating and implementing school strategic plans in public secondary schools in East Wanga, Kakamega County, Kenya. The study findings were four fold namely: that schools in that region of Kakamega County had not incorporated strategic plans as a part of their management and administrative tools, that there were several dynamics that had held back the implementation of strategic planning in the region namely the lack of funds and knowledge on how to formulate and implement strategic plans, that important stakeholders such as the school board, the PA, teachers and learners were hardly incorporated in the designing of strategic plans and that through the process of strategic planning, institutions can see the “big picture” of where they are, where they hope to reach and how they to reach their destination, which calls for firm human and financial resources.

Njunu, Kiprop & Nyambura (2016) did a study on the impact of strategic planning implementation in sustained focus on instruction and learning in public secondary schools in Nakuru County, Kenya. The study findings established that the process of strategic planning led to school effectiveness in sustained instruction and learning in secondary schools in Nakuru County.

2.2.3 BOM Efficacy in Monitoring Teaching and Learning and Student's Academic Performance

Shober & Hartney (2014) undertook a national survey of nine hundred school board members in four hundred and seventeen U.S. school districts. Representation of schools from different backgrounds and different sizes was achieved by stratified sampling. The study sought to measure whether board members: have correct knowledge regarding the academic and financial status of their school district, whether the focus of learners' academic improvement guides their decisions and the work practices they use in carrying out their mandate. In their findings, they observed that the more academically successful districts consist of a higher proportion of its board members with an academic focus in their work practices. They prioritize better student achievement than expected and emphasize improving learning as the paramount goal. They also have a precise grasp of the "on-the-ground" situations in their schools.

A study by van Leeuwen (2023) aimed to find out teacher's experiences on monitoring their students during online classes. The qualitative study was occasioned by the global Covid-19 pandemic which saw a widespread rise in the introduction and increased use of technology in teaching. The traditional classroom setting changed as teachers and learners took to their computers in the attempt to tackle curriculum coverage. The focus of the study is on teacher's own assessment of their online lessons in higher education in Netherlands; the strategies used and the challenges faced. The study findings were that courses need to be re-designed so as to offer opportunities for monitoring the class and the introduction of content quizzes during the course of the classes so that the teacher can keep track with what learners are internalizing from lessons. Teachers are also challenged to create an atmosphere that

is open, where learners feel free to speak up and share their learning experiences and participate in discussions. The use of technology for content delivery and monitoring teaching and learning is a paradigm that education systems can adopt across all levels of study in the post pandemic era in order to vary teaching methodology.

A study was done by Khakwani, Parveen, Muhammad, Jabeen & Ahad (2023) to establish the correlation between monitoring system and teacher's performance in public primary schools in Punjab, as a follow up on the government's introduction of teacher monitoring. During the analysis of the quantitative study, a significant difference in mean scores was found between the female and male teachers. It found that the female teachers had better performance than the male teachers. It also found that there existed a weak positive relationship between school monitoring and teachers' performance, meaning that monitoring only had a small contribution to teacher's performance.

Mngomezulu (2015) did a study to determine the strategies of monitoring teaching and learning used by school management teams. The qualitative study was based on the self-assessment of the school leaders of two public schools; one primary and one secondary school. The study found the following strategies developed by the SMT's to monitor teachers; checking of teacher's files, moderation of assessment tasks, class attendance verification, class visits and checking learner's course books. The study however found that despite the development of the suitable monitoring strategies, the SMTs had not put them to use. The result was therefore an emphasis on learners' progress rather than on the quality of teaching. The overemphasis on the learner's progress consequently also became the obstacle inhibiting the practice of monitoring.

The study faulted the SMTs for their laxity and indecisiveness for allowing the school processes to be hampered by teacher's subjectivity.

Mugabe (2018) did research to unveil how SMCs monitor the implementation of UPE in Uganda. Among the specific research questions were to find out the ascribed roles of the SMC, the SMC perception of their roles, the experiences of the SMCs and the challenges faced by SMCs all in the monitoring the implementation of UPE guided by the systems theory. The explanatory sequential mixed methods research design was used and a sample size of one hundred and four selected. The findings showed that there was no clear, standard monitoring tool that had been developed and rolled out for use by SMCs by the Ministry of Education in Uganda, that the SMCs did not feel fully empowered to carry out their mandate and therefore make the necessary substantive decisions. It also established the several challenges faced by SMCs such as the lack of participatory management in decision making such that only the views of some members were regarded as more important than others. The results also revealed that the policy-related and managerial challenges had not been adequately addressed and resolved.

Murungi (2011) undertook a study on the role of the BOM in promoting academic performance in public secondary schools in Maara District. The findings were that the performance of the BOM was influenced by the skills, attitudes, and knowledge of the BOM members, the financial resource allocation, commitment, sensitive and visionary leadership, and the collaboration of the parents. The study concluded that the management of school through the BOM is essential to improve school performance.

Cheruiyot, Kibett & Ngeno (2020) did a study to assess the influence of the monitoring and control skills of science heads of departments on the performance of science subjects in Nandi County, Kenya. Mixed methods research design was employed and a sample size of twenty-three principals, one hundred and eight heads of departments (HOD) and two hundred and forty-seven science teachers was selected to participate in the study using stratified sampling technique. The findings showed that the main monitoring and control tool used in schools was the frequent departmental meetings convened by HODs to solve with emergent problems regarding student's results. It also established that HODs of sciences planned for monitoring and control sessions in school and urged their teachers to stick to the lesson plans in their teaching as a means of improving the quality of their delivery of the science content. The results also revealed that all the participants were unanimous that monitoring by physical supervision of teaching and learning and ensuring the integration of ICT in teaching and learning of science subjects were seldom conducted by the HODs and the management in schools. The results also showed that there was a significant positive correlation between monitoring and control and performance of science subjects in Nandi County, Kenya

Nzoka & Orodho (2014) did a study that aimed at analyzing the approaches being used by school managers of secondary schools to enhance the academic performance of their learners in the free day secondary school education in Embu County, Kenya. The study utilized the descriptive survey research design and a blend of purposive and stratified sampling techniques. The study findings were that managers of schools did make use of various strategies to enhance the performance learners among them: monitoring teaching and learning, exposing learners to internal forms of assessment and examination, managing the learners' health and the use of guidance and

counseling. The study found some strategies to be more effective than others in turning around the performance of learners, that there were insurmountable challenges faced in rolling out of the strategies and inadequate guidance and counseling teachers in schools.

Muiruri (2019) whose study sought to establish among other factors the influence of monitoring on student's performance in KCSE and found that ninety-five per cent of the respondents were of the strong view that monitoring influenced student's academic on performance in the Kirinyaga East sub-county, Kenya. Monitoring entailed the set programs, regular assessments, and discussions on overall school performance were implemented as planned.

A study was done by Kinyua (2013) to find out the influence of monitoring and evaluation on teaching and learning in public primary schools in Gatanga in Muranga County, Kenya. The descriptive survey research study found that internal monitoring and evaluation among primary schools in Gatanga were done by head teachers, deputy head teachers, subject heads and subject panels and that external monitoring by inspectors was rare. The study went on to find that teachers do not use registers while reporting to work or while leaving, that monitoring and evaluation brought about benefits including; increased efficiency in teaching and learning, early diagnosis of areas that need strengthening in the curriculum, heightened performance, and the employment of better teaching methods by teachers.

2.2.4 BOM Efficacy in Creating a Conducive Learning Environment and Student's Academic Performance

Literature is replete with research backing up the notion that the learning environment in all its differing dimensions has the potential to adversely influence student's

academic performance. Studies indicate that learning is not merely a cognitive process that occurs in a vacuum, but it involves the social, affective, and psychological atmosphere surrounding the learner (Adeyemo, 2012). When the learning environment is inspirational, comfortable, calm, and organized, effective learning can be expected to occur and education targets can be attained.

Byers, Mahat, Liu, Knock & Imms (2018) did a systematic review of empirical studies from literature to establish a proven basis for the relationship between different learning environments and student learning outcomes. Their study limited itself to twenty-one articles published since the year nineteen sixty that met the set criteria of published validity and reliability results. The summative findings were that some studies did establish that student outcomes were positively impacted by the learning environment. Some studies further established that students in a traditional classroom format outperformed student in an open-plan type of learning space. However, because comparatively few studies included in the review, the assertion that there is a lack of necessary evidence on the effect of learning space arrangements on student outcomes could be upheld.

Studies undertaken by The Research Alliance for New York City Schools on learning discovered that learning in a positive learning environment gets one month and a half worth more instruction than those from a deprived setting, giving them the probability of attaining the greatest levels of achievement (Learning Liftoff, 2016, as cited in Quarcoo, 2021).

Barrett *et al* (2018) undertook to scrutinize contemporary studies that relate to how school infrastructure impacts children's learning outcomes and to pinpoint the major factors that can be considered when designing, applying and overseeing future

education projects as school infrastructure is one of the World Bank's major expenditures in education. The study found evidence that the following factors have a positive impact on learners' academic performance: small-sized schools as well as small-sized classrooms, schools that are distributed close by so shortened travel distance to school, maximum length of school day hours and maximum planning for the utilization of learning spaces to achieve the most of education benefits. The other factors that had a positive effect on learners' progress were: good natural conditions such as lighting, quality of air and associations to nature, age-appropriate learning spaces, learning spaces that come with flexibility of learning opportunities for learners, a degree of ambient inspiration using colour effects and designs that match both the culture and climate of the local environment.

Ping, Teo, Wong, Khine, Chai & Divaharan (2003) did a study that focused on classroom management factors that make the classroom environment conducive for the effective integration of ICT in schools. Their argument is that a conducive learning environment is an essential prerequisite for introducing ICT as it promotes learner's higher-order intellectualism. Questionnaires, observation, face to face interviews and focus group discussion were used to collect data from two primary schools in Singapore. The findings established factors that support creating a conducive learning environment, that enable learners to be more likely to be hands-on and insightful and therefore likely to employ higher-order thinking. These factors are the availability of adequate ICT technology, setting of rules that govern behavior and academic work for the management of the practical lessons, use of ICT and non-ICT tools for ICT lessons, and sharing of roles among the ICT staff in Singapore.

Ali (2017) undertook a study that sought to investigate the correlation between the quality of the physical learning environment and the learning outcomes in intermediate public boys' schools in Kuwait. The aims of the study were two-fold: to determine the quality in the character of the school structures and the internal designs of classrooms. The study findings were that the environmental standards of the school were not effective as they had been created to serve the purpose of teaching rather than for the experience of learning, that the plans, procedures, and appraisals by the Ministry of Education were a contributor for the poor state of the physical environment of schools and that the teaching and learning experience and behavior were seriously influenced by the best school environment facility and organization.

Dhanapala (2021) undertook a study on the effect of their learning environment on academic performance from a student's perspective. The learning areas under study were; the convenience of lecture room facilities, availability of technology and other resources, availability of language laboratory facilities, and convenience of library facilities. The study population was science-based and non-science-based faculty students of Metropolitan University of Sri Lanka. The results revealed that for the non-science-based program students, many of their amenities required upgrading while the science-based learners required upgrading in the library amenities only. Their lecture hall amenities were adequate.

Sithole (2017) investigated how school settings promote positive learning environments in two schools in South Africa. The findings from the mixed methods research were that the donations in the form of equipment from the community (the Uthukela Municipal) had an impact on the learners. The following areas were also found to affect learners' success: the physical and non-physical environment of the

school, the way teachers communicate with learners, incorporating strategies to assist learners having difficulty in learning to catch up with the rest of the class. They recommend that teachers should create a good classroom climate for learners from the evidence that clean, well-maintained school grounds and adequate school facilities influenced student's performance in high school.

Adeyemo (2012) investigated the relationship between school environment, approaches to learning, and learners' academic performance in high school physics in Nigeria. The study utilized questionnaires to elicit data from one hundred learners of physics randomly selected from five randomly selected schools. The study results indicated that; the student's performance in senior secondary school physics was affected by the level of teacher-learner relationship, that teachers should be firm and fair yet friendly in attending to learners' needs. The teacher can influence the learners' attitude toward physics and consequently their performance in the subject. The study also found that a conducive school climate creates an enabling scenario for effective learning to occur and that inadequate physical facilities and inadequate sitting space affect learners' performance in senior secondary school physics.

Quarcoo (2021) did a situational analysis study to investigate how conducive the classroom environments of senior high schools offering clothing and textiles in Ghana. The study sought the responses of learners and teachers. The findings were that the teachers perceived that the classroom environment was not as good as they would have liked it to be and that they had to make the best of it for the sake of the learners. The learners reported that their classroom was situated in a noisy environment which made it difficult to concentrate in class. They also lamented the dark, unventilated class, and insecure electrical wiring. It affected teaching and

learning because having the right amount of light, the right temperature, and air circulation determine learners' participation in a class. They also reported that their teachers were not approachable. The poor learning environment meant that learners found it hard to learn much from their clothing and textiles lessons. The study recommended that the Ministry of Education and Ghana Education Service supply schools with state-of-the-art classrooms and laboratories for the teaching of clothing and textiles lessons.

Godson & Ngussa (2020) did a study on how student's commitment toward learning is affected by the school environment of among secondary schools in Mondulu District Tanzania. The study approach was quantitative with a study sample of three hundred and forty-six learners from five randomly selected schools. The main finding was that there is a relationship between the school environment and student achievement. The specific findings were; the learners felt that the environmental factors of the school were uncondusive for effective learning and that learners' have a high commitment to studies. The study therefore called for school environmental factors to be harnessed so as to forecast the degree of student's commitment to learning.

Adonis (2017) undertook a study that investigated the development of a learning environment at a disadvantaged primary school in the Western Cape, South Africa through a participatory action research process. Data was collected by use of questionnaires, semi-structured interviews and focus group discussions. The findings were that the exclusive problems and highlights of the school setting affected the school learning environment; that enhanced cooperation between the stakeholders added up to school effectiveness and that the school as an organization required that

all its sub-parts (head teacher, the teachers, parents, and members of the community) to effectively team up through accessible communication networks to provide the finest teaching and learning environments and the strategies for improving teaching and learning resources, contributed to school effectiveness.

The Ministry of Education, Science, and Technology in Kenya undertook a nationwide study in 2004 to evaluate the preliminary effects of the recently rolled out FPE program so as to use the results to handle the emerging shortfalls in its implementation (UNESCO, 2012). The results from the one hundred and sixty-two schools across seven of the then provinces aimed at pupils, teachers, and school committees indicated that Kenya's school buildings were in a derelict state, the learning spaces have no seats or tables, and some schools utilized makeshift classrooms and open-air latrines. The report in its conclusion recommended among other things that the government recruit an additional number of teachers to catch up with the surging school numbers, to help upgrade the school's physical environments, and to provide clean water.

Aloyo (2015) did a study that ascertained the relationship between the physical environment and academic achievement in public secondary schools in Nairobi, Kenya not as an educator but as an architect. The study used the case study research design and questionnaires to collect data from public secondary schools. The study found that the general quality of the school buildings in all the categories of schools was dilapidated, mainly because of their length of years, utilization of inappropriate construction materials, and insufficient funds to maintain them. It also uncovered environmental factors that explained for student's academic performance including; school vicinity, security of tenure, general aesthetics and delightful surroundings,

feeling of being secure, interior walls well decorated, presence of graffiti, state of furniture in the classroom, and volume of noise from the neighborhood. It concluded that the physical environment in school contributes to learning and therefore attention should be given to upgrading old buildings and school grounds and managing development around learning facilities.

Kitonyi (2013) sought to determine the influence of the learning environment on pupils' academic performance in KCPE in Kaiti Division, Makueni County. The objectives were to assess the relationship between school, psychological, and home environment influence on pupils' academic performance. Descriptive survey research design was used and data was collected by use of questionnaires. The study findings were that the major factors hindering pupil performance were lack of teaching and learning resources, lack of adequate physical facilities, very high teacher-pupil ratio, inadequate hygiene and sanitation facilities and that the learning environment at home was not conducive for performance and therefore negatively affected performance.

Makau (2018) undertook a study to determine the influence of the classroom learning environment on lower primary school pupils in social studies in Makueni County, Kenya. Specifically, he sought to find out the availability and use of teaching and learning materials, the availability and use of physical facilities, and the influence of the teacher-pupil ratio on the performance of social studies at Makueni County. The findings were that the learning environment was not conducive as most of the teaching and learning materials were not available and could not be adequately utilized. There was also a very high enrolment in lower primary, hence teachers could not manage the classroom, a scenario which impacted negatively the performance of

social studies. The study also found that some infrastructure such as desks, libraries, and playgrounds were inadequate, which impacted negatively on performance.

2.2.5 Principals' Leadership and Student's Academic Performance

Several studies have sought to determine the association between a principals' leadership and academic performance. Many of these have found that school leadership is significant in influencing student's performance in direct effect (Xu, 2018) but others found indirect effects with the principal as student improvement was mediated through other people, practices, and school factors such as teachers, classroom organization and the school climate (Pont *et al*, 2008). The influence of principals' leadership on student's performance is a subject of current debate as seen in the meta-analysis and systematic studies as well as individual studies (Waters *et al*, 2003). The section will first review meta-analysis and other systematic reviews before looking at individual studies. On the individual studies, those that study leadership styles studies will precede studies on leadership practices or characteristics.

Ozdemir *et al* (2022) carried out a systematic review of empirical studies that associated principals' leadership with student academic outcomes. One hundred and forty-four articles were selected out of the five thousand, five hundred and nine that were retrieved for descriptive and content analysis. The search findings were first, quantitative research is the most commonly utilized method of inquiry for studies on principals' leadership and student performance, with very few making use of qualitative or mixed methods research. Secondly, the majority of studies were also cross-sectional rather than longitudinal, which failed to explain the causal relationship between school leadership and academic achievement over time. Thirdly, they found that most studies depended on the direct-effects model of inquiry. When the indirect

path was utilized, school factors such as collaborative structures and culture and reasoned variables such as classroom instruction and disciplinary climate were the most common mediators. Lastly, instructional leadership was found to be the favorite model of principals' leadership research studies.

Grissom *et al* (2021) undertook a systematic review of principal effects studies done in the US since the year two thousand from elementary to middle schools at state and district levels. Only quantitative studies were considered. The results indicated that in learning institutions where the school principal is more effective, more significant learning took place in both math and reading. They also showed that school leaders affect learners far beyond learning outcomes. The other benefits were that school attendance and discipline are crucial not just for learners' future success but also for teacher outcomes and remaining in the institution longer. On the requisite skills principals ought to possess, studies identified three broad categories: skills on abilities and competencies to enhance teaching and learning such as teacher supervision and motivation and monitoring curriculum implementation, skills to manage and improve staff including the ability to communicate effectively and to show concern for teacher's interests and skills that deal with coordinating the school whose impact is felt far beyond the school.

Tan, Dimmock & Walker (2021) searched a vast body of literature to assess the relationship between wide-ranging school leadership practices and student achievements in varying school backgrounds to elicit new insights. The three-level meta-analysis consisted of four hundred and ninety-three separate effects from one hundred and eight studies circulated from the year two thousand. From the findings, the significance of leadership activities associated with instructional management

such as improving teachers' capabilities and involving stakeholders to enhance learners' performance were highlighted. The analysis further pointed out that school leadership practices were considerably related to student's academic performance and learning approaches but not to achievement. The study further established that principals' leadership effects were important on different grade levels and not others as described in different research types and varied years.

Wu (2020) undertook a multivariate meta-analysis of forty-two empirical studies done in the US in the last twenty years in a bid to understand whether and how a principals' leadership influences student achievement. Some of the research findings were that there is consistent and overwhelming evidence of the relationship between principals' leadership effects and student achievement, most of the dimensions studied were statistically related to student achievement as reflected in direct effect without control and/or moderation and indirect effect and that effects of principals' leadership were almost always present despite varied conceptual and analytic methodologies employed by researchers.

Robinson *et al* (2008) carried out a meta-analysis to study the effect of various school leadership types on the academic and non-academic outcomes of students from studies from all over the world. The meta-analysis was done in two phases. In the first phase, twenty-two studies were analyzed to compare the effects of instructional and transformational models of school leadership on student achievement. The second phase consisted of twelve studies used to compare the effect of five selected leadership behaviors on learner performance. The findings from the first phase indicated that the impact of instructional leadership on learner performance was on average three to four times more than that of transformational leadership. Principals'

leadership behaviours were assessed using five leadership dimensions namely: forming and anticipating goals, strategic resourcing, planning, monitoring and evaluating learning, professional development of teachers, and creating an organized environment that supports learning. In the second phase, it was uncovered that the leadership element of taking part in teacher learning had averagely solid effect on student.

Johnson (2006) carried out a study to establish whether differences exist in instructional leadership behaviors between principals of high-achieving, high-performing, low-achieving, and low-performing schools. The study involved two hundred and fifty-one high school principals from Tennessee whose perception was sought on how they utilized instructional leadership in school. The study found no statistical differences in the instructional leadership behavior between principals of high and low-achieving schools and no statistical difference in the instructional leadership behavior of principals of high-performing and low-performing schools. However, it found statistical significance when achievement and performance data were added up in four areas: in instructional leadership, in coining of school goals, guarding time allocated for instruction, upholding high visibility, and spearheading continuous professional development

Hahn (2017) did an inquiry on the principal of a high-performing school to determine the specific characteristics that had the most positive effect on school climate and employee engagement. The choice school was identified by the Department of Education of Georgia. The study adopted a qualitative research approach. The research identified six main leadership characteristics that influenced school climate and employee engagement. These were the principal's dedication to: students,

building relationships, harnessing an environment of collaboration, clear communication, staff development, and thinking on practice.

Tatlahet *al* (2014) carried out a study to examine the effect of principal leader behavior on student academic achievement at the secondary school level by comparing the perceptions of school leaders and teachers in Punjab, Pakistan. Results from the study registered an effect of principals' leadership behavior on learner's academic performance. However, there was a considerable disparity in the viewpoints of the school principals and the senior secondary school teachers on the effect of school leadership activities and learners' outcomes with the principals' indicating an effect of their leadership on learners' outcomes while teachers did not indicate any effect.

Tedla & Kilango (2022) carried out a study to discover the function of school leadership in improving student achievement in secondary schools in Changchun, China by regarding principals' leadership practices and behavior. The study employed a mixed methods approach where questionnaires and interviews were used to collect data from principals and teachers. Results indicated that classroom supervision, organizing, goal setting, working together for the common good keeping scrutiny on learners' development, and steering teacher independence were the principal behaviors that enhance greater performance in school.

Ofori, Tordzro & Ametefee (2018) assessed the influence of heads' leadership styles on student's academic performance at senior high school in East Akim Municipal, Ghana. They used a concurrent triangulation mixed method design with a sample size of four hundred and sixty respondents. Data was collected by use of questionnaires and face-face interviews. The findings were that the democratic leadership style had a

positive influence on learners' academic performance, that involving teachers and learners in decision-making while working together with the support staff and providing necessary instructional resources were the top factors that led to increased academic performance of students in senior high schools in East Akim Municipal, Ghana.

Gatama, Otieno & Waweru (2023) undertook a study on principals' instructional leadership practices and their influence on student's academic performance in public secondary schools in Nyeri and Nyandarua Counties. They sought the perceptions of principals, heads of departments, and teachers using a mixed-methods research methodology. The results indicated that there was a positive and substantial correlation between all five dimensions of instructional leadership and student's academic performance. The dimensions that had the most effect were: strategic facilitation of teaching and learning resources and enhancing teacher capability and incentives. The main finding was that school principals must attend and list all the dimensions of instructional leadership to effectively have an impact on student academic performance.

Okwaro *et al* (2020) investigated the effects of principals' leadership style on secondary school performance in Tongaren Division in Bungoma County. They used McGregor's Theories X and Y of 1960 and descriptive survey design and mixed methods. The research findings were that there was a negative relationship between autocratic leadership style and school performance. The leadership style brought about resentment from colleagues. Democratic leadership style had a positive moderate relationship with student performance while laissez-faire leadership style elicited a negative relationship with school performance.

Muasya (2018) carried out a study to investigate the effect instructional leader behavior had on student's academic performance. The research site was all 90 public secondary schools in Machakos County, Kenya. The research design was a survey. Head teachers, teachers, and learners formed the study respondents. Descriptive statistics and Pearson correlation were used to test the relationships between the study variables. The results indicated that all four instructional leadership practices are strongly related to student performance. The principal practices under study were; outlining of school mission, overseeing teaching and learning in school, pioneering a conducive learning culture, and championing teachers' welfare.

Irungu (2020) undertook a study to investigate the influence of instructional leader practices on student's academic performance. The research site was public secondary schools in Muranga and Kirinyaga Counties of Kenya. The research design adopted was a descriptive survey design. The study respondents were school principals and teachers. The Kolmogorov-Smirnov and Shapiro-Wilk tests were the tools used to analyze the data. The results showed that there was a positive correlation between most of the principals' leadership practices and student's academic performance. The leader's characteristics that correlated positively with the dependent variable were; communication of set school targets, teacher supervision, and the advancement of collaborative networks. On the other hand, the single variable that did not contribute to enhancing student academic performance was the principal role of facilitating teachers' professional development.

2.2.6 Principals' Leadership as Moderator

While studies have evaluated the effectiveness of the BOM (Chelimo, 2010; Kindiki 2009; Wendot, 2004; Serero, 2016; Liguluka & Onyango, 2020) none of these have

statistically tested the effect of the moderating variable on their independent and dependent variables. They simply applied traditional statistical methods using direct methods to separately look at the factors affecting academic performance without integrating and moderating them. The current study hoped to fill the gap by measuring the moderating effect of a principals' leadership on the relationship between BOM efficacy and student's academic performance. Honinggh *et al* (2020) in their review of international literature review on the effect of school boards on quality of education, emphasized the fact those studies that highlight the dynamics and relationship between school boards and the school leadership are "essential to education quality".

Namazi & Namazi (2016) justify the crucial importance of moderation studies in research. They offer three important reasons. Firstly, they argue that research problems are more clearly understood when mediation and/or moderation variables are measured. Secondly, they also point out that research problems are incomplete and unable to solve real problems without these variables. Lastly, they note that mediation or moderation provides a compelling theoretical basis for conducting empirical studies because research problems are analyzed more truly and accurately. They conclude that results obtained from mediation and/or moderation studies are more insightful, real, and valid.

While there is a considerable number of studies on school leadership and its relationship with learner performance, those that have looked at how changes in principals' leadership relates to school performance are scarce (Sebastian & Allensworth, 2019; Ozdemir *et al*, 2022). Studies where principals have a direct effect on student outcomes have generally been sidelined and attention given to studies on indirect relationships between principals and other school factors that affect student

performance using "more complex methodologies" (Hallinger 2005; Nettles & Herrington, 2009).

In the following section, the reviewed moderation studies presented include both where principals' leadership is the predictor and where principals' leadership is a moderator because studies on principals as moderators of student academic performance are scarce.

Sebastian & Allensworth (2019) undertook a study that utilized moderated mediation to analyze how a variation in the school leadership is equivalent to improved performance when mediated by a change in the organizational process of parent-teacher trust, school climate, and professional capability. These mediated relationships were further tested to ascertain whether initial school conditions moderated them. Their results showed that enhancement in school leadership corresponded to improvement in learning outcomes through school climate regardless of whether the schools had strong or weak leadership to start with.

Furthermore, bin Abdullahi, bt Ismail & bin Mydin (2013) used principals' leadership practices as a moderator in the relationship between workplace spirituality and leadership effectiveness in secondary schools in Malaysia. Data was collected from nine hundred and eighty-nine qualified teachers from eighty-seven national schools. The study established that principals' leadership practices moderated the relationship between workplace spirituality and leadership effectiveness and that workplace spirituality leads to effective leadership practices and recommended that the school administration should take advantage of workplace spirituality and leadership practices as ways of inspiring the teachers so that their satisfaction and commitment levels increase.

Tan *et al* (2021) did a meta-analysis of literature and identified 108 studies with associations between principals' leadership and student academic performance. Their study sought to establish the impact of a research-based range of behaviors, for varying categories of school leaders on differing student performance by investigating the moderating effect of various school contexts on principal effects. Theirs was an important pioneer study that filled a gap that previous meta-analysis studies had not done previously by examining the moderating effects of the diverse backgrounds and procedural constructs of principals' leadership effects. Results from the moderation analysis indicated that only levels of analysis considerably moderated principals' leadership effects in studies that utilized school-level analysis but not in those that utilized lower-level analysis. The results were not significant for school socio-economic status, grade levels, and types of studies among others.

A study was done by Hou *et al* (2019) to assess the impact of instructional leadership on high school student academic achievement in China and to establish the specific instructional leadership dimensions that had the most impact. The sample size was twenty-six principals and forty-two thousand, two hundred and eighty-eight high school students. The study that controlled for student's background, principal's demographics, and school context found that instructional leadership had a significant moderating effect on high school and college entrance scores in the Chinese context. The instructional leadership dimensions that had the most effect on the entrance scores both directly and indirectly were: instructional management, describing of school mission and targets and supporting teacher development.

Okwisa (2023) in her study on the effect of leadership practices on academic performance analyzed the moderating effect of teacher commitment on that

relationship. The study was done in the cities of Nairobi, Mombasa and Kisumu of Kenya using a sample of three hundred and sixty teachers and head teachers. The study utilized a concurrent mixed methods research design and analyzed the moderating effect by using moderated multiple regression analysis through the step-wise hierarchical regression model. The study found that staff commitment considerably moderated the correlation between leadership practices and academic performance of city public primary schools in Kenya.

2.3 Summary of Literature Review

The chapter reviewed the conceptualization and empirical literature on the influence of BOM Efficacy on student's academic performance, the effect of Principals' leadership on student's academic performance and the moderating role of principals' leadership on the relationship between BOM efficacy and student academic performance. The three BOM functions in focus were; setting strategic direction, monitoring teaching and learning and creating conducive learning environment.

On the concept of BOM efficacy, Tshiunza (2018) argues that effective school governance determines school output while Wing Ng (2013) that effective School Boards are open, transparent, and publicly accountable for their education achievements and proper use of funds and that an effective School Board operates within a centrally determined framework of authorities and responsibilities to meet government regulatory requirements. Shober & Hartney (2014) in their survey of nine hundred school board members concluded that effective school boards are those that prioritize better student achievement far above that which is expected and emphasize improving learning as their paramount goal.

On the concept of setting strategic direction, the concept of strategic planning was defined as being "a disciplined effort to produce fundamental decisions and actions that shape and guide what an organization is, what it does, and how it does it with a focus on the future" (Bryson, 2011). Among the main functions strategic planning offers to institutions found in literature included among others to be able to confront the persistent changes in the school's environment that present both problems and prospects, institutions can effectively situate themselves to create a viable competitive gain, set high ambitions for themselves and also attend strongly to their implementation (Schlebusch & Mokhatle, 2016). Strategic planning confers practical benefits on institutions such as; the achievement of clarity of future direction, the ability to develop priorities, the ability to deal effectively with rapidly changing circumstances, expertise in developing and working as teams, the ability to solve major organizational problems, and to improve organization performance (Bryson, 2011). Among the authors who have written on the concept of strategic planning and setting the strategic direction include: Kiritu, Kathuri & Thuba (2017); van Wyk & Moeng (2014); Fullan (2004); Xaba (2011); Gode (2009).

On the concept of monitoring teaching and learning, IASB (2001) argue that school boards in their nature as school managers are not directly involved in the learning process in the classroom, but they work through others by necessitating the requisite conditions that promote learning. Usman (2016) also argues that it is the effective school administration that has the effect of leading an efficient instructional process which will in turn yield a quality output. Among the authors that conventionalized the theme of monitoring and teaching were: Bush & Middlewood (2005); York *et al* (2019); The World Bank (2018); Ates & Artuner (2013); Delagardelle (2014); Bowring-Carr & West-Burnham (1997).

The concept of creating conducive learning environment was also discussed in the review of relevant literature. UNESCO Institute of Statistics (2012) define a learning environment as the total physical, social, and pedagogical setting in which learning occurs, which entails classrooms, science laboratories, libraries, gymnasiums, music rooms, staff room, and other non-formal learning areas. Ibem *et al* (2017) conceptualize learning environments to include governance structures, school policies, sitting arrangements, physical conditions like temperature, noise, and acoustics that affect learning and as a place that enables effortless attention from learners and entices them to coherent thoughtfulness (Chan, 1996, as cited in Ibem *et al*, 2017).

Quarcoo (2021) defined the learning environment to include the policies and the codes of conduct that enhance the physical and emotional health of learners and teachers, the educational context and practices that lead to knowledge, attitudes, values, and the life skills required to build self-esteem, good health, and personal safety. The authors that have conceptualized creating conducive learning environment as cited in the study included: Barrett *et al* (2018); Singh *et al* (2016); Dhanapala (2021); Kilei (2012).

Principals' leadership within the school setting is conceptualized as the situation where the head teacher steers the school community towards the achievement of the set goals and objectives by using persuasion and participation until the targets become a reality (Northouse, 2019). It is broadly considered a significant factor and a strong predictor of student performance that is only second in place among all school-related dynamics that determine student learning after classroom instruction (Msila, 2005; Nzoka & Orodho 2014; Wu, 2020; Leithwood *et al*, 2004; Xu, 2018; Grissom *et al*,

2021; Manns, 2020; World Bank, 2018) and that an exceptional school principal is the most important contributor to improved learning (Xu, 2018; Day & Sammons, 2016; Nettles & Herrington, 2009).

The review looked at discussions on definitions of principals' leadership such as Smith (2011), who contends that no single leadership style is suitable always, but it is up to the individual principal to vary approaches to suit the needs of the moment and that the characteristic of a good leader is the ability to maneuver through different styles without difficulty. The view was corroborated by Day & Simmons (2018) who point out that effective school leaders choose from the array of different strategies to suit the purpose at hand.

Reviewed literature on the concept of principals' leadership included authors such as Pont *et al* (2008); Grissom *et al* (2021); Okwaro *et al* (2020); Day & Simmons (2018); Wu (2020); Ozdemir *et al* (2022); Nettles & Herrington (2009); Waters *et al* (2003) and Hou *et al* (2019).

Student academic performance is conceptualized as the knowledge acquired and evaluated by a teacher and /or goals, set by the teachers and learners for realization within a specified period and measured in terms of continuous assessment or examination results (Narad & Abdulah, 2016) and the collaborative outcome that results from student learning and the teachers' teaching, which is the total of what has been learned through the educative process (Lamas, 2015). Several studies were also reviewed (York *et al*, 2019; Singh *et al*, 2016; Willcox, 2011; Alnawasreh *et al*, 2019; Ali *et al*, 2009).

Empirical studies reviewed on BOM efficacy in setting strategic direction included; those that looked at the effect of successful strategic planning on academic

performance (George *et al*, 2019; Miskell, 2020; Nkumbwa, 2019; Kwaslema & Onyango, 2021; Gode, 2009; Kobia, 2017; Njunu *et al*, 2016). The review looked at a study on the effectiveness of school boards in strategic thinking (Baker *et al*, 2015), the effect of strategic management process on the management of schools, (Mwangi, 2017) and the challenges in formulating and implementing strategic plans (Inyanga, 2013).

Studies on the different aspects of BOM efficacy in monitoring teaching and learning reviewed include: whether school boards have an accurate knowledge of the school districts in which they serve (Shober & Hartney, 2014), teacher's experiences in monitoring students in online classes (van Leeuwen, 2023), the correlation between monitoring system and teachers' performance (Mngomezulu, 2015), the effectiveness of strategies used by school managers (Nzoka & Orodho, 2014), the effect of monitoring on teaching and learning on student academic performance (Muiruri, 2019) and the effect of monitoring and evaluation on teaching and learning (Kinyua, 2012).

The empirical studies that were reviewed on BOM efficacy on creating conducive learning environment are: a systematic of the effects of learning environment on student learning outcomes (Byers *et al*, 2018), the impact of school infrastructure on learning: a synthesis of the evidence (Barrett *et al*, 2018), creating conducive learning environment for effective integration of ICT: classroom management issues (Ping *et al* (2003), influence of the physical environment on learning: a case study of intermediate schools in Kuwait (Ali, 2017) and the influence of the physical environment and academic achievement in public secondary schools in Nairobi (Aloyo, 2015), the effect of learning environment on academic performance

(Dhanapala, 2021; Sithole, 2017; Kitonyi, 2013); the relationship between school environment, student approaches to learning and their academic achievement in senior secondary school physics (Adeyemo, 2012) and the effect of classroom learning environment on lower primary social studies (Makau, 2018).

The empirical studies reviewed on principals' leadership were made up of meta-analysis and systematic reviews and individual studies. The meta-analysis and systematic reviews includes: principals' leadership and student achievement outcomes (Ozdemir *et al* 2022); how principals effect students and schools: a systematic synthesis of two decades of research (Grissom *et al*, 2021), school leadership practices on student achievement (Tan *et al*, 2021), a multivariate, meta-analysis on the effect of principals' leadership on student achievement (Wu, 2020); the impact of leadership on student outcomes: an analysis of differential effects of leadership types (Robinson *et al*, 2008).

Studies on direct effects of different aspects of principal or school leadership includes: instructional leadership and academic performance in high school (Johnson, 2006); leadership characteristics, school climate and employee engagement in high performing, high needs schools (Hahn, 2017); effects of leadership behavior of principals on student's academic achievement (Tatlah *et al*, 2014); role of school leadership on improvement on students academics in China (Tedla & Kilango, 2022); influence of head teachers' leadership styles on student's academic performance in Ghana (Ofori *et al* 2018); principals' instructional leadership practices on student's academic achievement (Gatama *et al* (2023), principals' leadership styles and secondary student's performance (Okwaro *et al*, 2020); instructional leadership behaviours on student's academic performance (Muasya, 2018) and principals'

instructional leadership practices on learners' performance in secondary school (Irungu, 2020).

Empirical studies that looked at the various aspects of principals' leadership as moderator include: linking principals' leadership to organizational growth and student achievement: a moderation mediation analysis (Sebastian & Allensworth, 2019), moderation effects of principals' leadership practices on workplace spirituality and leadership effectiveness (bin Abdullahi *et al* 2013), how school leadership practices relate to student outcomes: results from a three-level meta-analysis (Tan *et al*, 2021), the impact of instructional leadership on high school students academic achievement in China (Hou *et al*, 2019) and the moderating effect of teacher commitment on the relationship between leadership practices and academic performance (Okwisa, 2023).

Table 2.1 Summary of Identified Research Gaps

Authors	Topic	Methodology	Findings	Knowledge Gaps
Chelimo (2010)	Effectiveness of Board of Governors in Curriculum Implementation in Secondary Schools in Keiyo District, Kenya	Cross-sectional survey, use of chi-square	BOG training directly related to curriculum implementation	The current study covers a broader scope of BOM efficacy indicators. Principals' leadership moderates BOM efficacy and academic performance, use of convergent parallel mixed methods approach, pragmatic philosophy, and analysis through hierarchical multiple linear regression and PROCESS macro and controls for covariates.
Wendot (2004)	Effectiveness of School Management on Performance of KCSE: A Case of Koibatek District	Use of chi-square	Head teacher provision of teaching resources and use of staff development influenced school performance	Current study on BOM efficacy in Kenya, principals' leadership as moderates BOM efficacy and academic performance, use of convergent parallel mixed methods approach and analysis through hierarchical multiple linear regression and PROCESS macro and controls for covariates.
Mukima (2013)	The role effectiveness of the board of governors and parents' teachers' association in management of public secondary schools: a case of Thika Ruiru Division, Thika District, Kiambu County, Kenya.	descriptive research design, 28 respondents	The majority of BOG and PTA are not effective due to challenges faced	The current study utilized a larger sample size covered a larger study area. Did not use a theoretical framework, the current study used two theories. PL moderates BOM efficacy and academic performance as the DV use of convergent parallel mixed methods approach and analysis through hierarchical multiple linear regression and PROCESS macro and controls for covariates.
Serero (2016)	The effectiveness of school governing bodies regarding their overall school governance mandate in the Free State Province	Principal and governors and SGB chairpersons	effectiveness of SGBs is indeterminate, SGBs did well in some governance areas and not too well in others	The current study in Kenya includes teachers in the sample. Overall performance of the DV, academic performance is the DV of the current study. Did not use a theoretical framework while two theories underpin the current study. PL moderates BOM efficacy and academic performance.

Tshiunzae <i>et al</i> (2017)	Impact of Governance System of Local School Boards on Pupils' Academic Performance in DR Congo Pilot Primary Schools	used a sequential exploratory mixed methods design, 224 respondents in 16 schools; PTA, principal and deputy, LSB members, and teachers	LSB competencies have more impact on student academic performance, Followed by LSB leadership and control power and characteristics of LSB	Current study on BOM efficacy in secondary schools in three counties in Kenya, applies a convergent parallel mixed methods approach. PL moderates BOM efficacy and academic performance and controls for covariates.
Kingoina (2017)	A Qualitative Approach to the Role of Board of Management, School Climate and Teachers' Morale as Determinants of Pupils' Academic Performance in Public Primary Schools in Marani Sub-County, Kenya	Stratified random sampling, 133 respondents: head teachers and BOM chairpersons	BoM did not manage disciplinary matters, promote a culture of dialogue and democratic governance, participate in guidance and counseling, and manage resources. schools' climate was uncondusive, with negative pupil-teacher relations and low teacher morale	Primary schools targeted in the Marani sub-county. The current study covers secondary schools in three counties, use of mixed methods and PL moderates BOM efficacy and academic performance and controls for covariates
Lorentzen (2013)	The Relationship between School Board Governance Behaviors and Student Achievement	Pearson's r correlation, a non-experimental quantitative study	Student achievement significantly correlated with all board standards: providing responsible school governance, setting and communicating high student expectations, creating the conditions for success, holding the school district accountable, and engaging the community.	Evaluated aspects of SBG behavior, current study SB functions, a mixed methods study, use of hierarchical multiple linear regression, and PROCESS macro. PL moderates BOM efficacy and academic performance in Kenya and controls for covariates

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

The chapter aims to describe the location of the study, the philosophical paradigm of the study, the research design, the study population and sampling procedure, the data collecting instruments, measurement variables, pilot study, validity, reliability, data processing, data analysis and finally ethical considerations.

3.1 Study Area

The study was carried out in selected public secondary schools in the counties of Elgeyo Marakwet, Uasin Gishu and Nandi in Kenya. Public secondary schools are those with established BOMs appointed by the Cabinet Secretary of Education and work in collaboration with the CEB in their respective counties.

3.2 Research Philosophy

Research can be defined as a logical and systematic way of solving problems (Gay & Airasian, 2000) or an orderly investigation of a subject matter to add to knowledge (Postlethwaite, 2005). Research philosophy or worldview is a system of beliefs and assumptions about the development and nature of knowledge that guides action (Creswell, 2014).

There are different types of philosophical worldviews in literature; these are post-positivism, constructivism, transformative, and pragmatism. Post positivism developed from positivism which is the position of natural sciences. It deals with working with an observable and measurable social reality that forms the basis for rational conclusions (ibid). Positivists assess the causes that influence the outcomes of

study variables. They develop knowledge through the measurement of objective data using questionnaires as the main research instrument (Oates, 2010; Muijs, 2008). They use the knowledge to control and predict trends and behavior. The use of questionnaires elicits quantitative data which is used to determine the relationship between the variables. It was initially propounded by 19th-century scholars such as Comte, Mill, Durkheim & Locke.

Constructivism can be attributed to writers such as Lincoln Guba and Mertens. Social constructivists claim that individuals seek to understand their world by developing meanings from their experiences. These subjective meanings are varied and emerge from the interactions and upheld socio-cultural norms (Creswell, 2014). Indirect writings of scholars like Marx, Ardono, Mercuse, and Freire among others gave a voice to the marginalized communities such as the feminists, racial and ethnic minorities, and those living with disabilities among others to address social exclusion in such areas such as inequality, empowerment, oppression and domination (Creswell, 2014).

The pragmatic view was fronted by scholars such as Mead, Patton, Pierce, and John Dewey. Their orientation arises from actions, situations, and consequences. They are concerned with the pluralistic approaches that can be applied to solve problems. More recent proponents include Tashakkori, Teddlie & Creswell. While the primary focus of pragmatists is the problem under study, there is freedom of choice regarding the methods, techniques, and procedures to be used that depend on the needs and purposes at hand.

The study chose the pragmatic philosophical approach to underpin it, as it was deemed the most suitable to establish the relationships between the variables, test the

hypothesis and analyze the data as it allows for the use of pluralistic approaches in solving problems and the freedom of choice regarding methods, techniques, and procedures that best meets the purpose.

3.3 Research Design

The study employed the convergent parallel mixed methods design. In the convergent parallel mixed methods design, the researcher concurrently conducts the quantitative and qualitative aspects of the research during the same phase, weighs the methods equally, analyses the two components independently, and interprets the results together (Creswell & Plano-Clark, 2018, Creswell & Creswell, 2018). The researcher then looks for convergence, divergence, contradictions, or relationships in the sources of data.

The approach was chosen because it yields additional insight beyond the information obtained by either qualitative or quantitative data alone (Creswell & Creswell, 2018). One is also able to obtain a more complete understanding of the problem and validate one set of findings with the other (Creswell & Plano Clark, 2018). The method benefits from the strengths of both approaches hence the problem is understood in a broader and deeper format, and is richer and more reliable (Cohen, Manion & Morrison, 2018).

3.4 Target Population

A target population is defined as the members of a real or hypothetical set of people, events, or objects to which a researcher wishes to generalize the results of the research study (Gall, Gall & Borg, 2003). They are the individual or groups of people with which the researcher is interested in data collection. The target populations in the study were principals and teachers of selected public secondary schools. The principal

was selected because they the accounting officers in the school, members of the BOM and are the most knowledgeable about the school. Teachers were targeted because they are beneficiaries of BOM and principal decisions and would offer a realistic view of issues in their different schools. Teachers in public secondary schools in the three counties of Elgeyo Marakwet, Uasin Gishu, and Nandi are six thousand, six hundred and seventy-eight in number as shown in table 3.1.

Table 3.1 Teacher Population per County

County	Sub County	No. of Teachers
Elgeyo Marakwet	Marakwet East	221
	Marakwet West	514
	Keiyo North	632
	Keiyo South	622
	TOTAL	1,989
Uasin Gishu	Moiben	299
	Ainabkoi	323
	Soy	392
	Turbo	373
	Wareng	495
	TOTAL	1,882
Nandi	Nandi North	561
	Nandi South	517
	Chesumei	560
	Tindiret	400
	Nandi East	326
	Nandi Central	443
	TOTAL	2,807
Grand Total		6,678

Source: County Director of Education, U.G

3.5 Sampling Procedure and Sample Size

Sampling is the process of selecting a sample from a defined population with the intention that the chosen sample accurately represents that population (Gall, Gall & Borg, 2003). For the quantitative data, the table by Krejcie & Morgan (1970) was used to determine the sample size. Based on a study population of six thousand, six hundred and seventy-eight teachers from the three counties, the recommended sample

size is three hundred and sixty-four. The sampling procedures used were, convenient sampling to select the counties of Elgeyo Marakwet, Uasin Gishu and Nandi. Consequently, proportionate stratified sampling was used to calculate the sample size of teachers per sub-county. The calculated sample size for each of the sub-counties is shown in table 3.2.

Random sampling was used to select teachers from each of the sub-counties to fill the questionnaires to a total of three hundred and sixty-four teachers. To ensure maximum randomness in sampling, the researcher intentionally ensured that all the different types and backgrounds of schools were included: urban schools, schools from semi-urban areas, rural schools and those of different types: national, extra country, county and sub-county.

For the qualitative data, one principal was purposively selected from the four categories of schools per county to take part in the depth interview, totaling twelve principals as indicated in table 3.2.

Table 3.2 Sample Size of Teachers per Sub- County

County	Sub County	No. of Teachers	No of Principals
Elgeyo Marakwet	Marakwet East	12	1
	Marakwet West	28	1
	Keiyo North	34	1
	Keiyo South	34	1
	TOTAL	108	4
Uasin Gishu	Moiben	16	-
	Ainapkoi	18	1
	Soy	22	1
	Turbo	20	1
	Wareng	27	1
	TOTAL	103	4
Nandi	Nandi North	30	1
	Nandi South	28	-
	Chesumei	31	1
	Tindiret	22	-
	Nandi East	18	1
	Nandi Central	24	1
	TOTAL	153	4
Grand Total		364	12

Source: County Director of Education, U.G

3.6 Data Collection Instruments

Before data is collected, the collecting instruments are identified and developed depending on the particular data required. The identification depends on the research design, research objectives, and questions (Wiersma, 2000). In the study, both quantitative and qualitative data was collected. The quantitative data was collected by use of a self-administered questionnaire while qualitative data was collected by use of an interview schedule. The questionnaire was chosen because it solicits data from a large sample size and hence can be used to generalize for the rest of the population. The interview schedule was used to gather in-depth information from key informants to complement the data collected from the questionnaire.

3.6.1 Questionnaire

A questionnaire is a form that contains several carefully crafted questions in a definite order and is used for collecting data directly from people (Kothari, 2004). It is usually used singularly to collect large amounts of data from a large sample in their natural setting in a relatively short time (Kothari, 2008).

In questionnaires, questions can be closed-ended or open-ended. Closed-ended questions are those that provide a list of possible alternatives from which respondents are to select the answer that best describes their situation. Closed-ended questions or structured questionnaires are difficult to construct but easier to administer, and analyze and are economical in terms of time and money (Wiersma, 2000). Open-ended or semi-structured questions allow respondents the autonomy to respond to questions in their own words. They are simpler to formulate (Mugenda & Mugenda, 2003).

The study utilized a self-administered structured questionnaire as an instrument to collect data because it is not only relatively easy to administer and analyze, but mainly because it can be used to capture a huge capacity of responses. The questionnaire comprised two sections. Section A captured the demographic characteristics of the respondents, such as age, gender, school size, school type, and school climate. Section B captured the Board of Management (BOM) efficacy (independent variable), principals' leadership (moderating variable), and student's academic performance (dependent variable). The instrument was used to collect data from teachers in the study area according to the five research objectives.

3.6.2 Interview Guide

An interview guide is a face-to-face encounter with a respondent and a researcher where a general plan is followed in orally asking questions and making comments to lead a respondent towards giving data (Mugenda & Mugenda, 2003). Interviews have several advantages; they allow in-depth probing, elaboration, and clarification of terms where necessary; they tend to have more success with obtaining responses to open-ended items, and the omission of items is easily avoided (Wiersma, 2000). The interview guide was used on the school principals, considered to be the key informants. The use of open-ended questions was used to probe deeper in assessing the issues of BOM efficacy and principals' leadership in moderating BOM efficacy and influencing academic performance in public secondary schools in the county.

3.7 Measurement of Variables

The study collected data for analysis from four types of variables; dependent, independent, moderating, and control variables.

3.7.1 Dependent Variable

Student's academic performance (SAP) was measured using six items. The statements were about the degree to which student academic performance is enhanced for instance if: the school environment is quiet, safe, and orderly; school leadership is supportive of the teacher's efforts; teachers are exposed to regular training/workshops/seminars and highly performing teachers and learners are motivated.

3.7.2 Independent Variable

Board of Management (BOM) efficacy was the independent variable. It consisted of twenty-one items. The variable consisted of three key constructs namely (BOM)

efficacy in Setting Strategic Direction (SSD) which consisted of seven items, Monitoring Teaching and Learning (MTL) which consisted of six items, and Conducive Learning Environment (CLE) which consisted of eight items. BOM's efficacy in setting strategic direction reflects an understanding of the board's function in the area. The construct measured the point of efficiency in capacities such as; taking time to plan a budget for school activities, involving stakeholders in setting performance targets, and emphasizing mainly academics.

BOM's efficacy in monitoring teaching and learning measured BOM's efficacy in areas of monitoring such as monitoring syllabus coverage and learning in general and providing opportunities to discuss academic performance.

BOM efficacy in creating a conducive learning environment measured areas such as: facilitating regular workshops/seminars/trainings for teachers, giving incentives to highly performing teachers and learners, and ensuring there is a conducive learning environment.

3.7.3 Moderating Variable

Principals' leadership (PL) was the moderating variable in the study and consisted of eight items. The variable was measured to assess areas of principals' leadership for instance asking principals whether they; work harmoniously with the BOM, inspire and steer the school to strive to greater heights, support teachers' efforts, and be highly visible and involved in daily school activities.

3.7.4 Control Variable

The study included control variables/covariates. These are school factors that could potentially influence the role of the BOM and principals' leadership in enhancing student academic performance. The control variables in the study were; study class

size, school type, and school climate. In school type, schools were categorized as national schools, extra county schools, county schools, and sub-county schools. School climate is operationalized as the expectation to succeed and it was categorized into five types of schools: very high, moderately high, neutral, low, and very low. Class size was the number of learners in a class and is categorized into three; below 60, between 61 – 80, and over 80.

3.8 Pilot Study

A pilot study is a test run of the study to fine-tune (Lodico, Spaulding & Voetle 2006) the data collection instruments. The views received from the participants such as mistakes on grammatical, use of complex language, and challenges felt were corrected (UNESCO, 2005) to further refine the instruments before carrying out the actual study.

The researcher conducted a pilot study in four schools that were not from the sample; two extra counties of each gender, one county girls' school, and a sub-county school. The pilot study aimed to ensure that the questionnaire captured the intended information during the actual study. Through the pilot study, the researcher was able to change a typographical error, to rephrase some questions and time the response rate. It also enabled the researcher to familiarize herself with the best approach to administering the questionnaire in schools. Finally, it ascertained that the reliability and validity of the instrument were measured.

3.9 Validity

Validity refers to the degree to which an instrument measures that which it is meant to measure (Taherdoost, 2016). It is also how results are suitably interpreted for the projected usage (Wiersman, 2000) and the generalizability of relating results to other

locations, individuals, or samples (Creswell, 2004). There are two broad types of validity: content validity and internal validity. Content validity aims to ensure that all domains are represented in the items. Internal validity is the degree to which outcomes of a study can be interpreted precisely and with confidence. The other components of validity in social science research that are incorporated to enhance the overall validity of the study include face and construct validity.

3.9.1 Face Validity

Face validity is the personal conclusion of constructs as they have been operationalized (Taherdoost, 2016). It is also the degree to which a measure appears to be consistent with specific constructs in the opinion of non-experts and simply looks relevant. It was done by assessing the look of the test in terms of its feasibility, readability, consistency of style and formatting, and clarity of language. To ensure that the research instruments measured up to face validity, research experts from the department (supervisors) assessed the relevance of the questions based on the research objectives.

3.9.2 Content Validity

Content validity is the degree to which items in the instrument reflect the content universe to which the instrument was generalized (Straub & Bourdeau, 2004, as cited in Taherdoost 2016). Content validity is the systematic scrutiny of item content (Wiersman, 2000) ensuring that all the essential items for the construct are included and the undesirable items are eliminated. According to Mohajan (2017), there is no statistical test that can be used to decide whether a measure adequately covers a content area, but content validity is normally dependent on the ruling of experts in the field. It was done by the supervisors.

3.9.3 Construct Validity

Construct validity refers to how well a concept or an idea that is a construct is translated or transformed into a functioning and operating reality. It tests to ascertain if there are constructs that have no relationship and that they accounted for constructs that can account for more variance in the observed variables associated with it in the conceptual framework (Taherdoost, 2016). The researcher tested for construct validity using Exploratory Factor Analysis (EFA) and utilized Principal Component Analysis (PCA), Equamax rotation method and eigenvalues.

3.10 Reliability

Reliability refers to the dependability and consistency of research and the extent to which it can be replicated (Creswell & Creswell, 2018). According to Charkrabartty (2013), reliability measures the consistency, stability, precision, repeatability, and trustworthiness of research. In quantitative research, a reliable instrument should produce the same results from similar respondents over time. It means that if a test and a retest were carried out using the same instrument within a certain period, similar results would be obtained.

The questionnaire for data collection in the study was determined to be reliable after results from the pilot study were computed by use of Cronbach alpha. An alpha coefficient of > 0.8 in the study was deemed very good and reliable (Cohen *et al*, 2018).

Table 3.3 shows the reliability results of the questionnaire items at the pilot stage.

Table 3.3 Composite Results for Reliability Test – Pilot Study

Study Variable	No. of Items		Cronbach's Alpha(α)	No. of Items Retained
	Cronbach's Alpha(α)	Before Deletion		
Setting Strategic Direction	0.735	7	0.891	6
Monitoring Teaching and Learning	0.929	6	0.929	6
Creating Conducive Learning Env.	0.770	8	0.868	7
Principals' Leadership	0.946	8	0.946	8
Student Academic Performance	0.906	6	0.906	6
Total		35		33

In qualitative research, reliability is the consistency of data collection (Finlay, 2006) or the degree of precision and widespread coverage of the data collection process (Cohen, *et al.* 2018). The reliability of qualitative aspects of the research was ensured as follows:

3.10.1 Trustworthiness

Qualitative research should ensure that it is of quality in both the process of data collection and the findings. Lincoln & Guba (1985) opine that the trustworthiness of a research study is important to evaluating its worth. Trustworthiness involves establishing the following factors in one's research as discussed below.

3.10.2 Credibility

Credibility in research refers to the confidence in the “truth” of the findings. Shufutinsky (2020) argues that “your study is credible if the people in it recognize the truth of the findings in their social context”. Credibility in the current study was achieved by ensuring that the research was discussed from the point of view of the participants and not of the researcher to avoid any unnecessary bias. According to Patton (2002), the researcher should utilize rigorous techniques and methods for

gathering high-quality data. According to Creswell (1998), verification is critical to ensuring credibility in qualitative research. Patton (2002) argues that issues of quality and credibility are dependent on the audience and intended research purpose and that techniques and methods used should be rigorous for gathering high-quality data. He argues further that data should also be carefully analyzed bearing in mind the issues of reliability, validity, and triangulation.

Lincoln & Guba (1985) and Creswell (1998) both identify procedures or techniques that can be used to establish credibility. These are prolonged engagement and persistent observation, triangulation, peer review or debriefing, negative case analysis, referential adequacy, and member-checking. Patton (2002) proposed the following: an examination of rival explanations, analysis of negative or deviant cases, rigor in sampling and case selection

3.10.3 Transferability

Transferability shows that the findings have applicability in other contexts and that they fit into what is already known (Lincoln & Guba 1985). One technique that can be used to ascertain transferability is thick description (ibid) which the researcher endeavored to do in the discussion of research findings.

3.10.4 Dependability

Dependability refers to the process of showing that the study findings are consistent and could be repeated (Lincoln & Guba, 1985). According to them, when readers can examine the research process, they can better judge the dependability of the research. Dependability in research can be demonstrated by ensuring that the research process is not only logical and traceable but should also be clearly documented (Nowell *et al*,

2017). The researcher documented the schools visited and whether the head or the deputy of the institution was interviewed for the purposes of the study.

3.10.5 Confirmability/Objectivity

It is the degree or extent to which the findings of a study are shaped by the respondents and not the researcher's bias, motivation, or interest. It is the relative neutrality (Patton, 2002). Techniques that can be used to demonstrate confirmability include the use of an audit trail (whereby the researcher is transparent about the process by which data was collected, analyzed, and presented), triangulation (use of different sources of knowledge about the same issues compared and contrasted). Confirmability was done by the use of triangulating the sources of knowledge i.e., the use of questionnaires and interview schedule covering the same issues guided by the research objectives of the study.

3.11 Data Processing

Quantitative data: The data was first screened where data screening is the process of ensuring data is clean and sanitized before it is analyzed. Data was therefore coded, organized, and screened to ensure that it is useable, reliable, and valid. Data screening also, called pre-data analysis screening is a process of checking for inconsistencies in the database, detecting, cleaning, removing, correcting errors, typos, incorrect entries, and inconsistencies in the dataset and univariate outliers.

Qualitative data: The researcher first familiarized them self with the data to determine the depth and breadth of the content by listening to the recording and going through the field notes (Lincoln & Guba, 1985). It was to ensure that although all data is potentially useful, not all is vital for conducting analysis and giving the final report. Nowell *et al* (2017) point out that when data is collected using interactive means such

as through interviews and focus group discussion, the researcher will have some prior knowledge of the data and possibly some initial analytic thoughts.

3.12 Data Analysis

Data was analyzed using both descriptive and inferential statistics. Descriptive statistics involves the use of frequency, means, percentages, and standard deviations to summarize the survey data. Exploratory Factor Analysis (EFA) was run to determine the correlation among variables and where necessary to reduce the variables in the study data set to a small number of factors. It ensured that scales measuring the study construct/concepts attained appropriate construct validity, discriminant validity, and convergent validity levels for accurate statistical conclusions. The principal component analysis (PCA) method with Equamax rotation was used to extract factors. Factor loadings of .3 and above with eigenvalues greater than 1 were retained for analysis while those below were dropped.

Hypotheses were tested using a hierarchical regression model. Hypothesis testing ensures that study findings and conclusions are valid and reliable and that they do not arrive out of chance. The moderating effect of principals' leadership on the relationship between BOM efficacy and student's academic performance was analyzed using multiple regression via PROCESS macro software. All potentially confounding variables were controlled to ensure that any effect that is observed from the main predictors are unique and beyond that of the known predictors or the controls. In the study class size, type of school, and school climate are the covariates that were controlled for.

3.12.1 Assumptions of Regression Model

To improve the statistical conclusion and reduce the possibility of biases and errors the researcher tested several assumptions of the regression model namely; multivariate outliers, multi-collinearity, normality, linearity and homoscedasticity.

Multivariate outliers are extreme values that lie outside the general linear pattern of the midline (Garson, 2012). They are cases that represent high residuals (errors) which are clear exceptions to the regression explanation. Outliers are a form of violation of homoscedasticity. The set of outliers may suggest/require a separate explanation. To deal with outliers, the researcher may remove them from analysis and seek to explain them on a separate basis, or transformations may be used which tend to "pull in" outliers. These include the square root, logarithmic, and inverse ($x = 1/x$) transformations (Hair, Black, Babin & Anderson, 2019).

Normality – normality occurs when each variable under consideration is normally distributed concerning the other independent variables (Garson, 2012). Normal distribution takes the form of a symmetrical bell-shaped curve. Normality can be observed in a histogram of standardized residuals or frequencies showing a roughly normal curve. Non-normality is shown when points are not equally above and below the Y-axis 0 lines (ibid).

Linearity- Regression analysis is a linear procedure. To the extent nonlinear relationships are present, conventional regression analysis will underestimate the relationship. Linearity can be inspected on scatterplots. Non-linearity is shown when points form a curve. Substantial violation of linearity means that regression results may be more or less unusable.

Homoscedasticity- “refers to the assumption that dependent variable(s) exhibit equal levels of variance across the range of predictor variable(s)” (Hair *et al*, 2019). A lack of homoscedasticity can be seen in a scatterplot, it will be characterized by a funnel-shape pattern whereas a homoscedastic model will display clouds of dots dispersed randomly. The non-homoscedasticity funnel or other shape shows that variance differs as one moves along the Y axis (Garson, 2012).

Multi-collinearity – this is the degree to which a variable can be accounted for by other variables in the analysis (Hair *et al*, 2019). When the level of multi-collinearity increases, the inter-correlation among the independent variables will be high such that one cannot separate the effects of the dependent variable, and interpreting the variate becomes complex because it becomes harder to establish the effect of any single variable, owing to their interrelationship. Garson (2012) points out that an inter-correlation among the IVs of above .80 indicates a possible problem.

3.12.2 Model Specification

To achieve the purpose of the study, linear and hierarchical models took the form of:

- i. Model 1: $Y = \beta_0 + \beta_1 \text{school climate} + \beta_2 \text{school size} + \beta_3 \text{school type} + \epsilon$ The first model (Model 1) to examine how much variance is explained by the covariates of the study.
- ii. Model 2: $Y = \beta_0 + C + \beta_1 X_1 + \epsilon$...In the next step (Model 2), the first independent variable (SSD) is added to the first model to test how much variance explains the dependent variable while controlling for the covariates (H_{01}).

- iii. Model 3: $Y = \beta_0 + C + \beta_1X_1 + \beta_1X_2 + \epsilon$...In the next step (Model 3), the next independent variable (MTL) is added to test how much variance explains the dependent variable while controlling for the covariates (H_{02}).
- iv. Model 4: $Y = \beta_0 + C + \beta_1X_1 + \beta_1X_2 + \beta_1X_3 + \epsilon$...In the next step (Model 4), the third independent variable (CLE) is added to test how much variance explains the dependent variable while controlling for the covariates (H_{03}).
- v. Model 5: $Y = \beta_0 + C + \beta_1X_1 + \beta_1X_2 + \beta_1X_3 + \beta_1X_4 + \epsilon$...In the next step (Model 5), the fourth independent variable (PL) is added to test how much variance explains the dependent variable while controlling for the covariates (H_{04}).
- vi. To analyze the moderating effect of principals' leadership on the relationship between the Board of Management efficacy and student academic performance (H_{05}) the following moderated regression analysis is used.

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_3X_4 + \beta_5X_1Z + \beta_6X_2.Z + \beta_7X_3.Z + \beta_8X_4.Z + C + \epsilon$$

Where:

Y is academic performance

X_1 is BOM efficacy

X_2 is Principals' leadership

β_0 is a constant

$\beta_0 - \beta_8$ is the coefficients of regression

$X_4 Z - X_{68}Z$ is the interaction term of factors determining learner performance

C is the control variable

ϵ is the Error term.

Table 3.4: Steps for the Data Analyses

Analysis	Statistics	Decision Point
Demographic Profile and characteristics of the respondents	frequencies, percentages, mean using SPSS	N/A
Data Reduction:	Principal Component Factor Analysis with Equamax rotation using SPSS	KMO Bartlett's Test >.5
Independent variables		Eigenvalue greater than 1
Summarize data	frequency, means, minimum, standard deviation using SPSS	N/A
Differences in performance between schools in terms of class sizes, school types, and climates	ANOVA using SPSS	Sign. at $p \leq .05$,
Independent and dependent variables		
Degree and Strength of relationships between school size, type, and climate on academic performance	Pearson's Product Moment correlation coefficient Pearson's R using SPSS	R-value +1 to -1
Hypothesis testing		
Testing for covariates (control variables)	Hierarchical Regression model	Sign. at $p \leq .05$
H₀₁ : There is statistically no significant effect of BOM efficacy in setting the strategic direction on student's academic performance in selected secondary schools in Kenya.	Hierarchical Regression model using SPSS	Sign. at $p \leq .05$
H₀₂ : There is statistically no significant effect of BOM efficacy in monitoring teaching and learning on student's academic performance in selected secondary schools in Kenya.	Hierarchical Regression model using SPSS	Sign. at $p \leq .05$
H₀₃ There is statistically no significant effect of BOM efficacy in creating a conducive learning environment on student's academic performance in selected secondary schools in Kenya	Hierarchical Regression model using SPSS	Sign. at $p \leq .05$
H₀₄ There is statistically no significant effect of the principals' leadership on student's academic performance.	Hierarchical Regression model using SPSS	Sign. at $p \leq .05$
H₀₅ Principals' Leadership does not significantly moderate the relationship between BOM efficacy and student's academic performance	Multiple Regression model using PROCESS Macro	Sign. at $p \leq .05$,

Thematic analysis was carried out for the qualitative data. It is the method of identifying, analyzing, organizing, describing, and reporting themes found within the data set (Braun & Clarke, 2006). It is the process of making sense of the raw data from the participants' interpretation of their experiences of the phenomenon. It involves identifying patterns from the transcribed data and generating categories and themes (Cohen *et al*, 2018). The process of thematic analysis is represented in Figure 3.1.

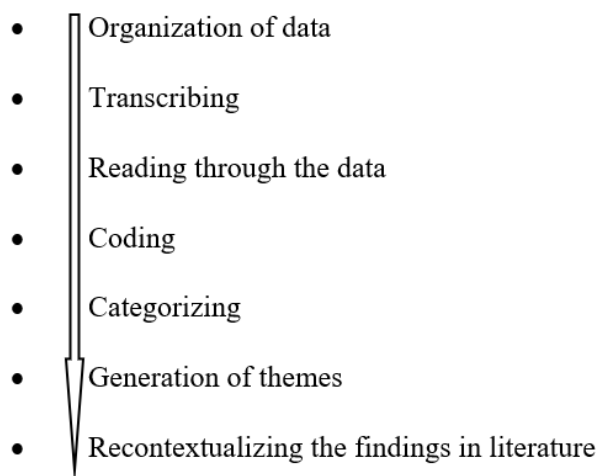


Figure 3.1: A Representation of the Thematic Analysis Process

Creswell (2014) points out that, due to the density and richness of qualitative data, it is not possible to use all the collected data. Data is therefore winnowed to ascertain the data to be used and that to be disregarded by focusing on significant data that is related to the research question. Data can be organized according to the group, individuals, the issue under inquiry, the instrument used, or the research question (Nueman, 2014). The data in the study was organized and coded according to the research questions. All the relevant quotations from the interviews that answered the research question were categorized together to provide the thematic analysis. The number of categories that emerged was deemed the themes of the study. These are used as the findings for interpretation and discussion in the light of literature. They

are then discussed together with the findings from the quantitative analysis for any convergence or divergence (Creswell & Creswell, 2018; Plano-Clark & Creswell 2018).

3.13 Ethical Considerations

The study took into consideration ethical and moral principles of conducting research. The researcher therefore sought to be trustworthy and honest during the research process so as not to expose the participants and their schools.

As such, the following measures were put in place as recommended by Creswell & Creswell (2018): Before proceeding to the field, the researcher acquired an introductory letter from the School of Education, Moi University. That was used to obtain a research permit from NACOSTI. The research permit from NACOSTI was then used to obtain clearance from the County Directors of Education of the three counties to be visited. The researcher then sought consent through an introductory letter to the schools as well as oral consent.

The researcher explained the nature and purpose of the study. They were assured of utmost confidentiality and anonymity. The researcher respected the choices and wishes of the participants when presenting the instruments, particularly concerning time, so that they were conducted at the convenience of the participants and not the researcher. Teachers filled out the questionnaires in the staffroom, science laboratories, and departmental offices while the interviews were held in the principal's offices.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.0 Introduction

The chapter consists of data presentation, analysis, and interpretation based on the study objectives. The main objective of the study was to assess the effect of BOM efficacy on student's academic performance and the role of the principals' leadership in moderating the relationship using the convergent parallel mixed-methods research design.

The empirical data was collected from questionnaires and an interview schedule. Three hundred and sixty-four questionnaires were administered to teachers from the three counties of Elgeyo Marawet, Uasin Gishu, and Nandi, and twelve principals were interviewed face to face. Data was analyzed using descriptive and inferential statistics. The descriptive statistics used were percentage, means, and standard deviation. The inferential statistics used were ANOVA, Component Factor Analysis, Pearson Correlation, Hierarchical Multiple Regression, and PROCESS Macro regression analysis.

First, the questionnaires were distributed to teachers in their schools at the different sub-counties. Two research assistants assisted the researcher. The respondents were informed to fill in all sections of the questionnaire. The exercise was done between July and August 2023. The questionnaires were distributed to three hundred and four teachers. However, only three hundred and eight were returned duly filled. This was a response rate of ninety-eight percent of the sample and was considered to be a good representation of the study population. The researcher conducted the interviews concurrently.

After separately analyzing the quantitative and qualitative data, the findings were compared by the side-by-side narrative method to evaluate their convergence and divergence using the convergent one-phase research design strategy (Creswell & Clark, 2018) to ensure a coherent and comprehensive understanding of the following objectives:

- i. To determine the extent of BOM efficacy in setting the strategic direction and its influence on student performance in selected secondary schools in Kenya.
- ii. To assess BOM efficacy in monitoring teaching and learning and its influence on student's academic performance in selected secondary schools in Kenya.
- iii. To establish the efficacy of the BOM in creating a conducive learning environment and its effect on student's academic performance in selected secondary schools in Kenya.
- iv. To establish the effect of the principals' leadership on student's academic performance in selected secondary schools in Kenya.
- v. To assess the moderating effect of principals' leadership on the relationship between BOM efficacy and student academic performance in selected secondary schools in Kenya.

4.1 Data Preparation and Screening

Each item in the questionnaire was assigned a numbered symbol to enable data entry. The terms were then entered in a statistical package IBM SPSS version 27. The raw data set was then screened to check for inconsistencies and errors in the entered values. The dataset was then explored to check the existence of univariate outliers (i.e., outliers in a single variable). As a result, there was non-existence of univariate outliers arising from errors in data entry.

4.2 Descriptive Statistics of Respondent's Demographic Characteristics

The following is a breakdown of the demographic information of the respondents in the study area. That information was useful for further analysis of the specific research objectives. It shed light on the nature and caliber of the respondents from which an interpretation could be made. An examination of the questionnaire responses for each of the 358 responses based on the teacher's age range, gender, academic qualification, years of experience, school type, school population, school gender, average class size, average KCSE mean, and school climate are shown in Table 4.1.

Table 4.1 Demographic Composition of Respondents (N=358)

Demographic Factor	Categories	N	% of N
Teacher's Age Range	21-30	135	37.7
	31-40	131	36.6
	41-50	63	17.6
	above 51	29	8.1
	Total	358	100
Teacher's Gender	Male	184	50.4
	Female	174	47.7
	Total	358	100
Highest academic Qualification	Diploma	19	5.2
	Degree	305	83.6
	Postgraduate Diploma	7	1.9
	Masters	27	7.4
	Total	358	100
Teaching experience	less than 5	151	41.4
	10-Jun	95	26
	15-Nov	58	15.9
	above 16	54	14.8
	Total	358	100
School Type	National	59	16.2
	Extra County	107	29.3
	County	65	17.8
	Sub-county	127	34.8
	Total	358	100
School Population	Less than 200	54	14.8
	200 – 500	81	22.2
	500 – 1000	105	28.8
	More than 1000	118	32.3
	Total	358	100
School Gender	Male	90	24.7
	Female	114	31.2
	Mixed	154	42.2
	Total	358	100
Average class size	Below 60	281	77
	61-80	57	15.6
	over 81	20	5.5
	Total	358	100
School Climate	very high	64	17.5
	moderately high	115	31.5
	Neutral	147	40.3
	Low	31	8.5
	very low	1	0.3
	Total	358	100

Source: Research Data, 2023

Firstly, the teachers' age showed that above 74% were below 40 years of age 17% were between 41 and 50 years and the least –those above the age of fifty-one were 8.1%. The results showed that the majority of teachers on the ground were those termed as youth and therefore implied that the field of teaching was attracting young

people and the older teachers possibly due to fatigue had moved on to greener pastures in the course of their career, such that very few were left in the system by the time they are in their fifty's. The age diversity was an indicator of the varied experiences and perspectives that teachers of different generations brought to the study.

Turning our attention to the gender dynamics within the respondent pool, a marginal majority of 50.4% comprised male teachers, while 47.7% were female. The gender distribution highlighted a relatively balanced representation within the study, indicating a diverse sample that allowed for a comprehensive exploration of potential variations in experiences, attitudes, and perceptions based on gender. It implied that although males are slightly more, gender parity is almost a reality in the teaching profession.

Academic qualifications emerged as a notable aspect of the demographic profile, with a striking 83.6% (n=305) of respondents holding a degree as their highest academic qualification. Meanwhile, 7.4% (n=27) of teachers possessed a master's degree, 5.2% (n=19) held a diploma, and a modest 1.9% (n=7) had obtained a postgraduate diploma. The results showed that the majority of teachers were degree holders and very few were diploma/postgraduate diploma holders, but all were qualified to teach in secondary schools according to TSC regulations. The concentration of educators with degrees underscores the academic prowess within the sample, potentially influencing the study outcomes and perspectives shared by participants.

Teaching experience, a critical factor in understanding professional backgrounds, showcased a balanced distribution. A substantial 41.4% (n=151) of respondents had less than 5 years of teaching experience, 26% (n=95) fell within the 6-10 years

category, 15.9% (n=58) had 11-15 years of experience, and 14.8% (n=54) had more than 16 years in the profession. The diverse spectrum of experience levels contributed to a nuanced exploration of the challenges, successes, and perspectives of educators at various stages of their careers. The results showed that teachers of all age groups were represented in the study to enlighten on the issues of BOM efficacy, principals' leadership, and student's academic performance.

On the type of school, the majority of respondents at 34.8% (n=127) were from sub-county schools, followed by extra county schools at 29.3% (n=107), county schools at 17.8% (n=65), trailed by national schools at 1.2% (n=59). The findings are a true reflection of the situation on the ground where sub-county schools are the most in number compared to the other categories while national schools are the least with only two in each county. School type was one of the study covariates.

On school population, the majority of schools represented were from the more than one thousand learners' categories at 32.3% (n=118), followed by the between 500 and 1000 at 28% (n=105), those between 200 and 500 constituted 22.2% (n=81) and the least category was the less than 200 at 14.8% (n=54). The results showed that all schools were represented in the study so no voice was left behind.

The study also found that the majority of teachers were from mixed schools at 42.2% (n=154), followed by girls' schools at 31.2% (n=114) and boys' schools at 24.7% (n=90). Those results correspond to the previous findings that there were more mixed (sub-county schools) in counties. The distribution ensured that the study adequately captured the experiences of teachers working in different educational settings, each with its unique set of challenges and opportunities.

The majority of learners 77% (n=281) were from the least category of class size, those of less than 60 learners followed by the category of between 61 and 80 at 15.6% (n=57) and the over-80 category at 5.5% (n=20). The results showed a mixed variety of class sizes that was an adequate representation of the whole population. It also indicated that the challenge of overcrowding in class has been dealt with in the majority of the sample. Class size was one of the study covariates.

Lastly, on the school climate which was the expectation to succeed, the majority of the teacher's perception, "neutral" constituted the majority of the responses at 40.3% (n=147), followed by "moderately high" at 31.5% (n=115), then "very high" at 17.5% (n=64) and "low" at 8.5% (n=31) and the last category, "very low" at 0.3% (n=1). School climate was the third covariate.

4.3 ANOVA Test Results

Table 4.2 below shows the ANOVA results for the three items against the school mean: school type, class size, and school climate.

Table 4.2 ANOVA Test Results

DV Sch. mean	Variable	M	SD	N	F	Sig
School Type	National	8.5153	1.43381	59	293.793	0.001
	Extra County	6.1636	1.24381	107		
	County	4.8046	0.98082	65		
	Sub-county	3.5359	0.87599	127		
	Total	5.3722	2.0773	358		
Class size	Below 60	5.3950	2.18950	281	0.182	0.834
	61-80	5.3532	1.75998	57		
	over 81	5.1065	1.10463	20		
	Total	5.3722	2.0773	358		
School Climate	very high	7.7359	2.08017	64	59.264	0.01
	moderately high	5.7316	1.51861	115		
	Neutral	4.5145	1.59616	147		
	Low	3.3032	0.68629	31		
	very low	3	-	1		
	Total	5.3722	2.0773	358		

Source: Research Data (2023)

The KCSE mean scores of the schools in the sample were collected for the last three years and their mean value was used for the ANOVA one-way test between groups, to find out the effect of different variables on the school mean. The first was to establish the effect of school type on the school mean. Participants were split into four categories according to their school type (group 1: National, group 2: Extra County, group 3: County, and group 4: County). The findings indicated that there was a statistically significant difference in the mean scores for the four groups at the $p < .05$ level. $F(3,354) = 293.793$, $p = .01$). The actual difference in mean score between the groups was significant as follows. The mean score for Group 1 ($M = 8.5153$, $SD = 1.43381$) was significantly different from that of Group 2 ($M = 6.1636$, $SD = 1.24381$). It was also significantly different from that of group 3 ($M = 4.8046$, $SD = .98082$) and group 4 ($M = 3.5359$, $SD = .87599$).

It was also done to assess the effect of class size on the school mean. Participants were divided into three groups (group 1 below 60: group 2: between 61 – 80 and group 3: above 81). The findings indicated there was no statistically significant difference in the mean scores for the three groups at the $p < .5$ level. $F(2, 355) = .182$, $p = 0.834$). The findings also indicated that the actual mean scores for groups one and two were minimal while groups three and four had a big difference with Group 1 ($M = 5.3950$, $SD = 2.18950$) group 2 ($M = 5.3532$, $SD = 1.75998$) and Group 3 ($M = 5.1065$, $SD = 1.10463$).

ANOVA was done to explore the effect of school climate on the school mean score. Participants were divided into five groups (group 1: very high; group 2: moderately high; group 3: neutral; group 4: low; group 5: very low). The findings indicated that

there was a statistically significant difference in the mean scores for the five groups at the $p < .05$ level. $F(4,353) = 59.264$, $p = .01$. The actual difference in mean score between the groups was significant as follows. The mean score for Group 1 ($M = 7.7359$, $SD = 2.08017$) was significantly different from that of Group 2 ($M = 5.7316$, $SD = 1.51861$). It was also significantly different from that of group 3 ($M = 4.5145$, $SD = 1.59616$), group 4 ($M = 3.3032$, $SD = .68629$) and group 5 ($M = 3.0000$). Group 5 did not have a standard deviation because it had less than two cases.

4.4 Descriptive Statistics for Measurement Items

Descriptive statistics were generally done to ascertain that the data lay within all the expected ranges in terms of means and standard deviations, as well as to assess the percentage rate of responses.

4.4.1 Descriptive Statistics for BOM Efficacy in Setting Strategic Direction

Setting Strategic Direction was one of the independent variables of the study. Data was obtained from a 5-point Likert scale. The results are shown in Table 4.3. Note: 5=Strongly Agree, 4=Agree, 3=Neutral, 2=Disagree, 1=Strongly Disagree, M=Mean, SD=Standard Deviation.

Table 4.3 Descriptive Statistics for BOM Efficacy in Setting Strategic Direction

BOM Efficacy in Setting Strategic Direction	5	4	3	2	1	M	SD
The BOM usually takes time to plan and budget for school activities	181 (50.6%)	127 (35.5%)	34 (9.5%)	10 (2.8%)	6 (1.7%)	4.305	0.878
The BOM involves stakeholders in setting performance targets	153 (42.7%)	132 (36.9%)	42 (11.7%)	19 (5.3%)	12 (3.4%)	4.103	1.025
The school vision and mission are well documented/written down	143 (39.9%)	117 (32.7%)	66 (18.4%)	18 (5.0%)	14 (3.9%)	3.997	1.068
The school vision and mission are regularly communicated to and are known by students	130 (36.3%)	117 (32.7%)	68 (19.0%)	22 (6.1%)	21 (5.9%)	3.874	1.147
The BOM in my school emphasizes mainly on academics	171 (47.8%)	106 (29.6%)	54 (15.1%)	22 (6.1%)	5 (1.4%)	4.162	0.988
The BOM is effective in setting the schools' strategic direction and this has positively influenced the performance	169 (47.2%)	113 (31.6%)	53 (14.8%)	12 (3.4%)	11 (3.1%)	4.165	1.003
Grand Mean						4.101	1.018

Source: Research Data (2023)

The results presented in Table 4.3 shed light on the perceptions surrounding the BOM efficacy in setting strategic direction in the study. Firstly, a strong consensus emerged regarding the BOM's commitment to planning and budgeting for school activities. With 50.6% strongly agreeing and 35.5% agreeing, the mean value of 4.305 indicates a high level of agreement among respondents. The suggestion was that the BOM was perceived to be actively engaged in strategic planning, with a relatively low standard deviation of 0.878 implying consistency in the positive perception.

The principals supported the teachers' responses by stating that the BOM usually plans for the activities of the year. One principal, PS 8 remarked that:

“The Board usually plans for infrastructure projects under RMI at the beginning of the year based on the availability of funds. They also plan for academics based on teachers' needs and set targets which they would follow up in subsequent meetings to check the progress.”

Furthermore, stakeholders were seen to be actively involved in setting performance targets, as indicated by 42.7% strongly agreeing and 36.9% agreeing. The mean value of 4.103, coupled with a moderate standard deviation of 1.025, suggests a general agreement but with a slightly wider range of opinions compared to the planning aspect.

It was supported by the majority of respondents who consented that the BOM involved stakeholders in setting the performance targets pointing out that they involved teachers, the learners, and parents. One principal, PS 12 remarked;

“In the process of setting the mean score in school, the teachers usually come up with the mean score together with form fours. The BOM then approves it before parents and the sponsor are informed during the mean launching ceremony”.

The results supported the findings by Luhangala & Anyieni (2019) that the principal should consult the stakeholders in the formulation, implementation, and execution of the school's strategy. Findings by Gilchrist & Knight (2019) also established that boards should work well with the school leadership and others in deciding the overarching strategic direction of the school and offer support to realize its objective.

However, some studies established the lack of involvement of any or some stakeholders of the school, particularly the School Governing Body in the development and implementation of strategic plans by the principal (Schlebusch & Mokhatle, 2016; Adonis, 2017; Mwangi, 2017). A study by Dean *et al* (2007) also

found that governors in the study rarely got involved in influencing the strategic direction of the school and felt happier offering support to the head teacher rather than challenging them. They therefore depended on the head to set the strategic direction of the school.

The documentation and communication of the school's vision and mission also received attention. While 39.9% strongly agreed that these aspects are well-documented, the mean value of 3.997, with a higher standard deviation of 1.068, pointed to a moderately consistent agreement, yet with a broader range of opinions. Similarly, the regular communication of the vision and mission to students, with a mean value of 3.874 and a standard deviation of 1.147, suggested a somewhat varied range of opinions on the effectiveness of communication.

The BOM's emphasis on academics was strongly acknowledged, with 47.8% of respondents expressing strong agreement. That was indicated by the high mean value of 4.162, suggesting that the BOM was perceived to prioritize academic matters consistently.

Responses from the principals were also varied, some consented that the emphasis of the BOM was academics while others disagreed. One principal, PS 11 noted that;

“Our BOM is more inclined towards infrastructure, they are more effective in matters infrastructure not on academic matters”.

The findings particularly from the teachers supported Gilchrist & Knight (2019) The effective board focuses on improving the school and learners' performance rather than engaging in time-consuming activities of little benefit. It sincerely cares about the school's performance.

Lastly, the BOM's effectiveness in setting the school's strategic direction and positively influencing performance was strongly endorsed, with 47.2% strongly agreeing. The mean value of 4.165, coupled with a moderate standard deviation of 1.003, indicated a generally high level of agreement, yet with some variability in responses.

In summary, the overall grand mean of 4.101 suggested a predominantly positive perception among respondents regarding the BOM's efficacy in setting strategic direction. While there was some variability in opinions, especially in aspects related to communication and documentation, the majority of items demonstrated a high level of agreement, portraying an overall favorable view of the BOM's role in guiding the school's strategic direction in Kenyan schools.

When asked how effective BOMs were in setting the strategic direction of the school, the majority of the principals happily agreed that BOMs were effective. However, one of the principals had a somewhat differing opinion, and remarked that;

"I would say that our BOM is average because of unavailability. The so-called elite BOM members are not readily available, yet the available ones are not resourceful. BOM members should be elite but also available to impact the school. They should not be from far."(PS 5)

The principal highlighted that the so-called elite BOM members were not readily available, and the ones available lacked resourcefulness. The principal emphasized that BOM members should be both elite and readily available to make a meaningful impact on the school. That dissenting opinion accentuated the need for nuanced considerations and further analysis, particularly concerning the availability and impact of BOM members, to ensure a comprehensive understanding of the factors

influencing the perceived effectiveness of the BOM in setting the school's strategic direction.

The findings from the objective that sought to establish whether the BOM was effective in setting strategic direction indicated that the teachers generally perceived the BOM to be effective in that role. The items “BOM takes time to plan and budget”, “BOM emphasizes mainly academics”, “BOM involves stakeholders in setting performance targets” and “BOM is effective in setting the strategic direction of the school” all scored highly in terms of percentage of those that indicated strongly agree and agree and attained high means.

The results concurred with other findings that schools were effective in developing strategic plans, that implementation of strategic plans enhanced the improvement of student's academic performance (Kwaslema & Onyango, 2021), and that effective boards have strong strategic planning abilities (Gilchrist & Knight, 2019). The study results also supported prior studies that established a positive effect of strategic planning on student achievement (Miskell, 2020; Kwaslema & Onyango, 2021; Gode, 2011; Mwangi, 2017, Kobia, 2017; Kisaika, 2021) and that effective boards are effective in setting the strategic direction of the school which inevitably relates positively to enhancing school performance (Baker *et al*, 2015).

4.4.2 Descriptive Statistics for BOM Efficacy in Monitoring Teaching and Learning

Monitoring Teaching and Learning was one of the independent variables of the study. Data was obtained from a 5-point Likert scale. The results are shown in Table 4.4. Note: 5=Strongly Agree, 4=Agree, 3=Neutral, 2=Disagree, 1=Strongly Disagree, M=Mean, SD=Standard Deviation.

Table 4.4: Descriptive Statistics for BOM Efficacy in Monitoring Teaching and Learning

BOM Efficacy in Monitoring Teaching and Learning	5	4	3	2	1	M	SD
The BOM monitors syllabus coverage and learning in general	163 (45.5%)	129 (36%)	39 (10.9%)	16 (4.5%)	11 (3.1%)	4.165	0.998
The school uses records to monitor actual teaching in classes	210 (58.7%)	101 (28.2%)	33 (9.2%)	10 (2.8%)	4 (1.1%)	4.405	0.8547
The BOM makes staff accountable for their performance	274 (76.5%)	58 (16.2%)	17 (4.7%)	6 (1.7%)	3 (0.8%)	4.659	0.723
The BOM provides opportunities to discuss academic performance	185 (51.7%)	104 (29.1%)	45 (12.6%)	18 (5%)	6 (1.7%)	4.24	0.969
Our students easily and regularly consult teachers for extra help	137 (38.3%)	120 (33.5%)	64 (17.9%)	29 (8.1%)	8 (2.2%)	3.975	1.044
The BOM is effective and hands-on in monitoring teaching and learning which has improved the academic performance of my school	170 (47.5%)	121 (33.8%)	46 (12.8%)	16 (4.5%)	5 (1.4%)	4.215	.93
Grand Mean						4.064	1.030

Source: Research Data (2023)

The descriptive statistics provided in Table 4.4 shed light on the perceptions of respondents regarding the effectiveness of the Board of Management (BOM) in monitoring teaching and learning in selected public secondary schools in Kenya. Starting with the BOM's role in monitoring syllabus coverage and learning in general, the data revealed that 45.5% of respondents indicated “strongly agree”, while an additional 36% indicated “agree”. The mean value of 4.165 and relatively low standard deviation of 0.998 indicated a consistent and positive perception among participants. The majority's alignment toward agreement underscored a collective acknowledgment of the BOM's efficacy in overseeing critical aspects of the educational process.

Results from the interviews showed a concurrence that BOMs monitor syllabus coverage and learning in general. The majority of principals noted that the BOM

supports syllabus coverage and has laid down strategies to enable teachers to complete the syllabus on time including early morning, late-night lessons, and weekend classes in conjunction with the Parents Association and parent class representatives.

Previous studies agree that it is the responsibility of the board to lay down the right keystones necessary for learners to learn and achieve the highest attainable level (NSBA, 2000) and that a clear focus on the institution's management based on continuously improved teaching yields consistent high standards of teaching since good teaching is at the heart of every learning institution (Rosen, 2011). Results from a study by Plough (2014) also corroborate the finding that the application of teacher control through targets and marching procedures and by ensuring the mandatory covering of the curriculum belongs to the school board.

Moving to the utilization of records for monitoring actual teaching in class, a substantial 58.7% of respondents expressed a strong agreement, and 28.2% agreed with that practice. The mean value of 4.405, coupled with a low standard deviation of 0.8547, signified a high level of agreement among participants. The suggestion is that the majority of respondents viewed the use of records as an effective method for monitoring teaching, fostering a consensus within the surveyed group.

Results from the interviews indicated that the majority of the respondents agreed that the school used records to track lessons taught and were usually kept by class teachers and heads of subjects. However, one principal had a contrary opinion;

“Our school does not use any records to monitor teaching and learning. However, TPAD should be discussed in BOM meetings as it could help in sourcing for materials and to boost the teaching-learning experience’ (PS 5)

The BOM's role in making staff accountable for their performance received overwhelmingly positive feedback, with 76.5% strongly agreeing and an additional 16.2% expressing agreement. The mean value of 4.659, accompanied by a low standard deviation of 0.723, reflected a high level of agreement and consistency in the perception that the BOM played a pivotal role in ensuring staff accountability. The indication was a shared sentiment among respondents regarding the effectiveness of the BOM in promoting accountability within the educational institution.

The results from the interview indicated that BOMs do make staff accountable through the following emergent themes: summoning teachers to explain the reason for the poor results, through verbal warnings, through the principal – in their day-to-day running of school operations, through the academic sub-committee of the BOM who meet with the teachers and through school prefects who report on how they are taught in their weekly report to the principal. Day & Sammons (2016) point out that the school leadership should ensure that teachers are held to account for the achievement of school targets. Cotton (1988) however noted that learners should be held accountable for their achievement so that as the teachers examine their class work and assessments, the emergent issues are addressed immediately.

Regarding the provision of opportunities to discuss academic performance, 51.7% of respondents strongly agreed, and 29.1% agreed that the BOM provided such opportunities. The mean value of 4.24, coupled with a low standard deviation of 0.969, suggested a generally positive perception among participants. The indication was that the majority of respondents believed that the BOM facilitated an environment conducive to discussing and improving academic performance.

Results from the participants showed concurrence that BOMs provided forums to discuss teaching and learning in school. The themes that emerged for the provision of opportunities to discuss academic performance were: during BOM meetings when the DOS presents the academic report to the full board, in BOM forums with teachers, during academic days/subject clinics with parents, and during opening days when low performers report to school with their parents.

However, when it came to students easily consulting teachers for extra help, opinions were more diverse. While 38.3% strongly agreed and 33.5% agreed, the high standard deviation of 1.044 suggested a broader range of perspectives among respondents on that particular item. The varied responses reflect different experiences or perceptions regarding the willingness of learners to come forward for additional support.

The results from the interview painted the same picture as those from the questionnaires. Several principals indicated that their learners were not free to consult with teachers and feared being seen by their peers around the staff room. One of the principals interviewed said that curving time in the evenings for learners' consultation was a strategy the school took seriously so that learners could "open up" and get the help they required to improve their performance. Her sentiments were:

"We have intentionally created extra time for learners during night preps to be able to consult the teachers. We try and encourage them to consult." Principal, PS 1

Previous studies found that when learners felt unrestricted to access their teachers for help whenever they required, and when the teachers were warm and welcoming and not harsh and mean to students, there was a sharing of knowledge and experience, and that learning environment was good. Those studies found that teachers ought to be approachable and that there should be a healthy teacher-student relationship (Kitonyi,

2018; Makau, 2018; Korir & Kemboi, 2014; Adeyemo, 2012). The studies also established that it had a positive effect on the performance because all the areas of difficulties were ironed out, their attitude towards the subject was enhanced and learning occurred. The OECD (2012) also recommends prioritizing strategies where the teacher-learner interaction is enhanced as it has the manifold benefits of bringing about better teaching and learning environments, increased teacher satisfaction, and improved student results.

Finally, respondents overwhelmingly agreed (47.5% strongly agree, 33.8% agree) that the BOM was effective and hands-on in monitoring teaching and learning, contributing to improved academic performance. The mean value of 4.215 and a relatively low standard deviation of 0.93 underscored a high level of agreement and consistency among participants in perceiving the positive impact of the BOM on teaching and learning outcomes. Similar findings were obtained from the interviews where the majority agreed that the BOM was effective and hands-on in their role. For instance, one of them reported;

"The BOM has a strong M&E presence in the school. We have regular meetings where reports are discussed by the academic subcommittee and resolutions are made. The sponsor is a very important stakeholder in the school. The chaplain is in touch with the learners, teachers, and the subordinate staff. So, I get to know what is happening in school through him" (Principal, PS 2)

Other participants were not favor of the perception that the BOMs were effective in the role as indicated by the following themes; not keen on syllabus coverage, inactive education sub-committee, bossy BOMs who don't consult, members with other interests like politics and not academics, lack of minimum qualifications and lack of good rapport with teachers. For instance, some of the participants remarked;

"The BOM monitoring teaching and learning in school? The BOM knows very little of what is happening in school or academics or

with teachers. The academic subcommittee only exists in the paper."
(Principal, PS 7)

and

"The focus of the BOM is mainly on managing resources, not monitoring academics...The BOM's role by the ministry is not so clear...How the BOM comes in on academics is not clearly spelt out" (Principal, PS3).

The sentiment was echoed by another principal who highlighted that the BOM's role in school academics has little to do with the BOM but that teachers have a greater role to play:

"BOMs shouldn't be judged only on academics. The BOM should facilitate programs the school administration has thought out. The docket of academics is on teachers and the principal." (Principal, PS4)

The themes emerging from the qualitative data revealed various methods employed by the BOM to monitor teaching and learning in schools. These included the creation of extra time for teaching sessions, both in the evenings and early mornings, facilitated through consultations with the principal. Feedback mechanisms involving prefects, principals' academic reports during BOM meetings, and the engagement of the academic sub-committee of the board contributed to the comprehensive monitoring of academic progress.

One principal proudly pointed to the myriad of trophies in her office and said;

"You see these trophies? They were bought by our BOM members. You see, each BOM member has been allocated a subject to monitor and mobilize resources for examinations in that subject. At the end of the year when evaluation is done, leading subjects are awarded these trophies in a very colorful ceremony". (Principal, PS6)

The grand mean of 4.064 indicated a predominantly positive perception among respondents across all aspects of BOM efficacy in monitoring teaching and learning. While the standard deviation of 1.030 suggested some variability in responses, the majority of items demonstrated a high level of agreement, reflecting an overall

favorable view of the BOM's role in the educational context under consideration. The findings from the objective indicated that teachers generally perceived their BOM to be effective in the role of monitoring teaching and learning in school.

The findings support what Gilchrist & Knight (2019) found that effective boards monitor the performance of the school against the laid down targets because they know how to assess the performance data.

Overall, the integration of these qualitative insights with the quantitative findings indicated a multifaceted perception of the BOM's role in monitoring teaching and learning. While the quantitative data portrayed a generally positive view of the BOM's efficacy, the qualitative verbatim offered a nuanced understanding of the varied practices and perspectives surrounding the BOM's involvement in academic matters and presented a more comprehensive understanding of the role of BOM in monitoring teaching and learning.

4.4.3 Descriptive Statistics for BOM Efficacy in Creating a Conducive Learning Environment

BOM efficacy in creating a conducive environment was an independent variable in the study. Data was obtained from a 5-point Likert scale. The results are shown in Table 4.5. Note: 5=Strongly Agree, 4=Agree, 3=Neutral, 2=Disagree, 1=Strongly Disagree, M=Mean, SD=Standard Deviation.

Table 4.5 Descriptive Statistics for BOM Efficacy in Creating a Conducive Learning Environment

BOM Efficacy in Creating a Conducive Learning Environment	5	4	3	2	1	M	SD
The classroom atmosphere in the school is quiet, and friendly and creates interest in learning	219 (61.2%)	114 (31.8%)	17 (4.7%)	5 (1.4%)	3 (0.8%)	4.511	0.728
The school environment is healthy, safe, and secure for learners	224 (62.6%)	109 (30.4%)	19 (5.3%)	3 (0.8%)	3 (0.8%)	4.53	0.712
My school has adequate hygiene and sanitation facilities in school hence no time wasted in long queues	167 (46.6%)	132 (36.9%)	39 (10.9%)	10 (2.8%)	10 (2.8%)	4.218	0.945
The is an established school routine and our school is orderly	234 65.4%	89 (24.9%)	25 (7%)	9 (2.5%)	1 (0.3%)	4.525	0.75
Highly performing teachers and learners are given incentives	167 (46.6%)	102 (28.5%)	42 (11.7%)	23 (6.4%)	24 (6.7%)	4.02	1.203
The BOM facilitates regular workshops/seminars/ training for teachers	123 (34.4%)	104 (29.1%)	56 (15.6%)	45 (12.6%)	30 (8.4%)	3.684	1.289
The BOM has effectively ensured there's a conducive learning environment, and this improved academic performance in my school	154 (43%)	120 (33.5%)	55 (15.4%)	16 (4.5%)	13 (3.6%)	4.078	1.042
Grand Mean						4.224	0.953

Source: Research Data (2023)

The results in Table 4.5 show the respondents' perceptions regarding the effectiveness of the Board of Management (BOM) in establishing a conducive learning environment within the school. The data revealed a strong consensus among respondents that the classroom atmosphere was characterized by quietness, friendliness, and a stimulating environment for learning. A notable 61.2% strongly

agreed, and 31.8% agreed, contributing to a high mean value of 4.511 which suggested a widespread positive view of the learning atmosphere within classrooms.

Similarly, there was a resounding agreement that the school environment was healthy, safe, and secure for learners, with 62.6% strongly agreeing and 30.4% agreeing. The resulting mean value of 4.53 underscored a positive perception of the school's commitment to providing a secure and supportive learning environment. Respondents also expressed general agreement regarding the availability of adequate hygiene and sanitation facilities in the school, minimizing time wasted in queues. While 46.6% indicated strongly agree and 36.9% agree, the mean value of 4.218 suggested a positive perception, albeit with a slightly more diverse range of opinions compared to other aspects.

Similar findings were obtained from the interviews with principals. The responses obtained could be categorized on one hand the schools that were satisfied with the level of facilities and environment in general: facilities in our school are adequate, quiet and suitable for learning, CCTV cameras installed ensure learners are self-disciplined, running water that does not run out and on the other hand, other principals lamented inadequacies in the school environment; Lack of ceiling boards – noisy when it rains and hot during afternoon lessons, classes with seventy-five learners experienced congestion, lack of running water, inadequate sanitary facilities for boys.

One principal of a rural sub-county school remarked that;

"Our school environment is conducive for learning because it is safe, secure, and free from drugs because the surrounding environment is rural within a tea estate as you can see. Girls board, but our Form Four boys are encouraged to stay in school and revise until 8.30 pm to utilize electricity which they do not have at home." (Principal, PS 11)

The same principal however bemoaned the lack of ceiling boards in his school which affected learning in the hot and rainy seasons, saying;

Our classrooms are spacious but there are no ceiling boards, so it gets too hot or noisy during the rainy season which affects afternoon lessons.” (Principal, PS 11)

The findings corroborated those by Korir & Kipkemboi (2014) whose study established that schools should invest in the kind of environment that inspires learners to appreciate their educational experience, effectively internalize the knowledge being transmitted in the classroom, and therefore maximize the learning. Another study indicated that the process of teaching and learning and student’s consequent achievement could be impacted by the school’s physical environment (Adeyemo, 2012). Therefore, the school should ensure to clean and maintain the grounds, and mow the lawns for a feeling of order and good organization (Sithole, 2017). The learning space should also be adequately planned, and seats well-arranged to make the most of the classroom situation for effective learning (Ali, 2017). Schools ought not to be noisy and chaotic scenes (Quarcoo, 2021) but calm and quiet so that learners can follow the class proceedings without undue distractions.

Studies have also established that schools and classrooms ought to be well-lit and properly ventilated (ibid) so that students do not strain their eyes and lose concentration in class, given the length of time spent in the classroom which ranges from seven to ten hours a day in secondary school. Dark classrooms show a lack of concern from the school management for the learners’ welfare and poor school leadership. They could also be conducive to indiscipline and other deviant behavior in school.

A significant consensus emerged on the presence of an established school routine and overall orderliness, with 65.4% strongly agreeing and 24.9% agreeing. The high mean value of 4.525 indicated a strong collective perception of the school's organizational structure and adherence to a well-defined routine.

These findings were similar to those held by the majority of the interviewees. One such principal stated:

“We have a school routine that is well known by the boys, but the teachers have to be around to ensure compliance.” Principal, PS 10

In terms of incentives for highly performing teachers and learners, there was general agreement, with 46.6% strongly agreeing and 28.5% agreeing. However, the higher standard deviation of 1.203 suggested a more diverse range of opinions and indicated that views on that matter were less uniform among respondents. The facilitation of workshops, seminars, and training for teachers generated varied perceptions. The mean value of 3.684, coupled with a higher standard deviation of 1.289, suggested that opinions on that aspect are more diverse, possibly reflecting differing experiences or expectations regarding professional development opportunities.

Regarding the BOM's effectiveness in ensuring a conducive learning environment that positively impacted academic performance, there was a significant proportion of agreement, with 43% strongly agreeing and 33.5% agreeing. The mean value of 4.078, along with a moderate standard deviation of 1.042, implied a generally positive perception, yet with some variability in responses. Similarly, the majority of participants in the interviews agreed that the BOM was effective in creating a conducive learning environment. For instance, one principal remarked that;

“The BOM is effective, they motivate the teachers and learners and have ensured that infrastructure in school is adequate with the upcoming new administration block being built and that modern

kitchen there. There's a good feeling in the community about our school because we are now attracting students from a wider area than before and those who drop out of boarding because of fee problems." (Principal, PS5)

In summary, while there was a consistent and overwhelmingly positive perception across various dimensions of creating a conducive learning environment such as highly performing teachers and learners given incentives, the BOM facilitated regular workshops/seminars/ training for teachers, and BOM had been effective in ensuring a conducive learning environment in school. Certain aspects such as incentives and facilitation of professional development showed a broader range of opinions. Those variations stemmed from different experiences, expectations, or interpretations of what constitutes an ideal learning environment. Overall, the grand mean of 4.224 indicated a predominantly positive assessment of the BOM's role in fostering a positive and supportive learning atmosphere.

4.4.4 Descriptive Statistics for Principals' Leadership

Principals' leadership was the moderating variable in the study. The data was obtained from a 5-point Likert scale. The items were adopted from previous research. The results are shown in Table 4.6. Note: 5=Strongly Agree, 4=Agree, 3=Neutral, 2=Disagree, 1=Strongly Disagree, M=Mean, SD=Standard Deviation.

Table 4.6: Descriptive Statistics for Principals' Leadership

Principals' Leadership	5	4	3	2	1	M	SD
There's a harmonious working relationship between the Principal and the BOM	264 (73.7%)	71 (19.8%)	17 (4.7%)	4 (1.1%)	2 (0.6%)	4.65	0.676
Our principal is inspirational in steering the school to strive for greater heights	247 (69%)	79 (22.1%)	25 (7%)	5 (1.4%)	2 (0.6%)	4.57	0.732
Our principal is highly visible and is involved in daily school activities	248 (69.3%)	81 (22.6%)	20 (5.6%)	9 (2%)	2 (0.6%)	4.58	0.735
The focus of the principals' leadership is mainly on teaching and learning in school	238 (66.5%)	94 (26.3%)	15 (4.2%)	9 (2.5%)	2 (0.6%)	4.55	0.741
The principal supports teachers' efforts to enhance academic performance in my school	241 (67.3%)	88 (24.6%)	19 (5.3%)	5 (1.4%)	5 (1.4%)	4.55	0.778
The principal promotes parental participation in student's learning activities to improve their performance	228 (63.7%)	99 (27.7%)	20 (5.6%)	8 (2.2%)	3 (0.8%)	4.51	0.773
The principal supports the disciplinary committee which has directly impacted academic performance in the school	245 (68.4%)	83 (23.2%)	25 (7%)	3 (0.8%)	2 (0.6%)	4.58	0.708
The principal is very passionate about preparing learners for national examinations	269 (75.1%)	62 (17.3%)	21 (5.9%)	4 (1.1%)	2 (0.6%)	4.65	0.692
Grand Mean						4.58	0.729

Source: Research Data (2023)

Results in Table 4.6 provide a detailed overview of respondents' perspectives on Principals' Leadership within the school. The data encompasses various dimensions of the principals' leadership role, shedding light on their perceived effectiveness and impact on school dynamics. A notable finding was the overwhelmingly positive perception regarding the relationship between the Principal and the Board of Management (BOM). With 73.7% strongly agreeing and 19.8% agreeing, a high mean

value of 4.65, and a low standard deviation of 0.676, the suggestion is a consensus among the respondents. The indication was a favorable view of a collaborative and harmonious working relationship between the Principal and the BOM, fostering a cohesive leadership structure.

That view was equally shared by the majority of those interviewed who stated that they had a good, cordial working relationship with the BOM. An example of such a sentiment was the remark that:

“I have an amicable relationship with the board, the board we have is very supportive to me, particularly the BOM chair” (PS 4)

That supported the findings by Baker *et al* (2015) whose study established that a strong and fruitful correlation between the board chair and the principal had a very concrete impact on board effectiveness. The study by Gilchrist & Knight (2019) also found that a characteristic of effective boards was the existence of a strong relationship between the school principal and the board chair in particular. Finding from a study by Hess (2002) also revealed that according to the respondents, one of the most crucial determinants of a principal's performance is the board-principal relationship, which reflected the value of a well-functional leadership team for effective governance and management of a school. Conversely, a study by Plough (2014) also found that board members repeatedly emphasized the importance they place on their relationship with the superintendent saying that they made the effort to spend quality time developing that relationship.

Furthermore, respondents expressed a strong belief in the principal's inspirational leadership, with 69% strongly agreeing and 22.1% agreeing. The resulting mean value of 4.57 and a relatively low standard deviation of 0.732 indicated a shared positive

sentiment. That underscored the perceived impact of the principals' leadership in motivating and guiding the school community toward greater achievements.

The data also highlighted the principal's high visibility and active involvement in daily school activities, with 69.3% strongly agreeing and 22.6% agreeing. The mean value of 4.58 and a standard deviation of 0.735 suggested a consistent positive perception of the principals' hands-on approach to school affairs.

The majority of the study participants also agreed that the principal should be highly visible in school. One such principal remarked that.

“The principal must always ensure to have a presence in school by walking around to ensure that the system is working and that everyone is doing their role. One should not just sit in the office and assume that everyone is doing the right thing” (PS 10)

A study by McCollum (2010) also established that highly effective principals were typically highly visible role models for learners as they usually walked around greeting students and teachers informally checking for likely problems. The study found that the presence of the principal in hallways and extracurricular activities was a source of security that someone was in charge and that there was someone to consult when facing a difficulty.

Respondents acknowledged the principal's focus on teaching and learning, with 66.5% strongly agreeing and 26.3% agreeing. The mean value of 4.55, along with a standard deviation of 0.741, indicated a predominantly positive view, suggesting that the principals' leadership aligned closely with the academic aspects of the school.

The majority of the interviewees' opinions were similar to that of the respondents with the common expression being that they valued the academic aspects of school

more than the rest. However, there was a different opinion from one principal who shared that:

“I wish my focus was more on academics because the current students are low but I am more of a disciplinarian. My attention is time management, accountability of tasks, and strict compliance with rules and regulations” PS 9

According to Jackson (2018), principals' leadership should support improved teaching and learner achievement by creating a climate where learning can take place. Additionally, there was a general agreement that the principal supported teachers' efforts in enhancing academic performance, with 67.3% strongly agreeing and 24.6% agreeing. The mean value of 4.55, albeit with a standard deviation of 0.778, suggested a positive perception, though with a slightly wider range of opinions.

The principals' promotion of parental participation in student's learning activities was acknowledged by the majority (63.7% strongly agreeing and 27.7% agreeing). With a mean value of 4.51 and a standard deviation of 0.773, the data indicated a positive perception, emphasizing the principal's role in fostering a collaborative educational environment involving parents. The findings support the findings by Mleczo & Kington (2013) that the principal's role was vital in initiating programs where parents were involved in solving problems in the learning environment.

Furthermore, respondents believed that the principal's support for the disciplinary committee had a direct impact on academic performance, with 68.4% strongly agreeing and 23.2% agreeing. The mean value of 4.58, with a standard deviation of 0.708, suggested a positive consensus and highlighted the perceived connection between effective disciplinary measures and academic outcomes. The findings corroborated with findings by McCollum (2010) whose study found that principals supported the disciplinary decisions of the deputy principal and the teachers.

The majority recognized the principal's passion for preparing learners for national examinations, with 75.1% strongly agreeing and 17.3% agreeing. The mean value of 4.65 and a standard deviation of 0.692 indicated a strong positive perception, emphasizing the principal's commitment to academic excellence.

Moving beyond the quantitative analysis, the study delved into the qualitative aspects of principals' leadership factors contributing to enhanced academic performance. The participants identified several practices, including the provision of teaching materials, ensuring an adequate number of teachers, motivating both teachers and learners, organizing talks from subject examiners, implementing extra programs for early syllabus coverage, and leading by example through teaching. Notably, one principal highlighted that;

"I am very passionate about academics. I have weekly meetings with the candidate class called "the principals' forum", where I advise and encourage them. Sometimes I invite guests to come and talk to them. I organize rewards for those that perform well and have come up with remedials for the candidate class". (Principal, PS 7).

Furthermore, the study explored the practices deemed essential for effective principals' leadership in schools. Key themes that emerged included; mandatory presence in school, delegation of authority to departments and teacher empowerment, staff motivation, involvement of all stakeholders in school management, frequent consultative meetings, and leading by example through teaching. These themes collectively highlight the multifaceted role of effective leadership in creating a conducive learning environment. For instance, the following principals remarked that;

"My approach to leadership involves mandatory presence in school, delegation of authority to departments, and empowering teachers." (Principal, PS5)

"We prioritize staff motivation and actively involve all stakeholders in school management. Our strategy includes holding frequent

consultative meetings, and I believe in leading by example through teaching.” (Principal, PS6)

Moreover, principals were specifically questioned about their role in moderating the influence of the Board of Management (BOM) on student’s academic performance. In response, all principals unanimously affirmed that their leadership plays a crucial moderating role in shaping and guiding the contributions of the BOM toward fostering academic excellence within the school. Thematic areas identified included; creating an enabling environment, understanding BOM capacities, legal guidance, conflict resolution, and representation of the BOM's academic mandate within the school. These insights collectively underscored the intricate dynamics and collaborative efforts required for effective school governance. For instance, one of the participants reported that;

“As principals, we play a crucial role in shaping and guiding the contributions of the Board of Management to foster academic excellence within the school.” (Principal, PS3)

Overall, the descriptive statistics underscored a predominantly positive perception of the principals’ leadership qualities. The findings highlighted key strengths, such as collaborative engagement with the BOM, inspirational leadership, active involvement in daily activities, and a focus on teaching and learning. These positive perceptions collectively contributed to the Grand Mean of 4.58, reflecting a commendable assessment of the principals’ leadership impact within the selected Kenyan secondary schools.

In summary, the study provided a comprehensive understanding of Principals’ Leadership, revealing both quantitative and qualitative dimensions. The positive perceptions among respondents regarding various aspects of principals’ leadership aligned with the overarching goal of enhancing academic performance in Kenyan

secondary schools. The interplay between leadership practices, collaborative efforts, and the dynamic relationship with the BOM exemplifies the complex yet crucial nature of school leadership in shaping educational outcomes.

4.4.5 Descriptive Statistics for Student's Academic Performance

Student Academic Performance was the dependent variable in the study. The data was obtained from a 5-point Likert scale. The results are shown in Table 4.7. Note: 5=Strongly Agree, 4=Agree, 3=Neutral, 2=Disagree, 1=Strongly Disagree, M=Mean, SD=Standard Deviation.

Table 4.7: Descriptive Statistics for Student Academic Performance

Student's Academic Performance	5	4	3	2	1	M	SD
When teachers and learners are involved in setting academic targets by the BOM, it affects academic performance	196 (54.7%)	109 (30.4)	37 (10.3%)	9 (2.5%)	7 (2%)	4.335	0.904
When the BOM monitor teaching and learning, student's academic performance improves	174 (48.6%)	133 (37.2%)	42 (11.7%)	8 (2.2%)	1 (0.3%)	4.316	0.787
If the school environment is quiet, safe, and orderly, the academic performance goes up.	254 (70.9%)	85 (23.7%)	17 (4.7%)	1 (0.3%)	1 (0.3%)	4.648	0.612
A school leadership that is supportive of teachers' efforts enhances student's academic performance	259 (72.3%)	83 (23.2%)	12 (3.4%)	2 (0.6%)	2 (0.6%)	4.662	0.626
Exposing teachers to regular training/workshops/seminars affects learner's academic performance	263 (73.5%)	71 (19.8%)	17 (4.7%)	5 (1.4%)	2 (0.6%)	4.643	0.691
Motivating highly performing teachers and learners influences academic performance	280 (78.2%)	51 (14.2%)	21 (5.9%)	3 (0.8%)	3 (0.8%)	4.682	0.698
Grand Mean						4.548	0.720

Source: Research Data (2023)

Table 4.7 presents descriptive statistics that provide valuable insights into the perceived impact of various factors on student's academic performance. Firstly, when

examining the involvement of teachers and learners in setting academic targets by the Board of Management (BOM), a majority of respondents (54.7% Strongly Agree, 30.4% Agree) expressed a positive sentiment. The mean score of 4.335, coupled with a standard deviation of 0.904, indicated a relatively high level of agreement among the participants.

These results are perfectly aligned with the qualitative findings from the interviews where the majority of the participants expressed positive perceptions regarding the impact of teacher and learner involvement in setting academic targets by the BOM aligning with the emphasis on fostering self-drive among learners as a key factor in enhancing academic performance. For instance, some reported that;

"I strongly believe that when teachers and learners are actively involved in setting academic targets, as facilitated by the Board of Management (BOM), it significantly contributes to fostering a sense of self-drive among learners. In our school, we've observed that this collaborative approach empowers students to take ownership of their academic goals. (Principal, PS5)

The BOM's initiative to engage teachers and learners in the target-setting process creates a shared sense of responsibility, encouraging students to be more proactive in their learning journey. It's not just about meeting imposed standards; it's about students understanding and embracing their academic aspirations, leading to a self-motivated approach towards achieving those goals." (Principal, PS 8)

The suggestion was that collaborative goal-setting involving teachers and learners was perceived as influential in affecting academic performance. Similarly, the BOM's role in monitoring teaching and learning showed a positive correlation with student's academic performance. A significant proportion of respondents (48.6% Strongly Agree, 37.2% Agree) believed that when the BOM actively monitors teaching and learning, it positively impacts academic performance. The mean score of 4.316, along

with a standard deviation of 0.787, underscored a consensus among participants regarding the constructive role of BOM monitoring.

Furthermore, the study explored the association between the school environment and academic performance. A substantial majority (70.9% Strongly Agree, 23.7% Agree) perceived that a quiet, safe, and orderly school environment contributed to an improvement in academic performance. The high mean score of 4.648 and a low standard deviation of 0.612 signified a strong agreement and a relatively consistent viewpoint among respondents. Similarly, the acknowledgment of a quiet, safe, and orderly school environment positively influencing academic performance resonated with the qualitative suggestion to enhance discipline among learners.

“When students feel secure and the school environment is conducive to learning, it has a direct and positive influence on their academic focus and outcomes.” (Principal, PS3)

“By fostering a disciplined atmosphere, we contribute to creating the kind of environment where students can concentrate on their studies without unnecessary disruptions.” (Principal, PS4)

That suggested that investing in discipline measures and maintaining a safe and orderly environment directly contributed to the overall improvement in academic performance. When exploring the factors leading to low performance in schools nationally, respondents identified several themes. The qualitative data suggested that factors such as lack of resources, lack of readiness from learners, parental abdication of their mentorship role, poor performance culture, low entry behavior, the absence of role models in the school environment, and age-related challenges (older learners are more difficult to handle) contributed to low academic performance.

Conversely, when examining the factors that could be implemented to enhance students' academic performance, the qualitative findings revealed themes such as; the need to enhance discipline among learners, allocate adequate time for revision,

provide exposure to exam questions, foster self-drive among learners, ensure active teaching by teachers, involve all stakeholders, and engage in progressive discussions with the church taking a forefront role.

Supportive school leadership was also identified as a crucial factor influencing academic performance. The majority of respondents (72.3% Strongly Agree, 23.2% Agree) believed that leadership supportive of teachers' efforts enhances student's academic performance. The mean score of 4.662 and the standard deviation of 0.626 suggested a high level of consensus on the positive impact of supportive leadership.

Moreover, the exposure of teachers to regular training, workshops, and seminars was perceived to be beneficial for learners' academic performance. A significant proportion (73.5% Strongly Agree, 19.8% Agree) agreed with the notion. The mean score of 4.643 and a standard deviation of 0.691 indicated a strong consensus on the positive impact of professional development opportunities on academic outcomes.

Lastly, respondents strongly affirmed that motivating highly performing teachers and learners influences academic performance. A substantial majority (78.2% Strongly Agree, 14.2% Agree) acknowledged the importance of motivation in academic outcomes. The mean score of 4.682 and a standard deviation of 0.698 underscored a strong consensus on the positive influence of motivation.

Overall, the above findings revealed that teachers highly agreed with the indicators of student academic performance: a quiet, safe, and orderly school environment enhanced academic performance, school leadership that is supportive of teachers' efforts enhances student's academic performance, exposing teachers to regular training/workshops/seminars had an effect on learner's academic performance and motivating highly performing teachers and learners influenced academic performance.

Hence collectively revealed a positive perception among respondents regarding the factors influencing student academic performance. The high grand mean of 4.548 indicated an overall agreement on the significant role these factors played in fostering a conducive environment for enhanced academic outcomes.

4.5 Data Reduction Using Factor Analysis

Before undertaking the Principal Component Analysis, it was necessary to ascertain that data met the criteria for using Factor Analysis. The criteria were: a sample size larger than 150, a factorability of < 0.3 in the correlation matrix in several correlations, statistical significance at $p = < .05$, or the Kaiser-Meyer-Olkin's measure of sampling adequacy of above 0.6 (Tabachnick & Fidell, 2016).

Hair *et al* (2019) propose that for a factor or component to be statistically identifiable, it is recommended to have at least three to five items loading on each component, with no cross-loadings, provided that the minimum factor loading for each extracted factor or component exceeds the 0.5 cut-off. The data for the study met the stipulated assumptions as follows: the sample size in the study was three hundred and fifty-eight, a factorability of < 0.3 in the correlation matrix in the correlations, statistical significance at $p = < .05$, and a Kaiser-Meyer-Olkin's measure of sampling adequacy of 0.929.

4.5.1 Assessment of Multivariate Outliers

Before embarking on a factor analysis, it's crucial to assess for multivariate outliers within the dataset. Multivariate outliers refer to data points that exhibit extreme values across multiple variables simultaneously. Detecting and addressing these outliers is essential as they can distort the outcomes of factor analysis, potentially leading to inaccurate interpretations of the underlying data structure (Hair *et al.*, 2019).

To detect multivariate outliers, several methods are suggested by Hair *et al.* (2019). These include visual examination using scatterplots or other visualization techniques to identify observations that significantly deviate from the typical clustering pattern of the data. Additionally, statistical techniques like Mahalanobis distance, Cook's distance, and leverage values can be employed. Mahalanobis distance measures the distance of each observation from the mean of the data in multivariate space, considering the covariance structure of the variables. Observations with unusually large Mahalanobis distances may indicate potential outliers. Cook's distance evaluates the influence of each observation on the model parameters, with high values suggesting influential outliers. Leverage values assess how much observation deviates from the mean of the independent variables (ibid).

Once potential outliers are identified, a thorough investigation should be conducted to determine their validity. It involves examining whether outliers are genuine data points or the result of errors or anomalies. Depending on the nature of the outliers, appropriate actions can be taken, such as correcting errors, transforming variables, or excluding extreme observations (ibid). Overall, systematic assessment for multivariate outliers using the recommended techniques by Hair *et al.* (2019) enhanced the integrity and validity of factor analysis results, facilitating more meaningful interpretations of the data.

The researcher investigated the dataset for multivariate outliers by utilizing the linear regression method to compute Mahalanobis Distance (D2) measures, thereby establishing Mahalanobis D2 scores. To determine potential multivariate outliers associated with specific Mahalanobis D2 scores, the researcher calculated the probability Mahalanobis D2 Chi-square value. According to Hair *et al.* (2019), a

probability Mahalanobis D2 test value below .001 ($p < .001$) indicates the presence of multivariate outliers, necessitating their removal from the dataset. However, all computed probabilities of Mahalanobis D2 were above .001 in the study. Consequently, the dataset was found to be devoid of any multivariate outliers (See Appendix 4).

4.5.2 Multicollinearity

Multicollinearity is a statistical phenomenon where independent variables within a regression model exhibit high levels of correlation (usually $r > .8$). Moreover, when there is a perfect linear relationship between two or more independent variables ($r > 1$), singularity is said to have occurred. The presence of multicollinearity and singularity can give rise to various complications, such as inflated standard errors, diminished accuracy in estimating coefficients, and complexities in interpreting the impact of individual predictors on the dependent variable. Recognizing multicollinearity holds significant importance for researchers and analysts, as it can significantly influence the trustworthiness and consistency of regression analysis outcomes (Hair *et al.*, 2019; Pallant, 2016).

In factor analysis, it is assumed that the variables being analyzed are not highly correlated with each other. When multicollinearity is present in factor analysis, it can complicate the interpretation of factor loadings, which represent the relationships between variables and latent factors. High levels of multicollinearity can lead to instability in factor loadings, making it challenging to discern the unique contributions of each variable to the underlying factors being extracted. Therefore, recognizing and addressing multicollinearity is essential in factor analysis to ensure accurate and reliable results.

The researcher conducted Pearson's product-moment correlation test to ascertain the potential presence of multicollinearity and singularity, revealing associations among study variables. Correlation results (Table 4.8) showed a positive and significant association between BOM efficacy in Setting Strategic Direction (SSD) and Student Academic Performance (SAP) ($r = .267$, $p < 0.01$).

Further, BOM efficacy in Monitoring Teaching and Learning (MTL) was positively and significantly associated with Student Academic Performance (SAP) ($r = 0.243$, $p < 0.01$). Finally, a positive and significant association was found between BOM efficacy in Creating a Conducive Learning Environment (CLE) ($r = .307$, $p < 0.01$). Notably, none of the relationships observed in the correlation matrix are above .8 or equal to 1, indicating that the multicollinearity and singularity assumptions were met. It implies that while some variables may be correlated, none are so highly correlated that they violate assumptions of regression analysis, allowing for further examination of their relationships and potential predictive power in a multivariate context.

Table 4.8: Correlation Analysis of the Study Variables

	SAP	SSD	MTL	CLE
SAP	1			
SSD	.267**	1		
MTL	.243**	.631**	1	
CLE	.307**	.499**	.552**	1

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

Source: Research Data (2023)

A collinearity diagnostic test was conducted to further confirm the assumption. The results on the coefficients table (Table 4.9) give the Tolerance statistics (TOL) and Variance Inflation Factor (VIF) values. The tolerance indicators for the IV should not be small at less than .10 as it indicates the likelihood of multi-collinearity while the VIF values should not be above 10 (Tabachnick & Fidell, 2013; Pallant, 2016). In the

current case, the Tolerance statistics values were above 0.1 and the VIF values were below 10. Hence the assumption of multi-collinearity is not violated.

Table 4.9: Tolerance and VIF Values

Variable	Coefficients	
	Tolerance	VIF
SSD	0.0569	1.756
MTL	0.527	1.898
CLE	0.657	1.521
PL	0.964	1.038

Source: Research Data (2023)

4.5.3 Test for Normality of the Study Variables

The normality of the data is a fundamental assumption of many statistical techniques, including factor analysis. The test for normality helps ensure that the data follows a Gaussian distribution, which is necessary for accurate interpretation of the results. Common methods for assessing normality include examining skewness and kurtosis coefficients, as well as visual inspection through histograms and Normal Q-Q plots. If the data deviates significantly from a normal distribution, transformations may be applied to approximate normality (Hair *et al*, 2019). In the current study skewness and kurtosis of the study variables were examined to ascertain Normality. Table 4.10 shows the skewness and Kurtosis of the study variables. Overall, ensuring that the data meets the assumption of normality is crucial for valid and reliable factor analysis results.

Table 4.10: Skewness and Kurtosis Coefficients of the Original Variables (N=358)

	Min	Max	Mean	Std. Dev	Skewness	Std. Error	Kurtosis	Std. Error
	Statistic	Statistic	Statistic	Statistic	Statistic	Error	Statistic	Error
SSD	2.17	5	4.1196	0.76811	-0.917	0.129	0.116	0.257
MTL	2.83	5	4.2924	0.568	-0.871	0.129	0.217	0.257
CLE	2.71	5	4.2478	0.64421	-0.74	0.129	-0.368	0.257
PL	3.5	5	4.6219	0.48076	-1.229	0.129	0.234	0.257
SAP	3.5	5	4.567	0.44281	-0.928	0.129	-0.129	0.257

Source: Research Data (2023)

The results presented in Table 4.10 reveal that the skewness and kurtosis coefficients for all study variables were above -0.5. It suggests a moderately negatively skewed distribution of variable scores. In response, the researcher opted for a two-step transformation approach involving adjusting the scores using the fractional rank method to enhance the dataset's normality (Templeton, 2011). After applying these transformations, the skewness and kurtosis values of the variables (refer to Appendix 5) approached zero. The outcome indicates a close approximation to a normal distribution within the data.

4.6 Exploratory Factor Analysis

Exploratory Factor Analysis (EFA) is a statistical technique used to uncover the underlying structure of a set of variables. It aims to identify the underlying factors that explain the patterns of correlations among observed variables. Unlike confirmatory factor analysis, which tests a pre-specified hypothesis about the structure of the variables, EFA is more exploratory, allowing researchers to discover patterns in the data without a priori assumptions. By reducing the dimensionality of the data, EFA helps researchers understand the relationships among variables, identify latent constructs, and simplify complex datasets (Hair *et al.*, 2019).

4.6.1 Exploratory Factor Analysis for BOM Efficacy

The Exploratory Factor Analysis (EFA) results presented in Table 4.11 indicate that Bartlett's test of sphericity was significant with a chi-square of 3535.627, $df = 171$, and a significance level of $p=.000$. The Kaiser-Meyer-Olkin's measure of sampling adequacy was at 0.929, above the recommended value of 0.6 implying that the correlation matrix was not an identity matrix thus sufficient for factor analysis to commence (Hair *et al.*, 2019).

Table 4.11: KMO and Bartlett's Test for BOM Efficacy

KMO and Bartlett's Test			
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			0.929
Bartlett's Test of Sphericity	Approx. Chi-Square		3535.627
	Df		171
	Sig.		.000

Source: Research Data (2023)

The rotated component matrix for items measuring BOM Efficacy was run using an Equamax rotation method with Kaiser Normalization; Table 4.12 shows that all the nineteen items were extracted and were clustered along three (3) components namely: BOM efficacy in Setting Strategic Direction (SSD), BOM efficacy in Creating a Conducive Learning Environment (CLE) and BOM efficacy in Monitoring Teaching and Learning (MTL).

Notably, four Items: MTL1* (The BOM monitors syllabus coverage and learning in general), CLE6* (The BOM facilitates regular workshops/seminars/ training for teachers), MTL6* (The BOM is effective and hands-on in monitoring teaching and learning which has improved the academic performance of my school) and CLE7* (The BOM has effectively ensured there's a conducive learning environment, and this improved academic performance in my school) had cross-loadings and thus were excluded from the factor solution.

The remaining extracted items loaded perfectly onto the respective components confirming the achievement of convergent and discriminatory validity. The result strongly indicates construct validity, affirming that the items effectively measured the intended constructs.

Furthermore, a reliability test was carried out on the items of the extracted components to determine whether they meet the acceptable limit using the Cronbach Alpha test. Values more than 0.7 are deemed adequate but values above 0.8 are preferred (Pallant, 2016). The Cronbach's alpha coefficients (α) for each factor exceeded the recommended threshold of 0.7.

Table 4.12: Exploratory Factor Analysis Results for BOM Efficacy

Rotated Component Matrix					
Item Code	Item	Component			Cronbach
		SSD	CLE	MTL	
SSD4	The school vision and mission are regularly communicated to and are known to students	0.754			0.886
SSD6	The BOM is effective in setting the schools' strategic direction and this has positively influenced the performance	0.743			
SSD3	The school vision and mission are well documented/written down	0.718			
SSD2	The BOM involves stakeholders in setting performance targets	0.689			
SSD5	The BOM in my school emphasizes mainly academics	0.655			0.789
SSD1	The BOM usually takes time to plan and budget for school activities	0.649			
MTL1*	The BOM monitors syllabus coverage and learning in general	0.643			
CLE6*	The BOM facilitates regular workshops/seminars/ training for teachers	0.592			
MTL6*	The BOM is effective and hands-on in monitoring teaching and learning which has improved the academic performance of my school	0.551			0.704
CLE7*	The BOM has effectively ensured there's a conducive learning environment, and this improved academic performance in my school				
CLE2	The school environment is healthy, safe, and secure for learners		0.797		
CLE1	The classroom atmosphere in the school is quiet, and friendly and creates interest in learning		0.728		
CLE3	My school has adequate hygiene and sanitation facilities in school hence no time wasted in long queues		0.728		0.527
CLE4	There is an established school routine and our school is orderly		0.529		
CLE5	Highly performing teachers and learners are given incentives		0.510		
MTL4	The BOM provides opportunities to discuss academic performance			0.786	
MTL3	The BOM makes staff accountable for their performance			0.678	
MTL5	Our students easily and regularly consult teachers for extra help			0.564	
MTL2	The school uses records to monitor actual teaching in classes			0.527	

Extraction Method: Principal Component Analysis.

Rotation Method: Equamax with Kaiser Normalization.

a Rotation converged in 10 iterations.

Source: Research Data (2023)

All the three extracted components had significant Eigenvalues (>1), and thus formed the three reflective constructs of BOM efficacy, constituting the study's independent variables. The three components accounted for **58.599%** of the total variance in B.OM Efficacy (Table 4.13). Comparatively, efficacy in setting strategic direction

contributed **26.287%**, efficacy in creating a conducive learning environment contributed up to **17.53%** of the total variance in BOM efficacy, and efficacy in monitoring teaching and learning contributed up to **(14.781%)**.

Table 4.13: Total Variance Explained for BOM Efficacy

Component	Total Variance Explained					
	Initial Eigen Value	Rotation Sums of Squared Loadings				
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1. Efficacy in Setting Strategic Direction	8.47	44.579	44.579	4.995	26.287	26.287
2. Efficacy in Creating a Conducive Learning Environment	1.589	8.362	52.941	3.331	17.53	43.818
3. Efficacy in Monitoring Teaching and Learning	1.075	5.658	58.599	2.808	14.781	58.599

Extraction Method: Principal Component Analysis

Source: Research Data (2023)

4.6.2 Exploratory Factor Analysis for Principals' Leadership

The EFA results presented in Table 4.14 indicate that Bartlett's test of sphericity was significant with a chi-square of 2205.657, $df = 28$, and a significance level of $p=.000$. The Kaiser-Meyer-Olkin's measure of sampling adequacy was at 0.938, above the recommended value of 0.6 implying that the correlation matrix was not an identity matrix thus sufficient for factor analysis to commence (Hair *et al.*, 2019).

Table 4.14: KMO and Bartlett's Test for Principals' Leadership

KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.938
Bartlett's Test of Sphericity	Approx. Chi-Square
	df
	Sig.
	2205.657
	28
	.000

Source: Research Data (2023)

Table 4.15 shows that the Exploratory Factor Analysis extracted a unidimensional component comprising eight (8) items with loadings ranging between 0.748 and 0.884. The Cronbach's alpha coefficient (α) for the extracted component was 0.939, above the recommended value of 0.7 implying a strong internal consistency, indicating high correlation and reliability among the items within the construct (Hair *et al.*, 2019).

Table 4.15: EFA Results for Principals' Leadership

Component Matrix			
Code	Items	Component Principals' Leadership	Cronbach α
PL2	Our principal is inspirational in steering the school to strive for greater heights	0.884	0.939
PL8	The principal is very passionate about preparing learners for national examinations	0.874	
PL5	The principal supports teachers' efforts to enhance academic performance in my school	0.863	
PL3	Our principal is highly visible and is involved in daily school activities	0.842	
PL4	The focus of the principals' leadership is mainly on teaching and learning in school	0.841	
PL6	The principal promotes parental participation in student's learning activities to improve their performance	0.827	
PL7	The principal supports the disciplinary committee which has directly impacted academic performance in the school	0.82	
PL1	There's a harmonious working relationship between the Principal and the BOM	0.748	

Extraction Method: Principal Component Analysis.

1 component extracted.

Source: Research Data (2023)

4.6.3 Exploratory Factor Analysis for Student's Academic Performance

The EFA results presented in Table 4.16 indicate that Bartlett's test of sphericity was significant with a chi-square of 2205.657, $df = 15$, and a significance level of $p = .000$. The Kaiser-Meyer-Olkin's measure of sampling adequacy was at 0.775, above the

recommended value of 0.6 implying that the correlation matrix was not an identity matrix thus sufficient for factor analysis to commence (Hair *et al.*, 2019).

Table 4.16: KMO and Bartlett's Test for Student Academic Performance

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.775
Bartlett's Test of Sphericity	Approx. Chi-Square	757.006
	df	15
	Sig.	.000

Source: Research Data (2023)

The Exploratory Factor Analysis results in Table 4.17 show that the extracted unidimensional component comprised five items with loadings ranging between 0.636 and 0.811. Notably, item SAP1- "When teachers and learners are involved in setting academic targets by the BOM, it affects the academic performance" was dropped from the matrix. The Cronbach's alpha coefficient (α) for the extracted component was 0.805, above the recommended value of 0.7 implying a strong internal consistency, indicating high correlation and reliability among the items within the construct (Hair *et al.*, 2019).

Table 4.17: EFA Results for Student Academic Performance

Component Matrix			
Code	Items	Component	Cronbach's
		Student's Academic Performance	
SAP6	Motivating highly performing teachers and learners influences academic performance	0.811	0.805
SAP5	Exposing teachers to regular training/workshops/seminars affects learner's academic performance	0.807	
SAP4	A school leadership that is supportive of teachers' efforts enhances student's academic performance	0.787	
SAP2	When the BOM monitors teaching and learning, student's academic performance improves	0.688	
SAP3	If the school environment is quiet, safe and orderly, the academic performance goes up	0.636	

Extraction Method: Principal Component Analysis.

1 component extracted.

Source: Research Data (2023)

4.7 Testing Assumptions for Regression Analysis

Before carrying out correlation and regression analyses, the researcher carried out tests on the data to ascertain that no assumptions were violated, to reduce the likelihood of biases and errors, and to improve the statistical conclusion. The following underlying assumptions of the regression model were checked namely; Normality, Linearity of residuals, and Homoscedasticity and Independence of errors.

4.7.1 Testing for Normality of Residuals

Data for regression analysis requires conforming to the assumption of normality. Normality is present when the residuals are normally distributed in a histogram. The histogram below (Figure 4.1) shows that the residuals lie between -3 and +2.5. Therefore, the study conforms to the assumption of normality.

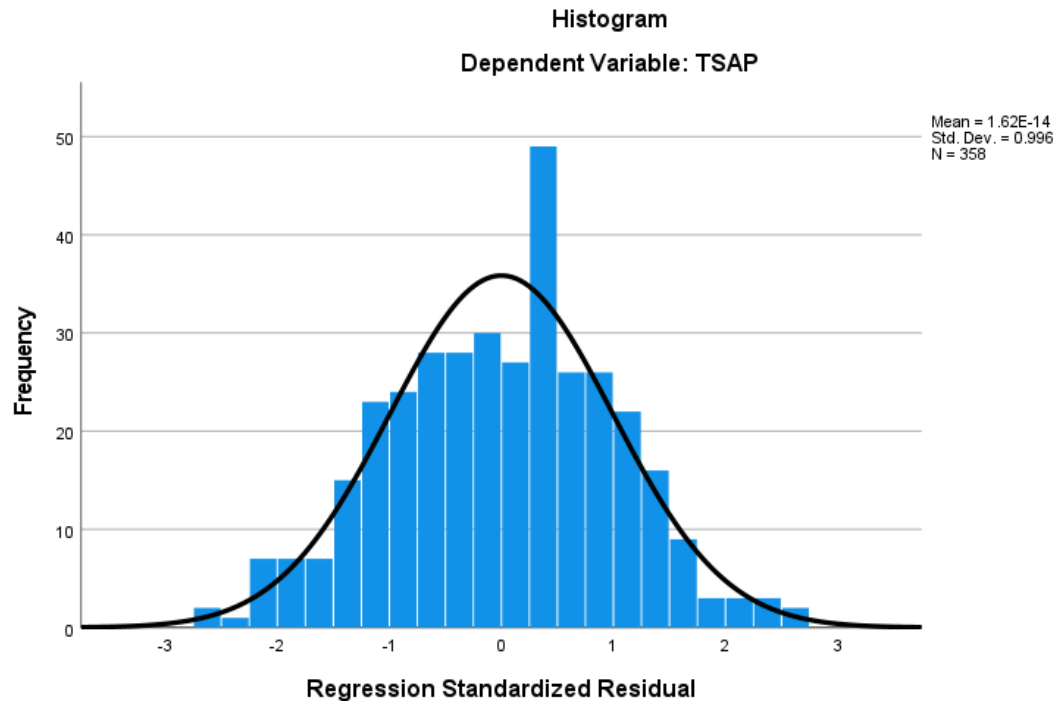


Figure 4.1: Normality Test Histogram

Source: Research Data (2023)

4.7.2 Testing for Linearity

Data for regression analysis requires conforming to the assumption of linearity. Linearity is where there should be a relatively straight line across the table from bottom left to top right signifying the existence of a linear relationship between the variables. The following is the normality p – p plot for the study (Figure 4.2) which indicates that the study conforms to the assumption of linearity.

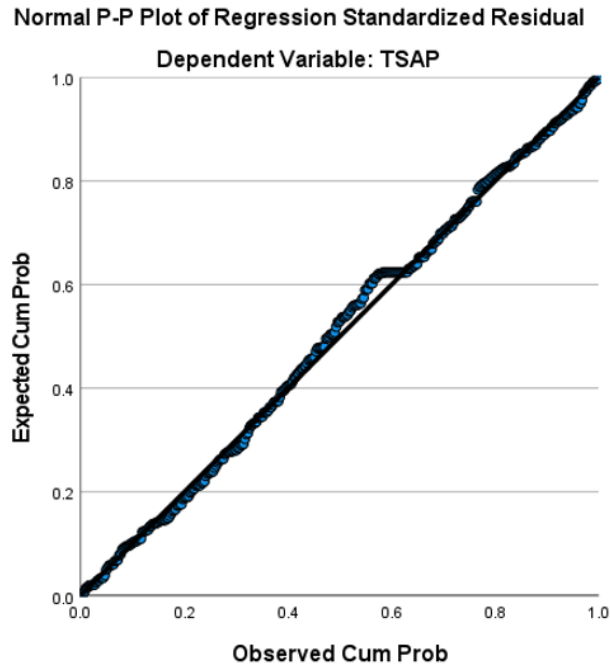


Figure 4.2: Normality and Linearity Plot

Source: Research Data (2023)

4.7.3 Homoscedasticity and Independence of Errors

Homoscedasticity is a fundamental assumption in regression analysis that assumes the variability of residuals or errors remains consistent across all levels of the independent variables. It implies that the dispersion of data points around the regression line stays uniformly across the predictor variables' range. The assumption is crucial because deviations from homoscedasticity can result in biased estimates of model parameters and unreliable conclusions. Identifying homoscedasticity typically involves scrutinizing residual plots, where any noticeable trend of increasing or decreasing spread about the independent variable indicates heteroscedasticity, which is contrary to homoscedasticity (Tabachnich & Fidell, 2013). The scatter plot in (Figure 4.3) shows that the data points around the regression line remained constant across all levels of the independent variables hence the assumption of homoscedasticity was not violated in the study.

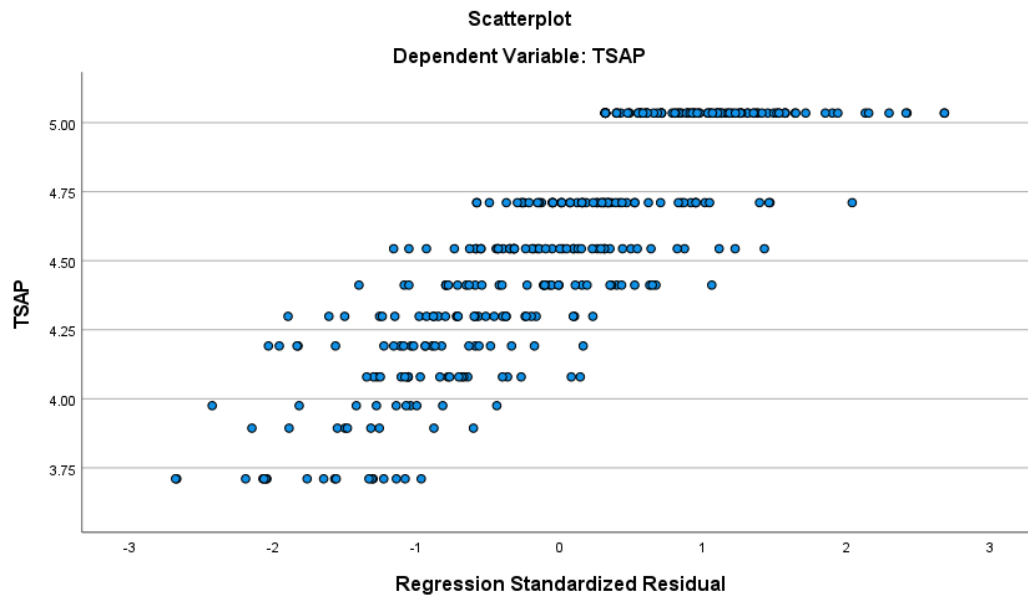


Figure 4.3: Scatter Plot
Source: Research Data (2023)

Moreover, the errors or residuals from a statistical regression model should not be correlated with each other across observations. Implying that the occurrence of an error at one point in time or for one observation does not influence the occurrence of errors at other points in time or for other observations. The statistical assumption is referred to as the independence of errors, also known as the absence of autocorrelation (Tabachnich & Fidell, 2013). When autocorrelation is present, it can lead to inefficient parameter estimates, inflated standard errors, and biased inference. Detecting autocorrelation often involves examining autocorrelation plots or using statistical tests such as the Durbin-Watson test. The researcher computed the Durbin-Watson test. A test statistic range value of 1.5 to 2.5 implies an absence of autocorrelation (ibid). Table 4.18 shows a Durbin-Watson test static value of 2.007 implying that the residuals were not serially autocorrelated.

Table 4.18: Test for Independence of Errors

Model	R	R Square	Std. Error of the Estimate	R Square Change	Durbin-Watson
1	.425	0.181	0.47789	0.181	2.007

Source: Research Data (2023)

4.8 Relationship between Covariates and Student Academic Performance

Pearson correlation was used to determine the direction and strength of the relationship between two or more variables. The relationship between student academic performance (SAP) and the study covariates: school climate, school type, and class size were investigated by the use of the Pearson product-moment correlation coefficient. Initial analysis was done to ensure that no assumptions of linearity, normality, and homoscedasticity were violated. The results showed that a positive moderate correlation exists between student academic performance and school climate $r = .039$, a positive strong correlation exists between student academic performance and school type $r = .076$, and a positive moderate correlation exists between student academic performance and class size $r = .044$, $n = 358$, $p < 0.463$, $p < .156$, $p < .411$ respectively as shown in Table 4.19.

Table 4.19: Pearson Correlation Results for Study Covariates

		Correlations			
N=358		SAP	SCL	STP	CSZ
SAP	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	358			
SCL	Pearson Correlation	.039	1		
	Sig. (2-tailed)	.463			
	N	358	358		
STP	Pearson Correlation	.076	.516**	1	
	Sig. (2-tailed)	.156	.000		
	N	358	358	358	
CSZ	Pearson Correlation	.044	.115*	.127*	1
	Sig. (2-tailed)	.411	.031	.017	
	N	358	358	358	358

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

**. Correlation is significant at the 0.05 level (2-tailed).*

Source: Research Data (2023)

4.9 Hypothesis Testing

Having conducted a preliminary analysis to ascertain that the study did not violate any of the assumptions of normality, linearity, multicollinearity, and homoscedasticity, the hypotheses were then tested. The results were as indicated below:

4.9.1 The Effect of BOM Efficacy in Setting the Strategic Direction on Student's Academic Performance

H₀₁ There is statistically no significant effect of BOM efficacy in setting the strategic direction on student's academic performance in selected secondary schools in Kenya. The hypothesis addressed the relationship between BOM efficacy in setting the strategic direction and students' academic performance and was based on objective one.

Hierarchical regression was utilized to determine the capacity of the predictor variable setting strategic direction (SSD) to predict student academic performance after controlling for class size, school climate, and school type. Class size, school climate, and school type were entered as step 1 and explained for 3% of the variance in student academic performance. After the addition of setting strategic direction (SSD) at step 2, the total variance explained by the model as a whole was 11% $F(4,353) = 10.7$ $p < .001$. The predictor SSD further explained an additional 11% of the variance in student academic performance $R^2 \text{ change} = .11$, $F \text{ change } 1, 353 = 41.77$, $p < .001$. In the coefficients table, only the predictor variable SSD was statistically significant recording a beta value of .325 $p < .001$ (Tables 4.19 & 4.20). Therefore, based on the findings, the hypothesis was rejected.

The study results support prior studies like Miskell (2020) whose qualitative study sought to find out the effect of strategic planning on student achievement in Rural

Schools in New York State. Her findings established a positive effect of strategic planning on student achievement. The school leader respondents confirmed that student achievement was boosted by the important process and that having strategic plans in place was a critical resource. The findings also concur with a study by Kwaslema & Onyango (2021) on school effectiveness on academic performance in public schools in Babati district, Tanzania. The study findings were that schools were effective in developing strategic plans and that implementation of strategic plans enhanced the improvement of student's academic performance.

Literature has shown that setting strategic direction confers benefits for institutions that practice it. Some of the benefits include; achieving clarity of future direction, coming up with priorities and the capacity to effectively deal with swiftly changing environments, harnessing team collaboration and proficiency, resolving key problems in the organization, and improving organization performance Bryson (2011). Being strategically astute also assists in resolving where to prioritize allocation of resources and most importantly, peg the allocation of resources to performance. It aligns activities within the larger environment outlook and provides continued survival and effectiveness. The warning is that when the strategic direction is not set or a lack of strategic planning results in organizations being reactionary instead of being pre-emptive (Long & Franklin, 2004, as cited in Gode, 2009).

Cornforth (2011) undertook a study on the relationship between board inputs, processes, structure, and board effectiveness. Respondents were to judge board effectiveness and the relationship between the measures of board effectiveness. The findings were that the total determinations of board effectiveness were strongly based on how effectively the board was assessed to perform various functions. Based on the

results from the regression analysis, the function that was found to have the most impact was reviewing and deciding on strategic direction. The study findings agree with the current study that setting strategic direction is the most important function of boards and is a key factor in board effectiveness (Bradshaw *et al*, 1992 as cited in Cornforth, 2011).

The findings in the study by Schlebusch & Mokhatle (2016) were that very few schools were involved in setting the strategic direction in the Motheo district and that where some form of strategy setting occurs, the principal does not involve any stakeholders of the school, particularly the School Governing Body in its development and implementation.

Kisaika (2021) in his study established that the two main contributors to high performance in schools were the practice of setting the schools' strategic direction and having a conducive working environment. The findings are similar to Njunu *et al* (2016) who also found that the process of strategic planning led to school effectiveness in sustained instruction and learning in secondary schools in Nakuru County.

The importance of the practice of setting the school's strategic direction is such that schools that practice it are different from those that do not mainly because as studies have indicated (George *et al*, 2019; Miskell, 2020; Nkumbwa, 2019; Kwaslema & Onyango, 2021; Gode, 2009; Kobia, 2017; Mwangi, 2017; Njunu *et al*, 2016). Setting the strategic direction inevitably related positively to performance.

The findings are in line with the open systems theory that schools, like other institutions and organizations, are open systems that are in constant interaction and influence with the external environment. The external environment is highly

competitive. Changes in the external environment require changes in the internal environment for the change to be effective. Therefore, schools need to embrace strategic thinking to cope with changes in the environment and to survive.

A current example is the hundred percent transition policy launched in Kenya, where all learners are to transition into secondary school despite the marks attained in KCPE. The majority of parents opted to take their children to sub-county schools (the local day/mixed school type) and thanks to the Free Secondary Education government funding, learners are only expected to pay K. Sh. 10,000/- per year. The scenario coupled with the hard economic times currently being faced has seen a massive drop in the number of learners in county schools which are mostly boarding and therefore charge more fees yet they are not usually 'performing' schools that parents would scamper to get admission to. BOMs of such schools needed to have foreseen the impact of the government policy and planned to mitigate the challenge before the effects were adverse.

4.9.2 The Effect of BOM Efficacy in Monitoring Teaching and Learning on Student's Academic Performance

H₀₂ There is statistically no significant effect of BOM efficacy in monitoring teaching and learning on student's academic performance in selected secondary schools in Kenya. The hypothesis addressed the relationship between BOM efficacy in monitoring teaching and learning and students' academic performance and was based on objective two.

To assess the ability of the independent variable monitoring teaching and learning MTL to predict student academic performance SAP, hierarchical regression analysis was done. Class size, school climate, and school type were controlled for and the

results show that they contribute to 3% of the variance in student academic performance. After the addition of monitoring teaching and learning MTL at step 2, the total variance explained by the model as a whole was 6% $F(4,353) = 5.6$ $p < .001$. The predictor MTL further explained an additional 5.4% of the variance in student academic performance $R^2 \text{ change} = .54$, $F \text{ change } 1, 353 = 20.03$, $p < .001$. Under coefficients, only the predictor variable SSD was statistically significant recording a beta value of .232 $p < .001$ (Tables 4.19 & 4.20). Therefore, based on the findings, the hypothesis was rejected.

As the NSBA (2000) opined it is the responsibility of the board to lay down the right keystones necessary for learners to learn and achieve the highest attainable level. It is supported by Miriam Rosen (2011), Her Majesty's Chief Inspector that a clear focus of the institution's management on continuously improved teaching yields consistently high standards of teaching since good teaching is the heart of every learning institution.

The findings of the study concur with the findings by Muiruri (2019) whose study sought to establish among other factors the influence of monitoring on student performance in KCSE and found that 95% of the respondents were of the strong view that monitoring influenced student's academic performance in the Kirinyaga East sub-county, Kenya. Monitoring entailed the set programs, regular assessments, and discussions on overall school performance were implemented as planned.

The study findings are also supported by Kinyua (2013) whose study established that monitoring and evaluation were done by the head teacher, the deputy, and the subject heads and that monitoring by external inspectors was rare. However, the monitoring and evaluation done internally had benefits including; improved teaching and

learning, early diagnosis of problem areas in the curriculum, heightened performance, and the employment of better teaching methods by teachers.

There is partial concurrence too with the study by Mngomezulu (2015) whose study uncovered that the SMT had developed suitable monitoring strategies but had not put them to use. The consequence was then an emphasis on learners' progress more than on the quality of the ensuing teaching. The overemphasis on the learner's progress consequently also became the obstacle inhibiting the practice of monitoring. The study faulted the SMTs for their laxity and indecisiveness for allowing the school processes to be hampered by teacher's subjectivity.

4.9.3 The Effect of BOM Efficacy in Creating a Conducive Learning Environment on Student's Academic Performance

H₀₃ There is statistically no significant effect of BOM efficacy in creating a conducive learning environment on student's academic performance in selected. The hypothesis addressed the relationship between BOM efficacy in creating a conducive learning environment and students' academic performance and was based on objective three.

Hierarchical regression was used to assess the predictability of a conducive learning environment on student academic performance. The control variables; class size, school climate, and school type were entered as step 1 explaining 3% of the variance in student academic performance. After the addition of a conducive learning environment (CLE) at step 2, the total variance explained by the model as a whole was 9.5 % $F(4,353) = 9.5$ $p < .001$. The predictor SSD further explained an additional 9.4 % of the variance in student academic performance $R^2 \text{ change} = .94$, $F \text{ change } 1, 353 = 35.91$, $p < .001$. In the coefficients table, only the predictor variable

CLE was statistically significant recording a beta value of .304 $p < .001$ (Table 4.19 & 4.20). Therefore, based on the findings, the hypothesis was rejected.

The research findings support several empirical studies that established that a conducive learning environment positively affects student's academic performance (Dhanapala, 2021; Makau, 2018; Kitonyi, 2013; Kitonyi, 2013; Ali, 2017; Aloyo, 2015). Therefore, the BOM and the school leadership should strive to ensure that the learners are not only being stimulated cognitively but also facilitate the kind of environment that inspires the learners to appreciate their educational experience and effectively internalize the knowledge being transmitted in the classroom. They should invest in the kind of environment that influences the learners' ability to learn (Korir & Kipkemboi, 2014).

Such an environment entails; adequate facilities for the learners. As was established in earlier studies (Dhanapala, 2021; Makau, 2018; Ping *et al*, 2018; Kitony, 2017; Sithole, 2017; Adeyemo, 2012), inadequate or unavailable materials and facilities in class hurt academic performance, but learners with adequate facilities perform better. It is because the teaching materials, resources, or facilities in theoretical and practical-based courses arbitrate the teacher and his/her management of the lesson, ensuring that learners follow the lesson alongside the teacher. Long queues of learners are also witnessed as learners wait their turn to use the facilities/tools. It is a major time waster as the time spent in the queues could have been put to better use in teaching and learning. Sourcing for adequate school facilities is therefore a time-saving strategy. Effective BOMs and principals ought therefore to ensure that there are adequate facilities/equipment for all learners in school.

The challenge of inadequate facilities is an ongoing challenge currently being encountered in several schools in Kenya due to the surging numbers of students occasioned by the one hundred percent transition to secondary school policy. The policy calls for all learners who complete primary school to transition to secondary education. Secondary schools are not allowed to deny them admission on account of the low marks attained in KCPE. The government has ensured that they can afford the tuition fee by substituting their tuition fee through the Subsidized Free Day Secondary funding to schools. The result has been an exponential outpouring of students to secondary schools (a big step in the direction of attaining EFA) more than the facilities were originally built for. Therefore, BOMs and principals are facing the emerging issue of keeping up with increasing and expanding facilities in schools, so that the situation does not affect the academic performance of learners.

A conducive learning environment also means that teachers should be approachable such that learners feel free to consult them for help and that there should be a healthy teacher-student relationship (Kitonyi, 2018; Makau, 2018; Korir & Kemboi, 2014; Adeyemo, 2012). Studies have shown that when learners feel unrestricted to access their teachers for help whenever they require it, and when the teachers are warm and welcoming and not harsh and mean to students, there is sharing of knowledge and experience and the learning environment is good (Adeyemo, 2012). It has a positive effect on the performance because all the difficult areas are ironed out, their attitude towards the subject is enhanced and learning occurs. One of the principals interviewed during the study said that carving time in the evenings for consultation by learners was a strategy the school takes seriously so that learners "open up" and get the help they require to improve their performance.

The BOM and principal should also strive to ensure that the learning environment is not too overcrowded because the teacher will not be able to manage the class (Korir & Kemboi, 2014). It is a factor of a poor learning environment which goes hand in hand with inadequate noise control and poor indoor air quality which if not checked, poor access to resources and could impact the health of the learners by spreading infectious diseases, leading to injuries and the onset of mental illness (Ogaji & Okokom, 2012, as cited in Aloyo, 2015). The summary of the positive contribution of small class size to learners' performance variously; higher levels of learner achievement, reduced absenteeism, improved rates of graduation, and a greater involvement in extracurricular activities (Leithwood & Jantzi, 2009, as cited in Barrett *et al*, 2018). They found that the above-mentioned benefits were more pronounced in schools with disadvantaged learners e.g., those with learning difficulties. The study by Dhanapala (2021) found that the number of those enrolled in lower primary is very large; hence teachers were unable to contain their classes, a situation that negatively impacted the performance of social studies.

The BOM and the school principal should also ensure that the school has a conducive learning environment by seeking to enhance the actual physical surroundings of the school because studies have indicated that the process of teaching and learning and the student's achievement consequently can be impacted by the school physical environment (Adeyemo, 2012). They could do that by ensuring that the grounds are clean and well maintained (Sithole, 2017), that the lawns are mowed and there is a feeling of order and good organization. The learning space should also be adequately planned, and seats arranged well to make the most of the classroom situation for effective learning (Ali, 2017). Schools ought not to be noisy and chaotic scenes

(Quarcoo, 2021) but calm and quiet so that learners can follow the class proceedings without undue distractions.

Whatever the school location; urban or rural, the school management should strive to ensure that their schools are well-lit and properly ventilated (ibid) so that students do not strain their eyes and lose concentration in class, given the length of time spent in the classroom which ranges from seven to ten hours a day in secondary school. Dark classrooms show a lack of concern from the school management for the learners' welfare and poor school leadership. They can also be a conducive environment for indiscipline and other deviant behavior in school.

The findings agree with the open systems theory that schools, like other organizations, are open systems, and as open systems, they consist of different sub-systems that function in a relationship that is interdependent and interactional. The interconnection of the various parts aims to accomplish certain common goals and if the goals are not achieved in one part of the system, the failure affects the whole system.

Thus, creating a conducive learning environment ought to be a concerted effort by the whole system (the stakeholders of the school) so that the common goal of improved student's academic performance can be attained. The learning environment is one of the major contributors of enhanced learner performance which when not developed, can have a negative impact on learners' performance.

It also agrees with the path-goals theory which lays the onus of responsibility on the leader to facilitate a conducive environment that is vibrant and functional to drive subordinates – in the current case, the learners towards achievement. The BOM and principal ought to deliberately recreate the learning environment with the learner's interests in mind so that their interest in the business of learning may be enhanced. In

so doing, the school leadership will not only increase the learner expectations but also their overall school performance.

The path-goal theory of leadership effectiveness helps to explain the role of the BOM and principal because as school leaders, it is their duty not only to rally all the subordinates together with a shared goal but more importantly, it is their responsibility to design the path that will lead to the attainment of those goals. They therefore must select the behaviours that can help achieve the goal such as teamwork and collaboration, participation, and mutual respect so that no one is left behind, but all are motivated to do their part to reach the shared goal.

4.9.4 The Effect of Principals' Leadership on Student's Academic Performance

H₀₄ There is statistically no significant effect of the principals' leadership on student's academic performance. The hypothesis addressed the relationship between principals' leadership and student's academic performance and was based on objective four.

Hierarchical regression was employed to find out the ability of the predictor principals' leadership (PL) to predict student academic performance after controlling for class size, school climate, and school type. Class size, school climate, and school type were entered as step 1 and explained for 3% of the variance in student academic performance. After the addition of principals' leadership (PL) at step 2, the total variance explained by the model as a whole was 12% $F(4,353) = 11.8$ $p < .001$. The predictor SSD further explained an additional 11.8 % of the variance in student academic performance $R^2 \text{ change} = .11.8$, $F \text{ change } 1, 353 = 47.31$, $p < .001$. In the coefficients table, only the predictor variable SSD was statistically significant

recording a beta value of .350 $p < .001$ (Tables 4.20 & 4.21). Therefore, based on the findings, the hypothesis was rejected.

The findings from the study support similar findings from several studies that found principals' leadership has a positive effect on learners' performance (Xu, 2018; Waters *et al* 2003; Ozdemir *et al* 2022; Grissom *et al*, 2021, Gatama *et al*, 2023; Irungu, 2020). Irungu (2020) in her study on the influence of instructional leader practices on student's academic performance found that the leader's characteristics - communication of set school targets, teacher supervision, and the advancement of collaborative networks correlated positively with student's academic performance. The study by Muasya (2018) that sought to find out the effect instructional leader behavior had on student's academic performance also found similar results to the practices of outlining of school mission, overseeing teaching and learning in school, pioneering a conducive learning culture and championing for teachers' welfare had a positive correlation with student's performance.

Ofori *et al* (2018) assessed the influence of heads' leadership styles on student's academic performance at senior high school in East Akim Municipal, Ghana. The findings were that that involving teachers and learners in decision-making while working together with the support staff and providing necessary instructional resources were the top factors that led to increased academic performance of students in senior high schools in East Akim Municipal, Ghana.

Table 4.20: Results for Covariates and Direct Effects

Model	R	R Square	Adjusted R Square	R Square Change	Change Statistics			Sig. F Change
					F Change	df1	df2	
1CSZ,SCL, STP	.051 ^a	.003	-.006	.003	.304	3	354	.823
21CSZ,SCL, STP, TOTSSD	.329 ^b	.108	.098	.106	41.769	1	353	.000
1CSZ,SCL, STP	.051 ^a	.003	-.006	.003	.304	3	354	.823
21CSZ,SCL, STP, TOTMTL	.237 ^b	.056	.045	.054	20.029	1	353	.000
1CSZ,SCL, STP	.051 ^a	.003	-.006	.003	.304	3	354	.823
21CSZ,SCL, STP, TOTCLE	.308 ^b	.095	.084	.092	35.914	1	353	.000
1CSZ,SCL, STP	.051 ^a	.003	-.006	.003	.304	3	354	.823
21CSZ,SCL, STP, TOTMTL	.347 ^b	.120	.110	.118	47.308	1	353	.000

Source: Research Data, 2023

Table 4.21: Regression Coefficients

		Beta	T	sig	Tolerance	VIF
2	Constant		25.059	.000		
	SCL	-.036	-.613	.540	.733	1.365
	STP	-.024	-.400	.690	.729	1.371
	CSZ	-.013	-.261	.794	.980	1.020
	TOTSSD	.325	6.463	.000	.999	1.001
2	Constant		31.461	.000		
	SCL	-.026	-.432	.666	.731	1.368
	STP	-.031	-.505	.614	.728	1.374
	CSZ	-.007	-.130	.897	.981	1.019
	TOTMTL	.232	4.475	.000	.997	1.003
2	Constant			.000		
	SCL	-.031	-.528	.598	.732	1.365
	STP	-.033	-.549	.583	.728	1.373
	CSZ	-.018	-.352	.725	.979	1.021
	TOTCLE	.304	5.993	.000	.996	1.004
2	Constant		19.742	.000		
	SCL	-.013	-.221	.825	.730	1.370
	STP	-.080	-1.346	.179	.713	1.403
	CSZ	-.040	-.790	.430	.971	1.030
	TOTPL	.350	6.878	.000	.964	1.038

Source: Research Data (2023)

4.9.5 The Moderating Effect of Principals' Leadership on the Relationship between BOM Efficacy and Student's Academic Performance

H₀₅ Principals' leadership does not significantly moderate the relationship between BOM efficacy and student's academic performance. The hypothesis addressed the moderating role of principals' leadership on the relationship between BOM efficacy and student's academic performance and was based on objective five.

The study adopted multiple regression analysis via SPSS PROCESS macro version 4.2 model number 1 by Hayes to test the hypothesis. PROCESS macro was chosen because its usage is fairly easy and it comes with a huge built-in catalog of model templates. Researchers get to choose from the wide selection of models the one that best answers their research questions (Sebastian & Allensworth, 2019).

Before the analysis, the independent variables; setting strategic direction SSD, monitoring teaching and learning MTL, and creating a conducive learning environment CLE were transformed as one variable SSD+MTL+CLE to be TOTIV. All the variables were mean-centered to lessen multicollinearity (Aiken & West, 1991). The predictor variable accounted for a significant amount of variance in student academic performance $R^2 = .16$, $F(1,351)=11.19$, $p<.001$. Therefore, BOM efficacy positively affects student academic performance.

The study then went on to examine whether the relationship between BOM efficacy and student academic performance is moderated by principals' leadership. The hypothesis stated the principals' leadership does not significantly moderate the relationship between BOM efficacy and student's academic performance. We observed that the interaction term is significant, $b=.07$, $p<.01$. Therefore, the hypothesis was rejected. Next, we conducted a simple slope analysis and probed

interactions (Figure 2). When principals' leadership is high ($b=.065$, $p<.001$) and medium ($b=.041$, $p<.01$), BOM Efficacy is associated with high levels of student academic performance. However, when principals' leadership is low, the relationship becomes non-significant ($b=.008$, $p=.69$) as shown in Table 4.22 and Figure 4.4 below. Therefore, principals' leadership amplifies the effect of BOM Efficacy on student academic performance.

Table 4.22: Moderated Regression Results (N=358)

Predictors	B	S.E	t
Constant	19.19***	0.30	63.26
BOM Efficacy X	0.041***	0.15	2.75
Principals' Leadership W	0.14***	0.31	4.39
X.W	0.007**	0.003	2.43
SCL	-.0296	.1075	-.2756
STP	-.1184	.0854	-1.3863
CSZ	-.0907	.1481	-.6128

Note $F(1,351) = 11.29***$; $R=.40$, $R^2=.16$; *** $p<.001$, ** $p<.01$, S. E= standard error, b is unstandardized regression coefficients

Source: Research Data (2023)

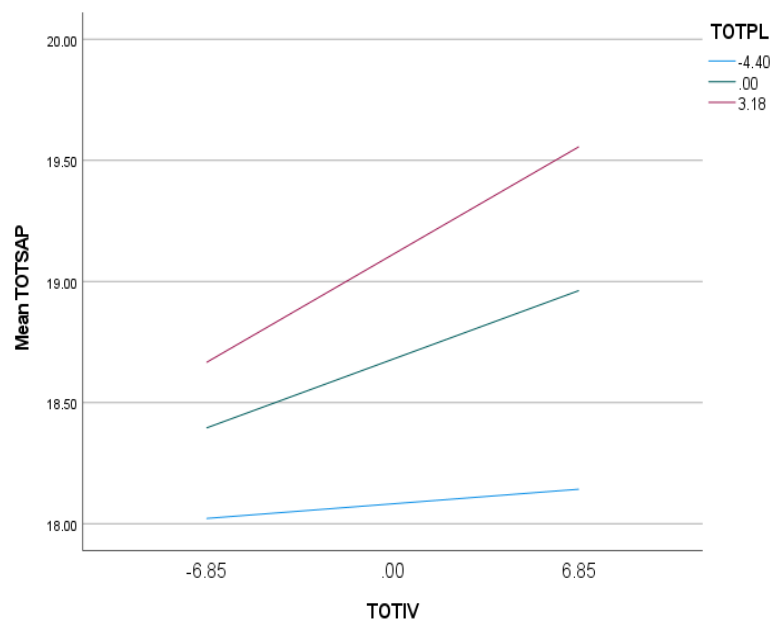


Figure 4.4: Graphic Presentation of the Moderating Effect of Principals' Leadership on the Relationship between BOM Efficacy and Student's Academic Performance.

Source: Research Data (2023)

The findings of the study support the findings of Hou *et al* (2019) whose study examined the impact of instructional leadership on high school student academic achievement in China and to establish the specific dimensions that had the most impact. The study that controlled for student's background, principals' demographics, and school context found that generally, instructional leadership had a significant moderating effect on high school and college entrance scores.

They also support the findings of Sebastian & Allensworth (2019) whose study utilized moderated mediation to analyze how a variation in school leadership is equivalent to improved performance when mediated by a change in the organizational process of parent-teacher trust, school climate, and professional capability. Results indicated that enhanced school leadership corresponded to improvement in learning outcomes mediated by school climate whatever the starting position of the school leadership. bin Abdullahi *et al* (2013) in their study also corroborated that principals' leadership practices moderated the relationship between workplace spirituality and leadership effectiveness in Malaysian post-primary institutions.

The meta-analysis study by Tan *et al* (2021) on one hundred and eight studies with associations between principals' leadership and student academic performance also found from the results that only levels of analysis considerably moderated principals' leadership effects in studies that utilized school-level analysis but not in those that utilized lower-level analysis. The study findings also agree with the finding by Okwisa (2023) in her study on the effect of leadership practices on academic performance which analyzed the moderating effect of teacher commitment on the relationship between leadership practices and academic performance. The study established that staff commitment considerably moderated the correlation between

leadership practices and academic performance of city public primary schools in Kenya. Table 4.23 presents a summary result of the study hypotheses test.

Table 4.23: Summary Results of Hypotheses Tests

Hypothesis	B	P	Remark
H ₀₁ There is statistically no significant effect of BOM efficacy in setting the strategic direction on student's academic performance in selected secondary schools in Kenya.	.325	.001	Rejected
H ₀₂ There is statistically no significant effect of BOM efficacy in monitoring teaching and learning on student's academic performance in selected secondary schools in Kenya.	.232	.001	Rejected
H ₀₃ There is statistically no significant effect of BOM efficacy in creating a conducive learning environment on student's academic performance in selected	.304	.001	Rejected
H ₀₄ There is statistically no significant effect of the principals' leadership on student's academic performance	.350	.001	Rejected
H ₀₅ The principals' leadership does not significantly moderate the relationship between BOM efficacy and student's academic performance	0.007	0.01	Rejected

Source: Research Data (2023)

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

The chapter presents the summary of the major findings of the study, conclusions, recommendations and suggested areas for further research.

5.1 Summary of the Findings

Existing literature on BOM efficacy sees it as one of the key determinants of student's achievement (Ford, 2013). The study sought to lend its voice to the literature on the effect of the school board's efficacy on student academic performance and to fill the gap in the literature by determining the moderating effect of principals' leadership on the relationship. The following are the objectives the study sought to answer:

- i. To determine the extent of BOM efficacy in setting the strategic direction and its influence on student performance in selected secondary schools in Kenya.
- ii. To assess BOM efficacy in monitoring teaching and learning and its influence on student's academic performance in selected secondary schools in Kenya.
- iii. To establish the efficacy of the BOM in creating a conducive learning environment and its effect on student's academic performance in selected secondary schools in Kenya.
- iv. To establish the effect of the principals' leadership on student's academic performance in selected secondary schools in Kenya.
- v. To assess the moderating effect of principals' leadership on the relationship between BOM efficacy and student academic performance in selected secondary schools in Kenya.

5.1.1 BOM Efficacy in Setting Strategic Direction and its Influence in Student's Academic Performance

The study findings showed the following teachers' perceptions regarding the effectiveness of the Board of Management (BOM) in setting strategic direction: Firstly, there was a strong consensus indicating the BOM's dedication to planning and budgeting for school activities, with a majority of respondents agreeing. It suggested active engagement in strategic planning, supported by consistent positive perceptions among respondents. Additionally, stakeholders were perceived to be actively involved in setting performance targets, although opinions showed slightly wider variability compared to planning aspects. Documentation and communication of the school's vision and mission received attention, yet opinions on their effectiveness displayed a broader range. Nevertheless, the BOM's emphasis on academics was strongly acknowledged, indicating a consistent prioritization of academic matters. Overall, respondents generally perceived the BOM as effective in setting the school's strategic direction, with some variability in opinions regarding communication and documentation aspects.

However, one principal's differing opinion highlights the importance of BOM members being both elite and readily available to make a meaningful impact on the school. The dissenting perspective underscored the need for further analysis of factors influencing the perceived effectiveness of the BOM. The findings from the study indicated that teachers generally perceived the BOM to be effective in setting strategic direction, with high scores across various constructs.

The study measured whether BOM efficacy in setting strategic direction had a significant effect on student's academic performance in selected secondary schools in

Kenya. The results indicated that BOM efficacy in setting the strategic direction is a predictor of student's academic performance with $\beta = .325$ $p < .001$. There was therefore a positive statistically significant relationship between BOM efficacy in setting strategic direction and student's academic performance.

The findings converged with what the majority of the participants said that the BOM was effective in setting the strategic direction of the school. They said that the BOM set the direction of the school by setting annual targets for student's performance, establishing reward systems, identifying priorities in development for projects, laying strategies to enhance performance, identifying and planning for academic requirements, providing necessary materials, and making decisions on curriculum matters.

5.1.2 BOM Efficacy in Monitoring Teaching and Learning and its Effect on Student's Academic Performance

The study findings showed the following teachers' perceptions regarding the effectiveness of the Board of Management (BOM) in monitoring teaching and learning: The analysis indicated a strong consensus among respondents regarding the BOM's role in monitoring syllabus coverage and learning, as well as utilizing records for monitoring teaching. Moreover, the BOM's accountability measures for staff performance were highly praised, with a majority expressing strong agreement. Opportunities for discussing academic performance were also positively acknowledged. However, opinions were varied regarding students consulting teachers for extra help. Overall, respondents widely agreed that the BOM positively influences teaching and learning outcomes.

Interviews with principals largely supported these findings, although some expressed concerns about inactive education sub-committees and unclear roles. Qualitative findings highlighted diverse methods employed by the BOM in monitoring teaching and learning, such as creating extra teaching sessions and feedback mechanisms. The integration of quantitative and qualitative data provides a comprehensive understanding of the BOM's role in monitoring teaching and learning, emphasizing its significant impact on educational processes.

The study measured whether BOM efficacy in monitoring teaching and learning had a statistically significant effect on student's academic performance in selected secondary schools in Kenya. The results indicate that BOM efficacy in monitoring teaching and learning has a statistically significant and positive effect on student's academic performance with $\beta = .232$ $p < .001$. BOM efficacy in setting strategic direction was therefore found to be a predictor of student's academic performance.

The finding converged with the findings from the interviews. The majority of the respondents agreed that the BOM is effective in monitoring teaching and learning in schools through creating extra teaching time for syllabus coverage, revision, and consultations; through feedback from learners and prefects; indirectly through the principal and active academic sub-committees of the board. Some pointed out the BOM has the power to discipline and recommend the transfer teachers who are deemed uncooperative in the duty of teaching.

5.1.3 BOM Efficacy in Creating a Conducive Learning Environment and its Effect on Student's Academic Performance

The study findings showed the following teachers' perceptions regarding the effectiveness of the Board of Management (BOM) in creating a conducive learning

environment: Firstly, a strong consensus among respondents regarding the positive atmosphere within classrooms, characterized by quietness, friendliness, and stimulation for learning. Furthermore, a significant majority strongly agreed with the characterization, indicating a widespread positive view of the learning environment. Similarly, there was resounding agreement that the school environment is healthy, safe, and secure for learners, with the majority expressing strong agreement. Respondents also generally agreed on the availability of adequate hygiene and sanitation facilities in the school, although opinions show slightly more diversity on the aspect.

Interviews with principals further corroborated these findings, with some expressing satisfaction with the level of facilities and environment, while others lamented inadequacies such as lack of ceiling boards and overcrowded classes. However, a significant consensus emerged on the presence of an established school routine and overall orderliness, indicated a strong collective perception of the school's organizational structure. In terms of incentives for highly performing teachers and learners, there was general agreement, although opinions are less uniform, indicating some diversity among respondents. Similarly, perceptions regarding the facilitation of workshops, seminars, and training for teachers were varied, reflecting differing experiences or expectations regarding professional development opportunities.

Overall, while there was a consistent and overwhelmingly positive perception across various dimensions of creating a conducive learning environment, certain aspects showed a broader range of opinions. These variations could have stemmed from different experiences, expectations, or interpretations of what constitutes an ideal learning environment. Nonetheless, the grand mean indicated a predominantly

positive assessment of the BOM's role in fostering a positive and supportive learning atmosphere.

The study also sought to establish whether BOM efficacy in creating a conducive learning environment had a statistically significant effect on student's academic performance in selected secondary schools in Kenya. The results indicated that BOM efficacy in creating a conducive learning environment has a statistically significant positive effect on student's academic performance with $\beta = .304$ $p < .001$. BOM efficacy in creating a conducive learning environment was therefore found to be a predictor of student's academic performance.

The findings converged with some of the views from the participants that the BOM is effective in creating a conducive learning environment in school whose views are summarized as facilities are adequate, quiet, and suitable for learning, CCTV cameras installed ensured learners are self-disciplined, safe, and secure school environment conducive for learning. The respondents agreed that when the learning environment is conducive, learning takes place and so performance is enhanced. For example, when the facilities are adequate, learners are comfortable in class and are in a better place to participate fully in the proceedings in class as opposed to when the facilities are inadequate, they end up scrambling for the few facilities and are not relaxed and calm enough to learn.

However, the findings diverged with the views of some other participants who remarked that the BOM has not been as effective hence they still face some challenges in their learning environment such as insufficient running water, and lack of ceiling boards in the classrooms which means that the classroom is noisy when rains and is hot for learning in the afternoons, classes are congested and inadequate

sanitary facilities for some genders of learners. It had a negative effect on learning and impedes performance in the long run.

5.1.4 Principals' Leadership and Student's Academic Performance

The study findings showed the following teachers' perceptions regarding the principals' leadership role within the school. The data encompassed various dimensions of the principals' leadership role, providing insights into its perceived effectiveness and impact on school dynamics. Notably, respondents highly commended the collaborative and harmonious relationship between the Principal and the Board of Management (BOM), indicating a cohesive leadership structure. Furthermore, the Principal's inspirational leadership, high visibility, active involvement in daily activities, and focus on teaching and learning received strong endorsement, reflecting a shared belief in the principal's motivating and guiding influence on the school community.

Qualitative insights delved deeper into the practices contributing to enhanced academic performance, such as providing teaching materials, motivating teachers and learners, and leading by example through teaching. Additionally, essential practices for effective principals' leadership, including mandatory presence in school, delegation of authority, staff motivation, stakeholder involvement and supporting the efforts of teachers were identified.

The study also sought to establish whether the principals' leadership had a statistically significant effect on student's academic performance in selected secondary schools in Kenya. The results indicated that the principals' leadership had a significant effect on student's academic performance with $\beta = .350$ $p < .001$. The study therefore

established that principals' leadership was a predictor of student's academic performance.

The findings are in convergence with the results from the interviews. The respondents agreed that principals' practices have a positive effect on student's academic performance. They concurred that it is principals who provided teaching, learning, and examination revision materials to prepare learners for examinations; it is the principal who ensured there are adequate teachers by advising the BOM to source for the subjects that are lacking a teacher; it is the principal who ensured that performing teachers and learners are motivated, it is they who organized for subject specialists to equip learners with the application knowledge in the different subjects and maintain a visible presence in the school to respond to emergent issues in the day to day running of the school and led by example by their effective teaching.

Overall, the study highlighted a predominantly positive perception of Principals' Leadership, emphasizing key strengths such as collaborative engagement, inspirational leadership, and a focus on academic excellence. The findings underscored the critical role of effective leadership in shaping educational outcomes and fostering a conducive learning environment within Kenyan secondary schools.

5.1.5 Moderating Effect of Principals' Leadership on the Relationship between BOM Efficacy and Student's Academic Performance

The study examined whether the relationship between BOM efficacy and student academic performance was moderated by principals' leadership. It was observed that the interaction term is significant, $b=.07$, $p<.01$. Therefore, the hypothesis was rejected and the alternative accepted thus principals' leadership does moderate the relationship between BOM efficacy and student academic performance. The results

from the simple slope analysis and the probed interactions indicated that when principals' leadership was high ($b=.065$, $p<.001$) and medium ($b=.041$, $p<.01$), BOM efficacy was associated with high levels of student academic performance. However, when principals' leadership was low, the relationship becomes non-significant ($b=.008$, $p=.69$). Therefore, the results of the study indicated that principals' leadership amplified the effect of BOM Efficacy on student academic performance.

The findings elicited from the respondents converged with the above findings as they strongly agreed that the principals' leadership moderated the work of the BOM in enhancing student's academic performance by creating an enabling environment that works, by managing the BOM to be productive for the betterment of the school and by advising them as the technical advisor in matters education, being a bridge to the teachers and carrying out the academic mandate of the BOM on behalf of the board.

The moderating effect of principals' leadership on the relationship between BOM efficacy and student academic performance implied that principals who exhibited strong leadership qualities and proactive engagement effectively enhanced the impact of school board efficacy on student outcomes. The study underscored the critical role of school leadership in optimizing the effectiveness of school Board of Management bodies and emphasized the importance of fostering collaborative efforts between principals and BOMs to drive improvements in educational outcomes.

5.2 Conclusion of the Study

The objectives of the study were five-fold namely; to determine the extent of the BOM's efficacy in offering strategic direction and its effect on student's academic performance in selected secondary schools in Kenya, to assess the efficacy of the BOM in the monitoring of teaching and learning its effect on student's academic

performance in selected secondary schools in Kenya, establish the efficacy of the BOM in creating a conducive environment for learning its effect on student's academic performance in selected secondary schools in Kenya, to establish the effect of principals' leadership on student's academic performance in selected secondary schools in Kenya and to assess the moderating effect of principals' leadership on the relationship between BOM efficacy and student's performance in selected secondary schools in Kenya.

The study findings revealed that there is a positive statistically significant relationship between BOM efficacy in setting strategic direction and student's academic performance in selected secondary schools in Kenya and that the BOMs set the strategic direction of the school by setting annual targets for student's performance, establishing of reward systems, identifying priorities in development projects, laying strategies to enhance performance, identifying and planning for academic requirements, providing necessary materials and making a decision on curriculum matters.

The study findings also revealed a positive statistically significant relationship between BOM efficacy in monitoring teaching and learning and student's academic performance and that the BOM monitored teaching and learning by creating extra teaching time for syllabus coverage, revision, and consultations; through feedback from learners and prefects; indirectly through the principal and active academic sub-committees of the board.

The findings also indicated that there was a positive statistically significant relationship between BOM efficacy in creating a conducive learning environment and student's academic performance in selected secondary schools in Kenya by ensuring

the adequacy of facilities, ensuring that schools are quiet and suitable for learning, ensuring schools have installed CCTV cameras to make learners self-disciplined to learn and that schools are safe and secure school environments that are conducive for learning.

Furthermore, the findings indicated a positive statistically significant relationship between principals' leadership and student's academic performance and that the principals' practices that had a positive effect on student's academic performance including: the provision of teaching, learning, and examination revision materials to prepare learners for examinations, ensuring adequacy of teachers by for the subjects, ensuring that performing teachers and learner are motivated, organizing for subject specialists to equip learners with relevant knowledge, by maintaining a visible presence in school and leading by example by their effective teaching.

Findings also indicated that principals' leadership moderated the relationship between BOM efficacy and student academic performance by creating an enabling environment and a school system that works, managing the BOM members to be productive for the betterment of the school, by being their technical advisor in matters education, by being a bridge to the teachers and by carrying out the academic mandate of the BOM on behalf of the board.

The study therefore concluded that the positive statistically significant effect of the BOM in setting the strategic direction, monitoring teaching and learning, and creating a conducive learning environment means that BOMs should enhance their efficacy in carrying out these functions because based on the study findings, this would have a statistically significant effect on student's academic performance.

The study also concluded that based on the positive statistically significant effect the principals' leadership has on student's academic performance in selected secondary schools in Kenya, principals should endeavor to consistently practice those behaviors that improve student's performance because the findings from the study infer that it would have a positive statistically significant effect student's academic performance.

Furthermore, the study further concluded regarding the moderating role the principals' leadership that the findings indicated that principals' leadership moderated the relationship between BOM efficacy and student academic performance. Some of the behaviors indicated by the principals that moderated BOM efficacy included creating an enabling environment and a school system that works and being a bridge to the teachers. The results from the study therefore implied that when the principals' leadership practice of these factors was high, the BOM efficacy would increase in the positive statistical significance in affecting student's academic performance and vice versa that if the principals' leadership does not demonstrate these practices, BOM efficacy would be negative and it would in turn have a negative statistically significant effect student's academic performance.

Principals' Leadership played a moderating role in the relationship between Board of Management (BOM) Efficacy and Student's Academic Performance in selected public secondary schools in Kenya. This implied that the effectiveness of the BOM in influencing student's academic performance is influenced by the leadership practices demonstrated by the principal. In other words, the impact of the BOM on academic outcomes was enhanced or mitigated by the leadership style, actions, and decisions of the principals within these schools. Therefore, strategic leadership development and collaborative governance approaches between the principal and the BOM maximize

educational outcomes in secondary schools hence ultimately impact student's academic performance.

5.3 Recommendations of the Study

Recommendations are made in line with the study objectives about policy, and managerial implications.

- i. The study findings established that BOM efficacy in setting the strategic direction had a positive statistically significant influence on student's performance in selected secondary schools in Kenya. Therefore, school boards should train on how to set the direction of the school so that they can be effective in the role. The BOM and principal should also rally stakeholders to work together to come up with the targets and strategies. The stakeholders should also do their part in the implementation and fulfillment of strategies both as individuals and as a team, say as class representatives and parents, teachers, learners, the community, and even the sponsor so that student's academic performance can be enhanced.
- ii. The study findings established that BOM efficacy in monitoring teaching and learning had a positive statistically significant influence on student's performance in selected secondary schools in Kenya. Therefore, the study recommends that the BOM should put down strategies to ensure that teaching and learning take place. They should also enforce the use of the TPAD to check on pupils' progress and to give feedback to teachers on their teaching. Teachers and learners should cooperate in the monitoring process so that student academic performance is heightened.
- iii. The study findings established that BOM efficacy in creating a conducive learning environment had a positive statistically significant influence on

student's performance in selected secondary schools in Kenya. Therefore, the study recommended that the BOM and the principal invest in creating the school and classroom to be a conducive environment for learning. Stakeholders assist ensure the school is safe and secure for learners, and that the infrastructure is adequate so that student's academic performance will be achieved.

- iv. The study findings established that principals' leadership had a positive statistically significant influence on student performance in selected secondary schools in Kenya. The study therefore recommends that principals should be trained so that they can demonstrate leadership that improves student academic performance. The stakeholders should each play their roles and cooperate with the principal so that academic performance is improved.
- v. The study findings established that principals' leadership had a moderating effect on the relationship between BOM efficacy and student academic performance in selected secondary schools in Kenya. Therefore, the principals should be conversant with the laws, policy documents, circulars, and any other such documents that govern institutions so that they can advise the BOM from a point of knowledge. They should also increase their leadership skills to be able to effectively moderate the BOM in their role of enhancing student academic performance. Principals should be at the center of connecting the BOM and other school stakeholders and channeling their strengths to the right use for the sake of bettering the school.

5.4 Implications of the Study

The study offers the following theoretical, policy, and practical implications to inform the educational stakeholders and policy makers in the Ministry of Education Science and Technology (MoEST) in Kenya.

5.4.1 Theoretical Implications

Exploring the moderating role of Principals' Leadership in the relationship between Board of Management (BOM) efficacy and student's academic performance in selected public secondary schools in Kenya through the lenses of Ludwig von Bertalanffy's Systems Theory (1968) and House's Path-Goal Theory of Leadership Effectiveness (1971) reveals numerous theoretical implications.

From a Systems Theory Perspective, the study perceived the school system as a complex entity comprising multiple subsystems, including the BOM, principals' leadership, teachers, students, and the broader educational environment. Understanding the interactions and influences among these subsystems was vital for grasping the overall functioning of the school system. Systems theory emphasizes feedback loops, where outputs from one part of the system impact inputs into other parts. This study explored feedback mechanisms between the BOM, principals' leadership, and student's academic performance. Effective leadership led to constructive feedback to the BOM, resulting in well-informed decisions that positively affect academic outcomes. Furthermore, systems theory emphasizes emergent properties, novel characteristics, or behaviors arising from interactions among system components. Effective principals' leadership within the school system may generate emergent properties such as improved communication, collaboration, and a positive school culture, all contributing to enhanced academic performance.

From a Path-Goal Theory Perspective, the study suggested adapting leadership styles based on situational factors and followers' needs to achieve organizational goals. Effective principals' leadership involves employing appropriate leadership styles (e.g., directive, supportive, participative) to facilitate achieving academic objectives set by the BOM. Leaders should clarify goals, remove obstacles, and provide support to help followers achieve objectives. Principals play a critical role in aligning BOM's goals with student's needs and aspirations, motivating better academic performance. Moreover, the Path-Goal Theory emphasizes clarifying paths to goal attainment by providing guidance, resources, and support to followers. Principals articulate clear paths for students to excel academically, including academic support, mentoring programs, and extracurricular opportunities. The theory stresses providing feedback on performance and adjusting leadership behaviors as necessary. Principals assess the effectiveness of their leadership approaches, solicit stakeholder feedback, and adjust for continuous improvement.

In conclusion, applying systems theory and Path-Goal Theory to the study offers insights into the complex dynamics of school leadership, organizational systems, and their impact on student's academic outcomes. Systems theory highlights the interconnectedness of various components within a school system, emphasizing feedback loops and emergent properties. On the other hand, the Path-Goal Theory underscores the importance of leadership styles, goal clarification, path clarification, and performance feedback in achieving organizational objectives. It emphasizes viewing schools as dynamic, interconnected systems and underscores the critical role of effective leadership in navigating and optimizing these systems to promote student success.

5.4.2 Policy Implications

The study findings hold multifaceted and crucial policy implications for educational policy formulation and implementation. Here are several key policy implications: Policymakers should prioritize the development and implementation of Leadership Development Programs for school principals. These programs should focus on enhancing leadership skills, fostering effective communication, promoting strategic decision-making, and strengthening collaborative approaches to school governance. By investing in the professional development of principals, policymakers can ensure that school leaders are equipped with the necessary competencies to effectively moderate the relationship between BOM efficacy and academic performance.

There's a need for policymakers to establish clear guidelines for BOM functioning within secondary schools. These guidelines should delineate the roles and responsibilities of BOM members, provide mechanisms for accountability and transparency, and emphasize the importance of collaborative decision-making processes. By setting clear expectations for BOM functioning, policymakers can ensure that BOMs operate effectively in supporting school leadership and enhancing academic outcomes.

Policymakers should allocate resources and support for School Leadership Teams, including principals and BOM members. The support could include access to professional development opportunities, mentorship programs, and networking opportunities with other school leaders. By investing in the capacity-building of school leadership teams, policymakers can strengthen their ability to effectively moderate the relationship between BOM efficacy and academic performance.

In addition, policymakers should implement robust Monitoring and Evaluation mechanisms to assess the effectiveness of principals' leadership and BOM functioning in influencing academic performance. That could involve conducting regular assessments, collecting feedback from stakeholders, and using data-driven approaches to identify areas for improvement. By systematically monitoring and evaluating school leadership practices, policymakers can identify successful strategies and best practices that can be scaled up across the education system.

Moreover, policymakers may consider implementing Incentives for Effective Leadership to reward schools and principals who demonstrate effective leadership in improving academic performance. That could include financial incentives, awards, or accreditation programs that incentivize schools to prioritize effective governance and leadership practices. By rewarding and recognizing effective leadership, policymakers can create a culture of excellence and continuous improvement within the education system.

Overall, the policy implications underscore the critical role of effective leadership, both at the principal and BOM levels, in shaping student's academic outcomes. By prioritizing leadership development, establishing clear guidelines, providing support for school leadership teams, implementing monitoring and evaluation mechanisms, and incentivizing effective leadership practices, policymakers can create an enabling environment for enhancing academic performance in secondary schools across Kenya.

5.4.3 Practical Implications

The practical implications arising from the study findings are diverse and significant for stakeholders in education. For instance, the study underscores that there is a clear need for Leadership Training Programs tailored for school principals. These programs

should concentrate on equipping principals with the requisite skills and knowledge to effectively lead and manage their schools, particularly in moderating the connection between BOM efficacy and academic performance.

Secondly, schools should offer ongoing Professional Development Opportunities for principals to enhance their leadership capabilities. That could involve workshops, seminars, and mentoring programs aimed at developing specific leadership competencies that foster collaboration between the BOM and other stakeholders to improve academic outcomes.

Moreover, it's crucial for principals to actively engage in Collaborative Decision-Making Processes with the BOM and other stakeholders concerning school governance and academic planning. It fosters a culture of transparency, trust, and mutual respect, where all parties contribute to setting academic targets, monitoring progress, and implementing interventions to support student learning.

Additionally, Principals should prioritize strategic planning that emphasizes academic excellence and student success. It requires clear objectives and actionable strategies aligned with the school's vision and mission, along with effective communication and continuous monitoring and evaluation to ensure progress toward academic goals. Furthermore, Principals should collaborate closely with the BOM to ensure optimal resource allocation and management, including finances, infrastructure, and human capital, to support teaching and learning activities. That may involve identifying and addressing resource gaps, advocating for additional resources where necessary, and ensuring efficient utilization of existing resources to maximize their impact on student academic performance.

In creating and maintaining a supportive school culture, Principals play a pivotal role. It involves promoting inclusive practices, celebrating diversity, and providing appropriate support and interventions to address the individual needs of students, fostering a sense of belonging among students and staff. Finally, Principals should adopt a growth mindset and commit to Continuous Improvement and Learning as part of their leadership journey. That involves seeking feedback, reflecting on practice, and actively seeking out opportunities for professional development to enhance leadership effectiveness and drive positive change within their schools.

In summary, the practical implication emphasizes that by investing in leadership development, fostering collaboration, and creating supportive school environments, educational stakeholders can work towards enhancing student's academic performance. Therefore, by addressing these implications, educational stakeholders can work towards enhancing academic performance and fostering student success in Kenyan secondary schools.

5.5 Contribution to Knowledge

While numerous studies have explored the relationship between Board of Management (BOM) efficacy and student academic performance, the study has expanded our understanding on the influence of school leadership on this relationship. It found that the effectiveness of the school management board in enhancing student academic performance is significantly influenced by the quality of leadership exhibited by the school principal. It underscores the pivotal role of strong leadership in schools for fostering academic success.

Specifically, the study revealed a significant moderation effect of principals' leadership on the relationship between BOM efficacy and student academic

performance. It suggests that the impact of BOM efficacy on academic outcomes may vary depending on the quality of leadership witnessed in school. Such insights not only deepen our understanding of the mechanisms at play within educational institutions but also underscore the importance of collaborative and effective leadership in achieving academic excellence.

Moreover, the study has made a notable contribution by controlling for confounding variables such as class size, school type, and school climate. By accounting for these factors, the study ensured that any observed effects on student academic performance could be accurately attributed to the variables under investigation, namely BOM efficacy and school leadership. The methodological rigor strengthens the validity and reliability of the study findings, enhancing their efficacy for informing policy and practice in the realm of education.

By combining different research methodological frameworks, analyzing moderation effects, and accounting for other factors that could influence the results, the study has not only advanced our understanding of the intricate dynamics within educational institutions but also offers valuable insights for stakeholders seeking to improve academic outcomes in secondary schools.

5.6 Suggested Areas of Further Research

The following are the key areas which may provide avenues for further research;

1. Investigating the mediating role of specific school climate factors in the relationship between principals' leadership, BOM efficacy, and academic performance presents an opportunity to explore the underlying mechanisms driving educational outcomes. For instance, through Structural Equation Modeling (SEM) analyses, researchers can further assess the extent to which

factors such as teacher-student relationships and disciplinary practices mediate the effects of leadership and governance on student's academic achievements, shedding light on the pathways through which these influences operate.

2. A comparative analysis study to explore how the moderating role of principals' leadership varies across different types of schools provides a nuanced understanding of contextual factors shaping educational effectiveness. By examining variations in urban versus rural settings or high-performing versus low-performing schools, researchers can discern how environmental contexts influence the efficacy of leadership practices in optimizing the impact of governing boards on academic performance.
3. A longitudinal study to track changes in principals' leadership and BOM efficacy over time, offering a dynamic perspective on their influence on academic performance. By analyzing these longitudinal data, researchers can discern patterns and trends, identify key predictors of academic success, and understand the temporal dynamics of leadership and governance within educational institutions.

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APPENDICES

Appendix 1: Questionnaire for Teachers

Section A: Demographic Information.

Instructions: Please tick in the appropriate bracket

1. Indicate your age bracket
 21 – 30yrs [] 31 – 40yrs []
 41 – 50yrs [] above 51yrs []
2. Indicate your gender:
 Male [] Female []
3. Highest academic qualification?
 Diploma [] Degree []
 Postgraduate Diploma [] Masters []
4. Number of years in the teaching profession?
 Less than 5 years [] 6 – 10 years []
 11 - 15 years [] above 16 years []
5. Type of school?
 National [] County []
 Extra County [] Sub County []
6. Indicate your school population
 Less than 200 [] 500 – 1000 []
 200 – 500 [] More than 1000 []
7. School gender:
 Boys [] Girls [] Mixed []
8. Average class size:
 Below 60 [] 61-80 [] over 81 []
9. Indicate the school's KCSE mean score for the last three years:
 last year:, previous year: 3 years ago:
10. Indicate the school climate (the expectation to succeed) among your learners
 very high [] moderately high [] neutral [] low [] very low []

SECTION B: INSTRUCTIONS

Please read the statements below and rate your responses on a rating scale of 5 to 1

(Strongly Agree (SA) = 5, Fairly Agree (FA) = 4, Neutral (N) = 3, Fairly Disagree

(FD) = 2, Strongly Disagree (SD) = 1)

BOM Efficacy in Setting Strategic Direction	5 SA	4 FA	3 N	2 FD	1 SD
The BOM usually takes time to plan and budget for school activities.					
The BOM involves stakeholders in setting performance targets.					
The school vision and mission are well documented/written down.					
The school vision and mission are regularly communicated to and are known by students.					
The BOM in my school emphasizes mainly on academics.					
The BOM is effective in setting the schools' strategic direction and this has positively influenced the performance.					
BOM Efficacy in Monitoring Teaching and Learning	5 SA	4 FA	3 N	2 FD	1 SD
The BOM monitors syllabus coverage and learning in general.					
The school uses records to monitor actual teaching in classes.					
The BOM makes staff accountable for their performance.					
The BOM provides opportunities to discuss academic performance.					
Our students easily and regularly consult teachers for extra help.					
The BOM is effective and hands-on in monitoring teaching and learning which has improved the academic performance of my school.					

BOM Efficacy in Creating a Conducive Learning Environment	5 SA	4 FA	3 N	2 FD	1 SD
The classroom atmosphere in the school is quiet, and friendly and creates interest in learning.					
The school environment is healthy, safe, and secure for learners.					
My school has adequate hygiene and sanitation facilities in school hence no time wasted in long queues.					
There is an established school routine and our school is orderly.					
Highly performing teachers and learners are given incentives.					
The BOM facilitates regular workshops/seminars/training for teachers.					
The BOM has effectively ensured there's a conducive learning environment, and this improved academic performance in my school.					
Principals' Leadership	5 SA	4 FA	3 N	2 FD	1 SD
There's a harmonious working relationship between the Principal and the BOM.					
Our principal is inspirational in steering the school to strive for greater heights.					
Our principal is highly visible and is involved in daily school activities.					
The focus of the principals' leadership is mainly on teaching and learning in school.					
The principal supports teachers' efforts to enhance academic performance in my school.					
The principal promotes parental participation in students' learning activities to improve their performance.					
The principal supports the disciplinary committee which has directly impacted academic performance in school.					
The principal is very passionate about preparing					

learners for national examinations.					
Student's Academic Performance	5 SA	4 FA	3 N	2 FD	1 SD
When teachers and learners are involved in setting academic targets by the BOM, it affects academic performance.					
When the BOM monitors teaching and learning, student's academic performance improves.					
If the school environment is quiet, safe, and orderly, the academic performance goes up.					
A school leadership that is supportive of teachers' efforts enhances student's academic performance.					
Exposing teachers to regular training/workshops/seminars affects learner's academic performance.					
Motivating highly performing teachers and learners influences academic performance.					

Appendix 2: Interview Schedule for Principals

1. BOM Efficacy in Setting Strategic Direction

- a) How does the BOM set the school's strategic direction?
- b) In your opinion, is the BOM effective in setting the strategic direction?

2. BOM Efficacy in Monitoring Teaching and Learning

- a) How does the BOM monitor teaching and learning in school?
- b) Would you say that the BOM is effective in it?

3. BOM Efficacy in Creating a Conducive Learning Environment

- a) How has the BOM created a conducive environment in your school?
- b) Has the BOM been effective in this role?

4. Principals' Leadership

- a) How does the principal enhance performance in school?
- b) How does the principal moderate the work of the BOM?

Appendix 3: Sample Size of a Known Population

<i>Table for Determining Sample Size of a Known Population</i>									
N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384
<i>Note: N is Population Size; S is Sample Size</i>					<i>Source: Krejcie & Morgan, 1970</i>				

Appendix 4: Mahalanobis Distance D2 Multivariate Outliers' Analysis

Residuals Statistics					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.9368	4.8721	4.567	0.2368	358
Std. Predicted Value	-2.661	1.288	0	1	358
Standard Error of Predicted Value	0.021	0.091	0.037	0.013	358
Adjusted Predicted Value	3.9144	4.8763	4.567	0.23693	358
Residual	-1.1614	0.97239	0	0.37418	358
Std. Residual	-3.091	2.588	0	0.996	358
Stud. Residual	-3.097	2.617	0	1.002	358
Deleted Residual	-1.166	0.99412	0.00001	0.37922	358
Stud. Deleted Residual	-3.135	2.638	-0.001	1.006	358
Mahal. Distance	0.118	20.075	2.992	3.132	358
Cook's Distance	0	0.061	0.003	0.007	358
Centered Leverage Value	0	0.056	0.008	0.009	358

a Dependent Variable: SAP

Appendix 5: Skewness and Kurtosis of the Transformed Variables

	Min	Max	Mean	Std. Dev	Skewness	Std. Error	Kurtosis	Std. Error
	Statistic	Statistic	Statistic	Statistic	Statistic		Statistic	
TSSD	2.58	5.27	4.1154	0.72731	-0.136	0.129	-0.651	0.257
TMTL	3.14	5.17	4.2899	0.53892	-0.125	0.129	-0.611	0.257
TCLE	2.9	5.17	4.2424	0.60803	-0.175	0.129	-0.65	0.257
TPL	3.78	5.04	4.6056	0.41535	-0.459	0.129	-0.948	0.257
TSAP	3.71	5.04	4.5562	0.39759	-0.351	0.129	-0.823	0.257

Appendix 6: Exploratory Factor Analysis for BOM Efficacy

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.929
Bartlett's Test of Sphericity	Approx. Chi-Square	3535.627
	df	171
	Sig.	.000

Communalities

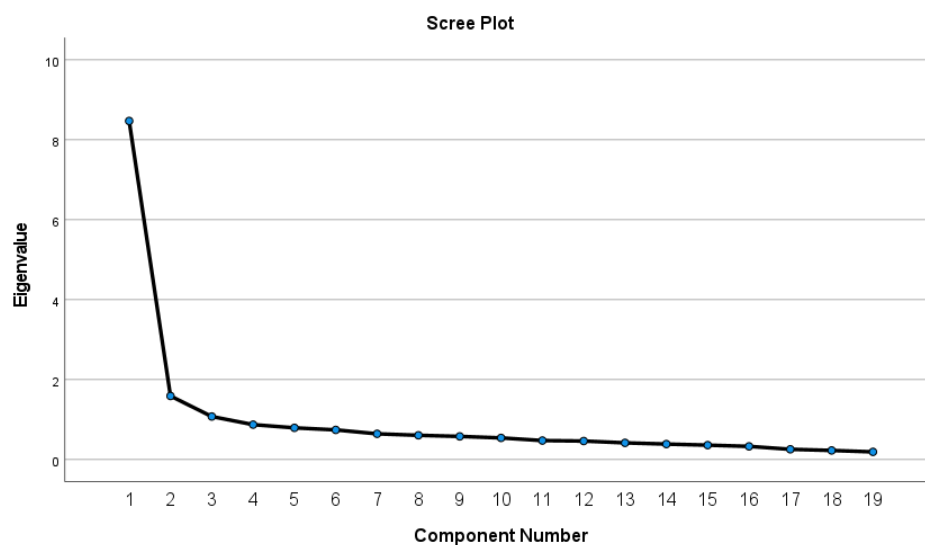
	Initial	Extraction
SSD1	1.000	.480
SSD2	1.000	.624
SSD3	1.000	.737
SSD4	1.000	.624
SSD5	1.000	.562
SSD6	1.000	.723
MTL1	1.000	.520
MTL2	1.000	.443
MTL3	1.000	.562
MTL4	1.000	.664
MTL5	1.000	.440
MTL6	1.000	.456
CLE1	1.000	.600
CLE2	1.000	.697
CLE3	1.000	.645
CLE4	1.000	.518
CLE5	1.000	.570
CLE6	1.000	.639
CLE7	1.000	.631

Extraction Method: Principal
Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared			Rotation Sums of Squared		
	Loadings			Loadings			Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.470	44.579	44.579	8.470	44.579	44.579	4.995	26.287	26.287
2	1.589	8.362	52.941	1.589	8.362	52.941	3.331	17.530	43.818
3	1.075	5.658	58.599	1.075	5.658	58.599	2.808	14.781	58.599
4	.872	4.589	63.188						
5	.792	4.168	67.357						
6	.740	3.897	71.254						
7	.642	3.381	74.635						
8	.605	3.185	77.821						
9	.578	3.040	80.860						
10	.540	2.842	83.703						
11	.474	2.493	86.196						
12	.462	2.430	88.626						
13	.416	2.191	90.817						
14	.386	2.031	92.848						
15	.359	1.889	94.738						
16	.328	1.727	96.464						
17	.255	1.343	97.807						
18	.226	1.190	98.997						
19	.191	1.003	100.000						

Extraction Method: Principal Component Analysis.



Rotated Component Matrix^a

	Component		
	1	2	3
SSD4	.754		
SSD6	.743		
SSD3	.718		
SSD2	.689		
SSD5	.655		
SSD1	.649		
MTL1	.643		
CLE6	.592		
MTL6	.589		
CLE7	.551		
CLE2		.797	
CLE1		.728	
CLE3		.728	
CLE4		.529	
CLE5		.510	
MTL4			.786
MTL3			.678
MTL5			.564
MTL2			.527

Extraction Method: Principal Component

Analysis.

Rotation Method: Equamax with Kaiser

Normalization.

a. Rotation converged in 10 iterations.

Appendix 7: Exploratory Factor Analysis for Principals' Leadership

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.938
Bartlett's Test of Sphericity	Approx. Chi-Square	2205.657
	df	28
	Sig.	.000

Communalities

	Initial	Extraction
PL1	1.000	.559
PL2	1.000	.782
PL3	1.000	.709
PL4	1.000	.707
PL5	1.000	.745
PL6	1.000	.684
PL7	1.000	.673
PL8	1.000	.764

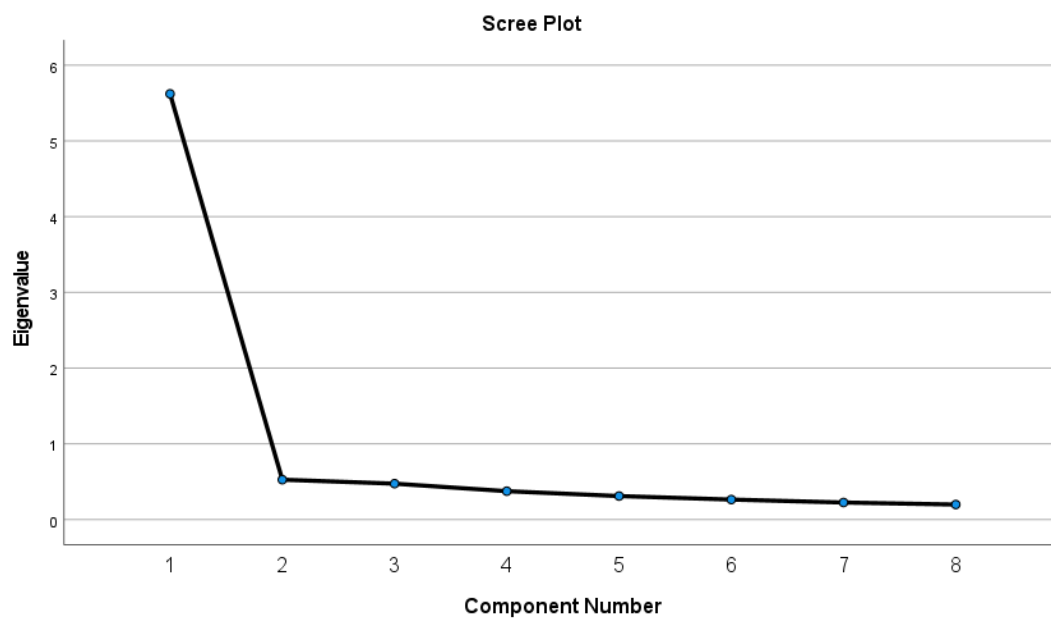
Extraction Method: Principal

Component Analysis.

Total Variance Explained

Component	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.623	70.282	70.282	5.623	70.282	70.282
2	.527	6.588	76.870			
3	.475	5.936	82.806			
4	.375	4.693	87.499			
5	.311	3.886	91.384			
6	.265	3.308	94.693			
7	.226	2.821	97.514			
8	.199	2.486	100.000			

Extraction Method: Principal Component Analysis.



Component Matrix^a

Component

1

	1
PL2	.884
PL8	.874
PL5	.863
PL3	.842
PL4	.841
PL6	.827
PL7	.820
PL1	.748

Extraction Method:

Principal Component

Analysis.

a. 1 components

extracted.

Appendix 8: Exploratory Factor Analysis for Students Academic Performance

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.775
Bartlett's Test of Sphericity	Approx. Chi-Square	757.006
	df	15
	Sig.	.000

Communalities

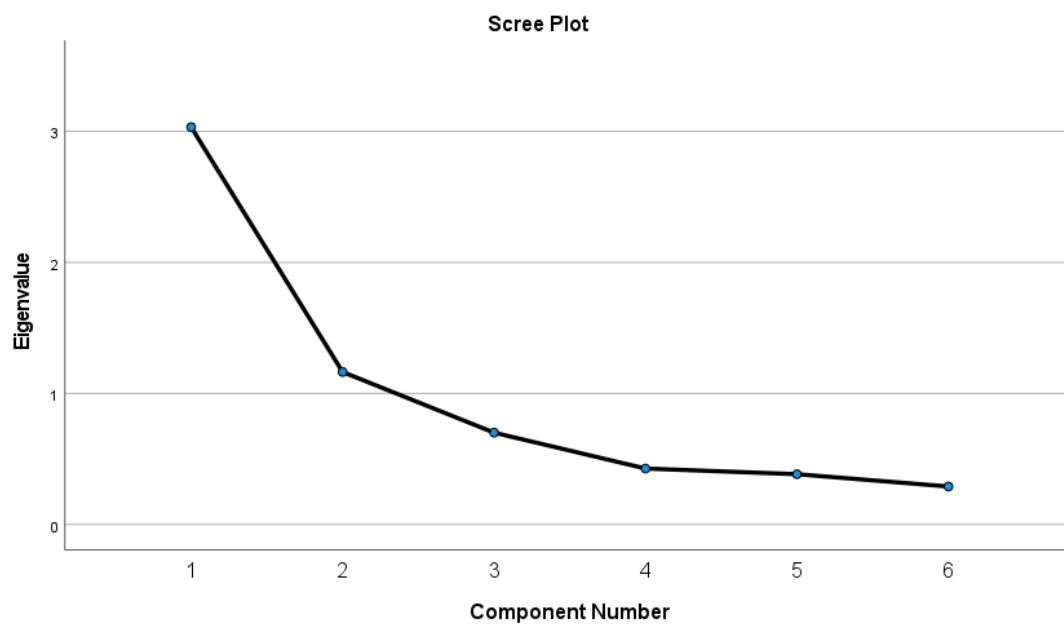
	Initial	Extraction
SAP1	1.000	.226
SAP2	1.000	.474
SAP3	1.000	.404
SAP4	1.000	.619
SAP5	1.000	.652
SAP6	1.000	.657

Extraction Method: Principal
Component Analysis.

Total Variance Explained

Component	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.033	50.550	50.550	3.033	50.550	50.550
2	1.164	19.401	69.951			
3	.701	11.686	81.637			
4	.427	7.122	88.759			
5	.384	6.404	95.163			
6	.290	4.837	100.000			

Extraction Method: Principal Component Analysis.



**Component
Matrix^a**

Component

1

SAP6	.811
SAP5	.807
SAP4	.787
SAP2	.688
SAP3	.636
SAP1	

Extraction Method:

Principal Component

Analysis.

ANOVA^c

Model		Sum of Squares	df	Mean square	F	Sig
2	Regression	106.274	4	26.568	10.696	.000 ^b
	Residual	876.810	353	2.484		
	Total	983.084	357			

a. Predictors : (constant), CZL,SCL,STP

b. Predictors: (constant), CSZ,SCL,STP,TOTSSD

Model		Sum of Squares	df	Mean square	F	Sig
2	Regression	55.174	4	13.793	5.247	.000 ^b
	Residual	927.910	353	2.629		
	Total	983.084	357			

a. Predictors : (constant), CZL,SCL,STP

b. Predictors: (constant), CSZ,SCL,STP,TOTMLT

Model		Sum of Squares	df	Mean square	F	Sig
2	Regression	93.072	4	23.268	9.229	.000 ^b
	Residual	890.012	353	2.521		
	Total	983.084	357			

a. Predictors : (constant), CZL,SCL,STP

b. Predictors: (constant), CSZ,SCL,STP,TOTCLE

Model		Sum of Squares	df	Mean square	F	Sig
2	Regression	118.405	4	29.601	12.085	.000 ^b
	Residual	864.679	353	2.450		
	Total	983.084	357			

a. Predictors : (constant), CZL,SCL,STP

b. Predictors: (constant), CSZ,SCL,STP,TOTPL

c. Dependent variable: TOTSAP

Coefficients

Model		Unstandardized coefficients		Standardized coefficients		Sig	Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t		Zero-order	Partial	Part	Tolerance	VIF
2	Constant	15.577	.622		25.059	.000					
	SCL	-.068	.110	-.036	-.613	.540	-.048	-.033	-.031	.733	1.365
	STP	-.034	.086	-.024	-.400	.690	-.038	-.021	-.020	.729	1.371
	CZS	-.039	.151	-.013	-.261	.794	-.011	-.014	-.013	.980	1.020
	TOTSSD	.208	.032	.325	6.463	0.000	.324	.325	.325	.999	1.001
2	Constant	17.092	.543		31.461	.000					
	SCL	-.049	.114	-.026	-.432	.666	-.048	-.023	-.022	.731	1.368
	STP	-.045	0.89	-.031	-.505	.614	-.038	-.027	-.026	.728	1.374
	CZS	-.020	.156	-.007	-.130	.897	-.011	-.007	-.007	.981	1.019
	TOTMTL	.162	.036	.232	4.475	.000	.231	.232	.231	.997	1.003
2	Constant										
	SCL	-.059	.111	-.031	-.528	.598	-.048	-.028	-.027	.732	1.365
	STP	-.048	.087	-.033	-.549	.583	-.038	-.029	-.028	.728	1.373
	CZS	-.054	.153	-.018	-.352	.725	-.011	-.019	-.018	.979	1.021
	TOTCLE	.172	.029	.304	5.993	.000	.302	.304	.303	.996	1.004
2	Constant	14.481	.734		19.742	.000					
	SCL	-.024	.110	-.013	-.221	.825	-.048	-.012	-.011	.730	1.370
	STP	-.117	.087	-.080	-1.346	.179	-.038	-.071	-.067	.713	1.403
	CZS	-.119	.151	-.040	-.790	.430	-.011	-.042	-.039	.971	1.030
	TOTPL	.132	.019	.350	6.878	.000	.333	.344	.343	.964	1.038

Appendix 10: Moderation Results

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.2 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model : 1
Y : TOTSAP
X : TOTIV
W : TOTPL

Covariates:
SCL STP CSZ

Sample
Size: 358

OUTCOME VARIABLE:
TOTSAP

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4007	.1605	2.3512	11.1878	6.0000	351.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	19.1919	.3034	63.2617	.0000	18.5953	19.7886
TOTIV	.0413	.0150	2.7560	.0062	.0118	.0708
TOTPL	.1357	.0309	4.3969	.0000	.0750	.1964
Int_1	.0074	.0030	2.4269	.0157	.0014	.0134
SCL	-.0296	.1075	-.2756	.7830	-.2411	.1819
STP	-.1184	.0854	-1.3863	.1665	-.2863	.0496
CSZ	-.0907	.1481	-.6128	.5404	-.3819	.2005

Product terms key:

Int_1 : TOTIV x TOTPL

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0141	5.8899	1.0000	351.0000	.0157

Focal predict: TOTIV (X)
Mod var: TOTPL (W)

Conditional effects of the focal predictor at values of the moderator(s):

TOTPL	Effect	se	t	p	LLCI	ULCI
-4.3969	.0088	.0220	.3997	.6896	-.0345	.0520
.0000	.0413	.0150	2.7560	.0062	.0118	.0708
3.1844	.0649	.0162	4.0102	.0001	.0331	.0967

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

```
DATA LIST FREE/
TOTIV TOTPL TOTSAP .
BEGIN DATA.
-6.8513 -4.3969 18.0221
.0000 -4.3969 18.0824
6.8513 -4.3969 18.1426
-6.8513 .0000 18.3960
.0000 .0000 18.6791
```

6.8513	.0000	18.9623
-6.8513	3.1844	18.6668
.0000	3.1844	19.1114
6.8513	3.1844	19.5559

END DATA.

GRAPH/SCATTERPLOT=

TOTIV WITH TOTSAP BY TOTPL .

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:

95.0000

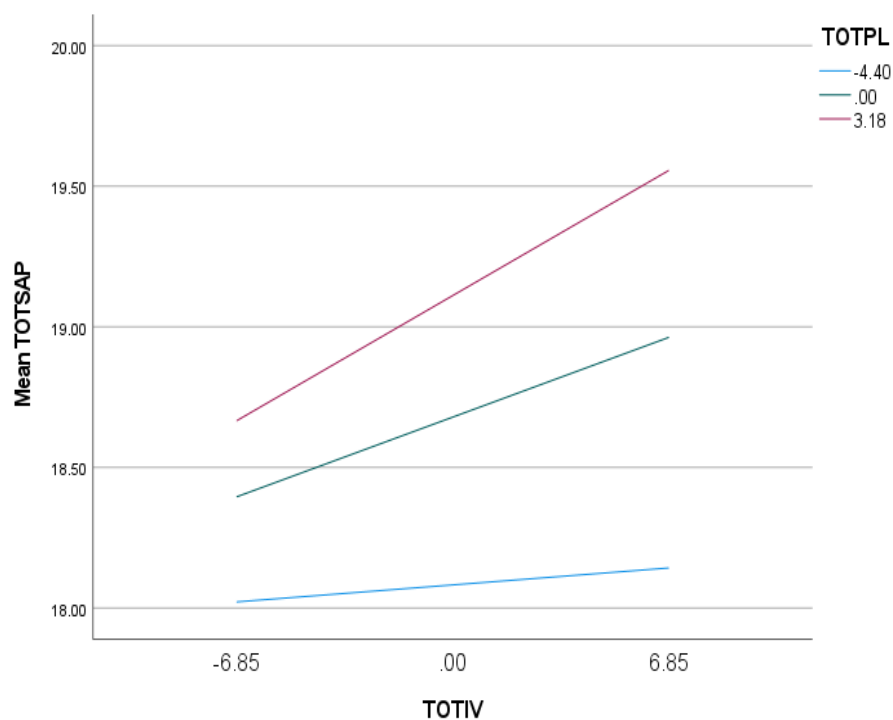
W values in conditional tables are 1 SD below the mean, the mean, and the maximum.

NOTE: One SD above the mean is above the maximum observed in the data for W, so the maximum measurement for W is used for conditioning instead.

NOTE: The following variables were mean centered prior to analysis:

TOTPL TOTIV

----- END MATRIX -----



Appendix 11: Letter of Introduction

Department of Educational Management and Policy Studies
School of Education,
Moi University.

Dear Sir/Madam,

RE: LETTER OF INTRODUCTION

I am a PhD student taking a course in Educational Management. As part of the course, I am carrying out research to find out how effective Boards of Management are in carrying out their mandate of improving student's academic performance in schools as well as the role of the principal.

The study is expected to shed light on how BOM and Principal can be effective in helping improve student's academic performance.

This is therefore to request you to fill all the questions in the attached questionnaire by ticking on the space that best suits your experience. Confidentiality will be strictly adhered to. Do not write your name or school anywhere on it.

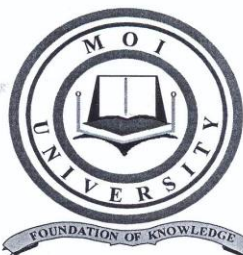
Thank you,

Florence Tanui Chesseret.

EDU/ D.PHIL.A/1013/11

Tel: 0727635253

Appendix 12: Research Permit and Other Letters of Approval



MOI UNIVERSITY
Office of the Dean School of Education

Tel. Eldoret (053) 43001-8/43620
Fax No. (053) 43047

P.O. Box 3900
Eldoret, Kenya

REF: EDU/D.Phil.A/1013/11

DATE: 15th September, 2022

THE EXECUTIVE SECRETARY

National Council for Science and Technology
Box 30623-00100
NAIROBI

Dear Sir/Madam,

RE: RESEARCH PERMIT IN RESPECT OF FLORENCE J. TANUI
CHESSERET – EDU/D.PHIL.A/1013/11

The above named is a 2nd year Doctor of Philosophy Student at Moi University, School of Education, Department of Educational Management & Policy Studies.

It is required of her PhD studies to conduct a research project and produce a research report. Her research topic is entitled:

“Board of Management Efficacy, Principals’ Leadership and Student’s Performance in National Examinations in Selected Public Secondary Schools in Kenya.”

Any assistance given to enable her conduct research successfully will be highly appreciated.

Yours faithfully,

PROF. ZACHARIAH KOSGEI
AG. DEAN, SCHOOL OF EDUCATION



(ISO 9001:2015 Certified Institution)

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Ref No: 389425	Date of Issue: 23/September/2022
RESEARCH LICENSE	
	
This is to Certify that Ms. Florence J. Tanui Chesseret of Moi University, has been licensed to conduct research in Elgeyo-Marakwet, Nandi, Uasin-Gishu on the topic: Board of Management Efficacy, Principal's Leadership and Student's Performance in National Examinations in Selected Public Secondary Schools in Kenya for the period ending : 23/September/2023.	
License No: NACOSTI/P/22/20598	
389425 Applicant Identification Number	 Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION Verification QR Code
 NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.	



MINISTRY OF EDUCATION
STATE DEPARTMENT FOR EARLY LEARNING AND BASIC EDUCATION

Email: cdenandicounty@yahoo.com

Telephone: 0773044624

When replying please quote

County Director of Education

NANDI COUNTY,

P. O. Box 36-30300,

KAPSABET.

Ref: NDI/CDE/RESEARCH/1/VOL.111/42

Date: 2nd November, 2022

Ms. Florence J. Tanui Chesseret

Moi University

P.O Box 3900

ELDORET.

RE: RESEARCH AUTHORIZATION.

Reference is made to the National Commission for Science, Technology and Innovation's letter Ref: No. NACOSTI/P/22/20598 dated 23rd September, 2022.

The above named person has been granted permission by the County Director of Education to carry out research on *"Board of Management Efficacy, Principal's Leadership and Student's and Student's Performance in National Examinations in Public Secondary in Nandi County, Kenya"* for the period ending 23rd September, 2023.

Kindly provide her all necessary support she requires.

Mathew Sum

For: County Director of Education,

NANDI COUNTY.

For: *County Director
of Education*
NANDI COUNTY



**REPUBLIC OF KENYA
MINISTRY OF EDUCATION
STATE DEPARTMENT FOR EARLY LEARNING AND BASIC EDUCATION**

TELEGRAM:.....
TELEPHONE NO: 0534142207
WHEN REPLYING PLEASE QUOTE OUR REFERENCE
EMAIL: cdeelgeyomarakwet@gmail.com

COUNTY DIRECTOR OF EDUCATION
ELGEYO MARAKWET COUNTY
P.O. BOX 214-30700
ITEN

DATE: 4th November, 2022

REF No: *CDE/EMC/R/26/VOL.IV/ (74)*

Ms Florence J. Tanui

RE: RESEARCH AUTHORIZATION

Following the authorization by the National Commission for Science, Technology and Innovation (NACOSTI) to carry out research in **Elgeyo Marakwet County** Vide Authority letter Ref. No. NACOSTI/P/ 22/20598 dated **23rd September, 2022** you are hereby formally granted authority by this office to proceed with your study on *“Board Of Management Efficiency, Principal’s Leadership And Student’s Performance In National Examinations In Selected Public Secondary schools in Elgeyo Marakwet County, Kenya for a period ending 23rd September, 2023.*

Okwemba O.V.
For: County Director of Education
ELGEYO MARAKWET



Copy to:

1. The Director General/CEO -NACOSTI
2. The Sub-County Directors of Education- Elgeyo Marakwet County





REPUBLIC OF KENYA
MINISTRY OF EDUCATION

State Department for Early Learning and Basic Education

Email: cdeuasingishucounty@gmail.com

: cdeuasingishucounty@yahoo.com

When replying please quote:

County Director of Education,

Uasin Gishu County,

P.O. Box 9843-30100,

ELDORET.

Ref: No. MOE/UGC/TRN/9/VOLL. IV/120

7TH November, 2022

Ms. Florence J. Tanui Chesseret
Moi University
P.O Box 3900
ELDORET.

RE: RESEARCH AUTHORIZATION.

In reference to your Licence Ref no. **NACOSTI/P/22/20598** dated 23rd September, 2022 from National Commission for Science, Technology and Innovation (NACOSTI), you are hereby granted the authority to carry out research on "**Board of Management Efficacy, Principal's Leadership and student's performance in National Examinations in selected Public Secondary in kenya Period Ending 23rd September, 2023,**" Within Uasin Gishu County.

We take this opportunity to wish you well during this data collection.


FOR COUNTY DIRECTOR OF EDUCATION
UASIN GISHU COUNTY
P.O. Box 9843-30100 ELDORET
Sign.....

Indimuli Harrison
For: County Director of Education
UASIN GISHU.



Appendix 13: Plagiarism Report



SR467

ISO 9001:2019 Certified Institution

THESIS WRITING COURSE

PLAGIARISM AWARENESS CERTIFICATE

This certificate is awarded to

FLORENCE J. TANUI CHESSERET

EDU/ D.PHIL.A/1013/11

In recognition for passing the University's plagiarism

Awareness test for Thesis: entitled: **BOARD OF MANAGEMENT EFFICACY, PRINCIPAL LEADERSHIP AND STUDENTS' ACADEMIC PERFORMANCE IN SELECTED PUBLIC SECONDARY SCHOOLS IN KENYA** With similarity index of 1% and striving to maintain academic integrity.

Word count: 51232

Awarded by

Prof. Anne Syomwene Kisilu

CERM-ESA Project Leader Date: 14/03/2024