PLANNING DYNAMICS AND ITS INFLUENCE ON ACADEMIC PERFORMANCE OF UPGRADED EXTRA-COUNTY SCHOOLS TO NATIONAL STATUS IN WESTERN KENYA COUNTIES

BY

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DECLARATION

Declaration by the Candidate

This thesis is my original work and has not been presented for any other award in any other university. No part of this thesis may not be reproduced without the prior permission of the author or University of Eldoret.

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DEDICATION

This thesis is dedicated to my dear husband: Simon and my beloved children, Susan, Pamela, Mike and Hesbon.

ABSTRACT

A report by Auditor General for the year 2018 showed that the upgraded 85 National Schools had recorded increased enrolment of students but these institutions experienced strained instructional, human and infrastructural facilities. The report noted that the upgrading of these schools to national status resulted to deterioration and congestion of the existing facilities with 73.0% of classrooms holding more than 45 students. This situation impelled the study to examine planning dynamics and its influence academic performance of upgraded extra-County Schools to national status in Western Kenya Counties. To achieve the purpose of the study, the following were specific objectives: to determine the influence instructional material planning on academic performance of upgraded National Schools, to examine the infrastructure dynamics on academic performance of upgraded National Schools, to establish the human resource dynamics on academic performance of upgraded National Schools and to assess the financial dynamics influence academic performance of upgraded Extra County Schools to national status in Western Kenya Counties of Bungoma, Kakamega, Vihiga and Busia. The study was guided by resource-based view theory to explain the interactions between independent and dependent variables. The study used a pragmatic philosophical paradigm which combines the use of qualitative and quantitative approaches. The research adopted a descriptive research design; the target population were 295 teachers and eight Principals in upgraded Extra County Schools to national level. Sample size calculation formular by Role was used to get 170 teachers who were selected through simple random sampling method whereas all eight Principals were selected using purposive sampling. Data for this investigation was collected through teacher questionnaire, interview schedule for Principal and document analysis guide for secondary data. Expert judgment was used to determine validity of the data collection tools. Test re-test technique was used to determine the reliability of the research questionnaire for teachers. The collected data was analyzed by use of descriptive statistics and inferential statistics with the presented using frequency tables and graphical illustration. The hypothesis for the study was tested at 0.05 significant levels. Qualitative data was analysed through thematic content analysis and presented through narrations. It was established that, only financial resource mobilisation had significant relationship with academic performance of upgraded National Schools in Western region. Human resource (r=0.070, p=*0*.380), instructional (r=0.074, p=*0*.357) and (infrastructural facilities r=0.063, p=*0*.432) had no significant (p>0.05) relationship with performance of the upgraded schools to national level in Western Kenyan Counties. The research concludes that with increased enrolment of learners, the TSC and BOM did not adequately supply teachers and support staff. The increased enrolment did not match with increased infrastructure facilities. The provision of instructional learning resources prior to upgrading was not done hence affecting teaching and learning. Only financial planning strategies were the found to positively affecting academic performance. The study concludes that not much planning had been done and actualised in upgraded National Schools to match increased enrolment resulting to decline in performance. The study recommends that national government Ministry of Education to provide text-books to schools should be enhanced to ensure they reach the target students on time. This will enhance effective curriculum process. TSC need to consider providing additional teachers required in schools to address the current shortfall that is low.

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
BOM	Board of Management
FDSE	Free Day Secondary Education
FSE	Free Secondary Education
HRM	Human Resource Management
ICT	Information Communication Technology
IGAs	Income Generating Activities
KCPE	Kenya Certificate of Primary Education
KCSE	Kenya Certificate of Secondary Education
MOE	Ministry of Education
NG-CDF	National Government Constituency Development Fund
NPE	National Policy on Education
ODEL	Open and Distance Education Learning
PA	Parents Association
RBV	Resource Based View Theory
SCDE	Sub County Director of Education
SPSS	Statistical Product and Service Solutions
TLR	Teaching and Learning Resources
TSC	Teachers Service Commission
UNESCO	United Nations Education, Scientific and Cultural Organisation
UNICEF	United Nations Children Emergency Fund
USA	United States of America
ZQASOs	Zonal Quality Assurance and Standards Officers

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CHAPTER ONE

INTRODUCTION TO THE STUDY

1.1 Introduction

This chapter describes the background information to the study; outline the problem statement under investigation, the study purpose, main and specific research objectives and related research questions. The chapter also presents the significance of the study, justification of the study, scope and limitations of the study. The theoretical framework is elaborated and eventually the chapter defines the terms according to their contextual meaning as used in the study.

1.1 Background of the Study

Education is seen as the sure way through which children would realise better and more productive lives in future since it aids in social, economic and political development of nations across the world (Mobegi, Ondigi & Oburu, 2010; Ipata, 2011). Education provides knowledge and skills to the population, as well as shaping the personality citizens in a country (Njegere, 2014). From the time the country gained independence, the government reformed its education into three pillars; manpower requirements, social demand and cost benefit analysis strategies (Namaswa, 1989). Over the years, this has been necessitated with the need for improving access to quality basic education for attainment of national goals of education, vision 2030 and Sustainable Development Goals [SDGs] (Republic of Kenya, 2012).

For these goals to be achieved, planning has to take place at both national and school level. This thesis focuses on the planning dynamics happening at school level in upgraded National Schools in Western Kenya. Scholars (Cook, 2005; Jamiana & Baharom, 2012; Kisembe & Were, 2014) indicated that a school that is well planned

would be properly for positive of education that would enhance better economic, social and political liberation, efficient teaching and learning in classrooms and improved students academic performance. The performance of schools can be in both academic and non-academic fronts. According to the directions from the Ministry of Education (MOE), as the country gears towards competency based education curriculum, the measurement of performance shall go beyond examinations to incorporate other indicators like participation in co-curricular activities (Republic of Kenya, 2012). Planning dynamics for education could also be a means to foresee and incorporate emerging issues that would affect educational institutions for now and future (Kisembe & Were, 2014).

In United Kingdom, Cook (2005) observed that schools were expected to arrive at determinations concerning imminent period ahead before the future renders or forces the decisions insignificant. According to Bryson, strategic consideration is grounded based on data that is collected concerning a school. Gathering of data systematically would result as an advantage of strategic planning dynamics; enhanced decision-making. In dynamic strategic planning, important issues and drawbacks need to be known and planned for and enhanced institutional receptiveness and increased academic performance (McEwan, 2015). Itegi (2016) indicated that planning process which is done strategically could be one of the most efficient approaches for influence reforms in secondary schools if the procedure is inclusive of all stakeholders. Successful planning efforts produce many benefits to the school and school management need to devise planning strategies (Crawford, 2016).

Planning in secondary schools in Kenya has been conceptualised by the Education Master Plan which was developed for years 1997-2010 to focus on human resources,

infrastructural facilities, instructional materials and financial resources (Nyatuka & Ndiku, 2015). In educational establishment especially secondary school Board of Management (BOM) has many things to take into account when measuring effectiveness of the institution such as, financial management, staff development, health and safety, child protection, attendance, of course curriculum implementation and teaching and learning (Lasoi, et al., 2017).

In United States of America, Fieldings and Simpson (2003) observed that if secondary schools were to thrive in human resource management practices, appropriate infrastructural and instructional facilities needed to be planned in advance to ensure they are available. This would enable members of staff to put most of their time in their responsibilities both inside and outside the classrooms (Muofhe, 2012). Still in USA, the government has installed methods of ensuring that all public secondary schools do have all needed physical infrastructural facilities, instructional materials among others aspects that would result to efficient process of teaching-learning (Williams, et al., 2008).

In Nigeria, Owoeye and Olatunde (2011) indicate that the government expects that learning institutions should have proper infrastructural facilities to enable these institutions function properly. Crawford (2016) adds that human resource factors associated with the teaching personnel need to be properly planned for to ensure they interpret curriculum documents into practice in schools calling for the school management to ensure adequate staff that are motivated and experienced. Nevertheless, research conducted in several African countries found that majority of secondary schools teachers mainly taught in poorly equipped institutions (infrastructural and instructional) and with teachers who are not well professionally

developed (Potterton & McKenzie, 2014; Ogbu, 2016). Tety (2016) research conducted in Tanzania found that secondary schools in the Rombo area faced a shortage of learning essentials which affected quality education provision. This shows secondary schools faces planning dynamic gaps in ensuring quality education is provided.

Kenya has four tiers of secondary schools which have been categorised by Ministry of Education. these categories of schools are 'elite government schools' known as National Schools and are the most prestigious institutions in the country, second is the Extra County Schools (formerly Provincial Schools), the third are County Schools and the fourth are Sub County secondary schools. Initially before they were upgraded, they consisted of eighteen single sex boarding secondary schools that enrolled around 3000 students who topped Kenya Certificate of Primary Education (KCPE) examinations (Lucas & Mbiti, 2014). Compared to other schools, National Schools have enhanced resources (physical and instructional), provided larger types of subjects, and offered an advanced quality of teaching personnel. For example in the year 2007, 80.0% teachers in National Schools possessed bachelors' degree than 68.0% of teachers in the low cadres of schools. This means that national schools were the most financed institutions in Kenya.

Moreover, teachers in National Schools were twice as expected to possess higher qualifications than teachers in lower cadre schools. Further, the National Schools offered an average of 16 Kenya Certificate of Secondary Education (KCSE) examinable subjects than 11 subjects other categories of schools lower than them. According to Lucas and Mbiti (2014), the extra examinable subjects like Aviation and German appeared to be too hard and costly to be taught in lower categories of schools

rather than national because of parents' inability to meet the education costs associated with them. Majority of 1,000 Extra County Schools which are classified in the second tier after national ones, usually enrol top performing remaining students from within a region. While the approximately 3,000 County Schools, the third in the tier, draw students from the County and neighbouring Counties who could not be enrolled into national or extra County (formerly Provincial) schools. The bottom of the tier is Sub County Schools which draw and enrol their students from sub Counties and end up admitting more students that the other three categories of schools.

The situation justifies why the government of Kenya utilises a considerable amount of money on secondary education from the year 2003 when Free Primary Education (FPE) was introduced as this led to increased demand for secondary school places (Nyawira, 2019). The government of Kenya keeps increasing finances budgeted for education sector each year. Based on Kenya Economic Survey (2020) report, the total expenditure for Ministry of Education was expected to increase by 9.2% to Kshs. 496.8 billion in 2019/2020 financial year from Kshs. 455.1 billion in 2019/2018 financial year. Based on the statistics, the recurrent expenditure was expected to increase by 9.4% from 428.2 billion in 2018/2019 financial year to Ksh 468.4 billion 2019/2020 whereas the developmental expenditure was expected to increase by 5.5% from Ksh. 26.9 billion in 2019 to Ksh 28.3 billion in 2019/2020. The above statistics show that recurrent expenditure takes the lion share (through payment of salaries to teaching staff) of the government allocation to the education sector leaving the school administration and parents to make plans for ensuring that the developmental needs are realised.

Teachers Service Commission (TSC) is the one government agency which usually takes the highest financial share (58.9%) of allocation to the Ministry while State

Department of Early Learning and Basic Education took 8.4 billion in 2019/2020 financial year (Kenya National Bureau of Statistics, 2020). Despite the increase in developmental budget towards supporting educational infrastructure, majority of public secondary schools in the country learning facilities is poor (Ngoko, 2019).

In Western Kenya Region counties, school environmental aspects like availability of instructional materials, physical facilities availability, size of classroom and location of the school are variables within the institution that may influence the planning dynamic of upgraded Extra County schools to National status. It is evident that before upgrading Extra County Schools to National Schools, some lacked adequate facilities and learning resources (County Education Office Bungoma, 2018). The condition of instructional materials, infrastructural facilities and other equipments are obsolete, dilapidated, inadequate, and/or not suitable for ensuring there is proper teaching and learning process. This situation increases worry about the preparedness of these schools serving as National Schools. The large numbers of upgraded National Schools that are in such conditions reflect a sign of the ineptitude of the educational planning systems of monitoring and regulation of these academic institutions in providing quality education for improved performance.

1.1.1 Upgrading of National Schools in Kenya

For many years, the country had three tier of secondary schools; National, Provincial and District Schools. Before 2010, the country had only 18 schools categorised as National level (Siringi, 2014). However, with the passage of new constitution in 2010, there was need for the country to ensure that equality and equity in the provision of basic education for all children in the country (Ngoko, 2019). The situation resulted to Ministry of Education to elevate 30 more Provincial Schools to National status in the

year 2011. This brought the number of national schools to 48 with the aim of increasing equity in access to secondary education for all children. The decision by the government to upgrade these schools was necessitated by the government policy in the year 2003 of Free Primary Education and 2008 policy on tuition free secondary education. This led to the call for the government to expand the education infrastructure in secondary schools to ensure realisation of Sustainable Development Goals (SDGs).

In the year 2013, the Ministry of Education further upgraded 30 more Extra County Schools to national status to promote equity, national unity and cohesion leading the total number of schools to 78 National Schools from different Counties in Kenya. According to Siringi (2014), The Ministry of Education provided Ksh 25 million to all upgraded National Schools in the year 2013 to plan and prepare them for their new status through purchase of adequate infrastructure facilities and expansion of the existing ones. The elevated schools were selected based on their past KCSE performance when they were classified as Extra County Schools. Some of them regularly hit a mean grade of C+ and above in KCSE exams but majority scored poorly in 2013 KCSE examinations.

Ngoko (2019) observed that the upgrading process did not stop there and 27 more schools were added making resulting to 105 national schools by the year 2014. Another reason that the government had during the upgrading of schools process was to make sure that the new National Schools spread across all fourty seven Counties of Kenya served as centres of academic excellence (Kafu, 2018a). Before the 2011, there were no any National School in the whole Western Kenya and therefore, from 2011-2014 a total of 8 Extra County Schools were upgraded to national school status and

these are: Lugulu Girls, Bunyore Girls, Friends School Kamusinga, Butula Boys, Kakamega Boys, Butere Girls, Kolanya Girls and Chavakali Boys. However, Ngoko's (2019) article that appeared in The Standard Newspaper online edition of February 16th noted that one of the upgraded national school in Busia County was seeking finance to help revamp its infrastructure because the girls were seen trekking to look for water causing uproar among education stakeholders. Further, Odanga (2019) reported that a team was formed by Busia County Education Board to probe why the one of the upgraded school did not record an 'A' grade in 2019 KCSE examinations. One of the reasons given was that with a total of 1200 students admitted the available facilities were inadequate despite upgrading the institution to national status; the facilities have remained the same.

Nyawira (2019) indicated that the auditor general report in upgraded National Schools in the country (85 in number) points a grim picture. The report noted that the upgraded National Schools in the country continued to enrol more learners without adequately expanding or improving the existing infrastructure. This went against the Basic Education Regulations of 2015. On other hand, one of the upgraded National School (girls) has become a pale shadow of its former outstanding fete of being the country's volleyball champions with the last title earned more than 10 years ago (Makhandia, 2019).

Another school that has recorded decreased in co-curricular performance used to be the national champions in rugby. The issue of inadequate finance to support sports activities and talented athletes were some of their challenges that their institutions were grappling with (Makhandia, 2019). This show that some of the upgraded National Schools were grappling with performance after they were from the year 2014.

It was against this situation that the study investigated the influence of planning dynamics and academic performance of upgraded Extra County Schools to national level in Western Kenya Counties, Kenya.

1.2 Statement of the Problem

The upgraded national schools in Western Kenya experience students' wastage in the form of repetitions, dropouts, low completion and transition rates to tertiary education (Western Kenyan Counties Director of Education Offices, 2018). Further, the academic performance of upgraded National Schools is still below the expectations in KCSE examinations for the past five years (Table 4.3). According to Siringi (2014), the chair of KNEC during release of 2013 KCSE indicated that some upgraded National Schools performed dismally (reduction in mean scores) as they were trounced by Extra County and County ones. Further, Nyawira (2019) article in the Daily Nation online edition of 10th January noted that with the upgrading programme of Extra County Schools to national status, existing facilities were strained due to the large number of students enrolled. It is also not known whether the amount of schools received by one of the upgraded school in the region in the financial 2014/2015 of Ksh. 15 million was enough to expand the existing infrastructure to accommodate new students.

The question that the study asked is: other than the capitation grants received from the MOE, were there other financial and resource planning dynamics that the institutions had in place to ensure quality education was attained? This situation increased worries in relation to planning dynamics and the preparedness of these schools serving as National Schools as there are challenges facing their development (Regional Director of Education, 2018). This study therefore assessed the planning dynamics on

academic performance of extra-County Schools that were upgraded to national status in Western Kenya Counties, Kenya.

1.3 The Purpose of the Study

The purpose of the investigation was to determine the planning dynamics that influence the academic performance of the upgraded National Schools in Western Kenya counties of Bungoma, Vihiga, Busia and Kakamega.

1.4 Research Objectives

The main objective of the study was to investigate the influence of planning dynamics on performance of the upgraded National Schools in Western Kenya Counties. However, the subsidiary objectives of the study were:

(i) To determine the instructional material dynamics on academic performance of upgraded National Schools in Western Kenya Counties.

(ii) To examine the infrastructure dynamics on academic performance of upgraded National Schools in Western Kenya Counties.

(iii) To establish the human resource dynamics on academic performance of upgraded National Schools in Western Kenya Counties.

(iv) To assess the financial resource dynamics on academic performance of upgraded National Schools in Western Kenya Counties.

1.5 Research Questions

The main research question is: What is the influence planning dynamics on academic performance of upgraded extra county school to national status in Western Kenya counties?

1.5.2 Subsidiary Research Questions

The study was guided by the following research questions:

(i) How does planning of instructional materials affect academic performance of upgraded National Schools in Western Kenya Counties?

(ii) How does planning for physical infrastructure affect academic performance of upgraded National Schools in Western Kenya Counties?

(iii) How do human resource dynamics affect academic performance of upgraded National Schools in Western Kenya Counties?

(iv) What is the influence of financial resource dynamics on academic performance of upgraded secondary schools in Western Kenya Counties?

1.5.1 Research Hypotheses

H_{01} There is no significant relationship between instructional material dynamics and academic performance of upgraded secondary schools in Western Kenya Counties

H_{02} There is no significant relationship between infrastructural resource dynamics and academic performance of upgraded secondary schools in Western Kenya Counties

H_{03} There is no significant relationship between human resource dynamics and academic performance of upgraded secondary schools in Western Kenya Counties

H_{04} There is no significant relationship between financial resource dynamics and academic performance of upgraded secondary schools in Western Kenya Counties

1.6 Justification of the Study

The government has the responsibility of ensuring quality education is provided to all children in Kenya. However, the situation is upgraded national schools in Western

Kenya is quite not good. The students' numbers being enrolled every year has increased as a result of government 100.0% transition policies. The money allocated through capitation from the Ministry of Education is not adequate to facilitate effective learning in these upgraded schools. Hence, schools are required to come up with plans on how to address the challenges they are facing with the intention of improving their institution performance. The academic performance of the upgraded national schools depends on how schools have planned for financial, infrastructure, human and instructional materials provision.

1.7 Significance of the Study

The study findings are expected to be significant to the following stakeholders; BOM, Principals, teachers, students, parents, MOE, TSC and future scholars. At first the BOM stands to benefit from the study as recommendations are made on how they can put proper plans through engagement of all stakeholders to ensure that schools goals and objectives are attained. Secondly, Principals of upgraded secondary schools will be benefit from the findings of this study as gaps in academic performance associated with having inadequate facilities is captured for the purpose of planning improvement of education standards offered by National Schools. The teachers of the upgraded secondary schools will benefit since their human resources needs and instructional needs will be addressed to enable them perform their jobs effectively, hence, improved performance.

Students will also benefit from the findings of the study as learning environment will be improved to ensure their academic needs are met. For parents, recommendations are made on how they can fully partner in schools in planning activities for the purpose of improving their schools facilities. To the Ministry of Education,

recommendations are made on how they are supposed to ensure the upgraded schools receive adequate financial support to ensure quality of education is not compromised. To the TSC, recommendations are made on how they can ensure that adequate teachers are provided to upgrade National Schools to address human resource crisis that has grappled these institutions.

Future studies will benefit in that the study since the findings adds to existing knowledge on preparedness of upgraded National Schools in regard to adaptability to their current national status since it would add more knowledge to existing literature on planning dynamics of upgraded County secondary schools to national status.

1.8 Limitations and Scope of the Study

1.8.1 Limitations of the Study

The following are the limitations that were experienced during the study:

i. One key limitation of the study was the use of upgraded national secondary schools alone when there were County Schools in Western Kenya Region as well. This would make generalization of the difficult. However, this was alleviated by ensuring that the random sampling technique was incorporated during sampling procedure, so as to ensure that the sample is representative of the whole study population for purposes of making generalisation of the study findings.

ii. Another limitation was non-cooperation from some respondents because of their busy schedules. The research therefore gave them more ample time to complete the instrument. Furthermore, interview sessions with the upgraded schools principals were re-arranged at times because work related issues.

1.8.2 Scope of the Study

This investigation was conducted in upgraded Extra County Schools to National level in Western Kenya Counties. Therefore, the result reflects the situation in upgraded National Schools in the study area. Moreover, the study focused on the four planning dynamics area; instructional sources, human resources, infrastructure facilities and financial planning. The study utilised questionnaire, interview guides and document analysis as instruments of data collection. Therefore, other research instruments were utilised in this study.

1.9 Theoretical Framework

This investigation was also anchored on resource-based view theory (RBV) developed by Barney (2001). The resource based view (RBV) theory has become one of the influential theories in management. The RBV is based on the standard that the origin of institutional competitive advantage depends in resources that are internal rather than to their external environment positioning. The said resources and capabilities involve intangible assets, human, physical, instructional and financial. The key position to this theory is that if an institution is to achieve its performance oriented objectives, it must acquire, and control valuable, rare, immutable and non substitutable resources and capabilities, plus have the institution in place that can absorb and apply them (Barney, 2002). The resource-based view theory literature explains academic performance in terms of how its plans to provide resources.

The theory is premised on the basis that resources for an institution are not alike and are restricted in move-ability. Kepes and Wider (2012) indicates that the institution may transform these resources and capabilities into a premeditated benefit if they are inimitable, rare, and valuable, and the institutions is organised to develop these

resources. Hence, other than just assessing opportunities in the environment and problems in performing school operations, competitive advantage rely on the distinctive resources and capabilities that an institution owns (Barney, 2001). This theory forecasts that certain types of resources owned and controlled by institutions have the potential and promise to create competitive advantage and ultimately improved institutional productivity (Ainuddin et al., 2007).

The resource based view theory by Barney (2002) is appealing, easily grasped and easily taught. However, the theory has been criticised for a number of weaknesses. The RBV has no managerial implications (operational validity) it is silent on how institutions should develop and obtain resources (Senge 2019). It implies infinite regress, the applicability of this theory is too limited, improved academic performance may not be achievable; RBV is not a theory of the organisation, non substitutable resources is neither necessary nor sufficient for improved performance, the definition of resources is unworkable and the value of a resource is too indeterminate to provide for useful theory. Despite its criticism, this theory has been applied by various scholars in their studies. Chen, Chao and Lee (2011) in exploring the human resource aspects from a supply-demand core competence to its suitability among Taiwanese firms. In Kenya, Mutiso (2013) utilised the RBT theory to establish the human resource management processes and public secondary schools quality service delivery in the County of Taita Taveta.

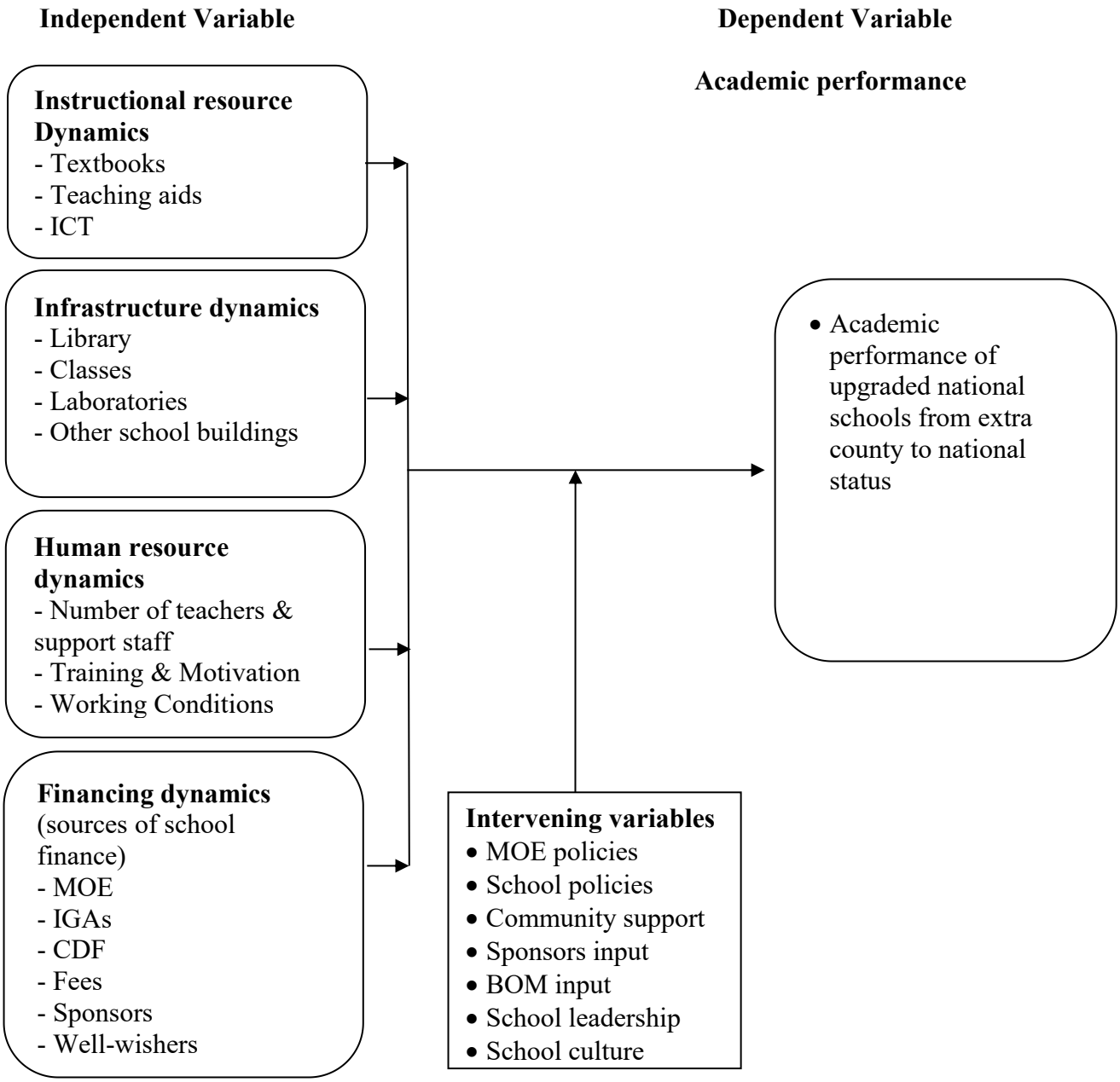
In relation to this investigation, the resources of an academic institution involve many things among the following; physical infrastructure, instructional materials, financial and human resources that an institution has at its disposal to ensure quality education is designed and provided. However, majority of institutions have not realised the

potential that they have (within them) to bring a turnaround in their performance. According to Ereh, Ojechi and Adelehe (2019), the application of this theory in secondary schools hinges on the management focus of their interior structure, resources and capabilities that they have to enable plan and come up with a ways of addressing their emerging challenges. This means that Principals of upgraded National Schools need to focus on their internal resources and capabilities to address the demands that have been brought up by higher student enrollment in their institutions.

Application of this theory would enable these secondary schools mobilise their own resources; financial, infrastructural facilities, human resources and instructional materials and competencies which could result in their improvement in academic and non-academic performance areas. This theory supports the four planning dynamics of this study and their effect on academic performance..

1.10 Conceptual Framework

In this research, the conceptual framework has been derived from the principles of the three theories that were reviewed above to show the interactions that exist between the independent, dependent and intervening variable as reflected in Figure 1.1.



(Source: Author, 2019)

Figure 1.1: Planning Dynamics and Academic Performance of Upgraded Extra County schools to National Status in Western Kenya Counties

Figure 1.1 shows the interaction of variables that assess the planning dynamics of extra-County Schools to national status. It is hypothesised that the independent variable with its components instructional materials infrastructure dynamics, human

resource dynamics, instructional resource dynamics, and financial resource dynamics directly influence the academic performance of upgraded extra county schools to national status in Western Kenya. However the output (academic performance) may intervened by intervening variables which at times may be constrained by government policies, school policies and school leadership. Nevertheless these factors were assumed to have minimal influence on the relationship between the independent and dependent variables.

1.11 Definition of Operational Terms

Academic performance: is the measure of how well an institution is performing in terms of student enrolment, student completion, academic performance, development of infrastructure and quality provision of secondary education.

Co-curricular activities: consist of components of academic curriculum which is undertaken outside classrooms to help students develop various domains like; aesthetic, social, moral, emotional and intellectual development. In this research it involves participation of students in drama, sporting activities and clubs (maths, science, writing, media among others).

Financial resource dynamics: refers to monetary capital that is available for undertaking of various operations (curriculum and non-curriculum) in schools. It may comprise of money for fees, development support, capitation grants, income from income generating activities, scholarships among others.

Human resource dynamics- refers to teaching and non-teaching members of staff in an educational institution. They are usually important to ensure the goal and objectives of an educational institution are attained. They comprise of teaching and Non-teaching staff.

Infrastructural resource dynamics – involves physical facilities that are available in the upgraded National School for purpose of ensuring that all educational processes are done in accordance to the standards set.

Instructional resource dynamics –they are curriculum materials required for teaching and learning activities. They are also known as instructional or educational resources.

Planning dynamics: refers to changes in instructional, infrastructural, financial and human resources associated with the upgrading of secondary schools.

Policy -In this investigation refers to plan of action that has been agreed by the Ministry Education to upgrade some County Schools to National Schools.

Training- is the act of inculcating the needed right knowledge skills to school members (teaching and non-teaching) important to ensure they discharge their academic and non-academic duties well.

Upgraded National Schools: they are secondary schools that were raised to the national status by Ministry of Education to national status admitting top performing students from all Counties around the country. A total of 105 National Schools exist with 8 being in Western Kenya Counties.

Western Kenya Counties: represents the geographical area covering the previous (Pre-2010 constitution of Kenya) Western province districts of Kakamega, Vihiga, Busia and Bungoma.

1.12 Summary

This chapter discussed and presented the preliminaries of the study as a preparation for the subsequent chapters of the study. The rest of the research has two other chapters; chapter two which deals with literature review related to the study and chapter three that is concerned with the research design and methodology that was followed. Chapter four presents the research and discussions while chapter five presents the summary, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The following reviews the literature that has been done on the global level and Kenyan situation on planning dynamics and academic performance of upgraded Extra county schools to national status. It contains investigations undertaken by various scholars who have made attempts to study the educational matters relating to study topic in other countries and Kenya as well. It also captures the summary of the reviewed literature.

2.2 Instructional Resource Dynamics and Academic Performance of Upgraded Schools

Instructional resources consist of material and non–material audio and audio visual institutional environment and materials present in school to facilitate school management and improve the classroom learning (Yunusa, 2016). Bausch and Ault (2008) defined instructional materials as resources which provide support, or help in the process of teaching and learning. Mugure (2012) said that they are inputs of education which are significant to teaching of curriculum subjects in secondary schools. Bausch and Ault (2008) said that instructional learning resources are items which support and aid in the process of teaching and learning in secondary schools. The performance of student is dependent on the planning and management of instructional materials in the school by management (Ayoti, Koteng'& Ongunya, 2016). Hence, the instructional materials availability and utilisation is an important element of general planning and administration of schools. This means that

instructional learning resources support and aid in the teaching and learning process in schools.

Instructional learning materials consist of the following items; stationery, ICT consumables, ICT resources, text-books, writing materials (pens, pencil, markers), laboratory consumables, furniture, exercise books, charts, models among others used in classroom teaching and learning (Abayomi & Olukayode, 2006). These resources also consist of important resources utilised in classrooms to simplify teaching and learning process to make it comprehensive and more meaningful to students (Turner, 2019). Others have mentioned these instructional learning resources to comprise of having; adequately equipped libraries (with books), well equipped laboratories and technical workshops, spacious classrooms and variety of print and audio-visual media resources for teaching various subjects in schools (Ayoti et al., 2016). The resources played a significant role in the realisation of the educational objectives and goals through meeting the physical requirements of students and teachers (Abayomi & Olukayode, 2006).

Lasoi et al. (2017) indicated that planning management of instructional materials necessitates the achievements of quality education in Secondary Schools. Board of Management and administrators use different strategies of administration to monitor the use of school resources in enhancing teaching and learning in schools. The school administrators plan and manage the physical resources and teachers in order to make sure that there is effectual learning in classrooms. every schools has a tasks of monitoring teaching and learning to ensure the quality of instructional materials provided used in promoting the teaching and learning of students in schools.

Improvements in science and technology demands that school board of management incorporate proper measures of resource administration so that to enhance the quality of instructional process. A positive correlation exists between quality of instructional learning resources, teaching staff and performance in academics as Ayoti et al. (2016) found that efficient management of instructional materials produces positive academic outputs. Instructional material planning determines the rate of attainment of educational goals in educational institutions. Instructional material availability and utilisation is significant to general instructional management process in the schools. The progress of schools is measured on how it is providing the required instructional materials to ensure effective and efficient teaching and learning process happens (Bausch & Ault, 2008).

Student learning performance in classroom is mainly dependent on the presence of proper instructional materials because acquisition of relevant skills is dependent on the quality of learning resources used. The academic performance of student is determined by appropriate planning and management strategies of instructional materials (Ayoti et al., 2019). Investment in instructional learning resources is pivotal to ensure that classroom becomes avenues where students work together, share knowledge from one another and benefit from school environment that is supportive; this ensures that student learning happens and all learners achieve their full academic potentials (Mugure, 2012). Mwili, Tanui and Ronoh (2015) argue that instruction learning items are significant factors when implementing a curriculum in secondary schools. They assist teachers to achieve their instructional goals and provide directions to the teaching and learning process, which result to realisation of improved academic performance by students. The discussions of the instructional materials and their influence on performance of schools are discussed in the next sub-sections.

2.2.1 Text-books Provision and Academic Performance of Schools

One of the main instructional learning resources is text-books and they are significant to learning process at all levels of education (Wanjiku, 2013). Owoeye and Olantunde (2011) argued that in some cases, text-books do provide the main source of information for all learners in addition to the courses of study subjects being implemented in schools. Teachers seeking to improve the quality of teaching and learning in their classrooms have to rely on text-books as it would bring significant changes in teaching and learning process. Whereas the selection of textbook has been ascertained to be significant to improved academic performance, the text-books that are needed for improved performance in secondary schools are not readily available.

Wanjiku (2013) observed that lack of text-books in secondary schools is as a result of high costs associated with purchasing them by schools that do not have adequate finances. Owoeye and Olatunde (2011) contends that since the process of curriculum implementation is dependent majorly on books, the significance of institutional library is to ensure that all students can conveniently access all books, magazines, newspapers and other reproduced resources of interest and value to them which cannot be found in basic text-books.

Wanjiku (2013) further determined how efficiently teachers and learners utilised available libraries and text-books in impacting academic performance by students. Wanjiku discovered that text-books were not adequate. However, there was no critical shortage because the available text-books were shared by several students grouped in various categories in classrooms. This meant that subsidized secondary education programme had marginally ensured text-books were available in schools. The text-books that had been provided to schools were used by learners in reading ahead of

their teachers, writing of notes among other tasks while their teachers utilised text-books for setting examinations, giving assignments and preparation of lessons in their classrooms. Nevertheless, the unavailability of text-books affected utilisation among students and teachers in mixed day secondary schools. The study by Wanjiku failed to link the provision for text-books as instructional materials and academic performance, a focus of this investigation. The gap created from Wanjiku study is that it was in mixed day Sub County schools whereas this study focused in upgraded national schools.

2.2.2 ICT Materials Supply and Academic Performance of Upgraded Schools

ICT utilisation in school management has been advocated for the remedy for the realization of desired outcomes and to providing effective solutions to educational problems that are difficult to solve through traditional approaches. However, although secondary schools have invested in setting up ICT infrastructure, it is doubtful that these facilities are being used effectively in the management of schools (Mumbi, 2014). United Nations Education, Scientific and Cultural Organisation [UNESCO] (2014) pointed that few secondary schools in developing countries had access to internet, email and computer facilities that are pivotal to the teaching and learning instruction.

Mwencha (2012) investigated the ways in which e-learning and ICT facilities would supplement conventional approaches of curriculum instructions in secondary schools. Further, the study determined the measures which had been planned to ensure effective integration of ICT in teaching and learning process. findings indicated that majority of secondary schools ICT facilities were ill equipped, available ICT facilities access was very low by students and teachers. Additionally, teachers required training

on computer use to improve their pedagogical competencies on the same. The research concluded that most teachers and students had positive perceptions on the use of ICT resources to improve teaching and learning process. The study investigated whether the upgraded National Schools in Western Kenya had planned for provision of ICT resources to enable improvement in performance.

Mumbi (2014) investigated the implementation of ICT in management of public secondary schools in Mathira West Sub County, Kenya. The study established that majority of schools did not make use of basic computer hardware and software. The use of ICT in management of school financial management activities was low. The study also established that the use of ICT in communication with stakeholders is very low. This study investigates where the upgraded National Schools in Western Kenya did make plans for provision of ICT resources for both instructional and management activities in Western Kenya.

Mugweru (2018) study was to establish the accessibility of the available ICT facilities to English language teachers and students, establish usefulness of ICT integration on teachers and learners. Findings of this research showed the majority of teachers were prepared to use and operate ICT facilities; many computers were not installed with educational software for teaching English; majority teachers rarely integrated ICT; some ICT facilities were inaccessible to both teachers and students; tutors and learners appreciated ICT integration but many schools do not have ICT technical support staff. The study concluded that although teachers were prepared and competent to use ICT facilities, lack of appropriate hardware and software, inaccessibility of ICT facilities and shortage of ICT technicians have gravely hindered dissemination of skills. The gap created in Mugweru research is focus on English

subject whereas this study expands to include other subjects to establish how planned for ICT affected academic performance.

2.2.3 Learning Resources and Academic Performance of Upgraded Schools

Learning resources used in classroom instruction enables students to have meaningful and positive learning outcomes (Okoye et al., 2019). In Malaysia, Jamiana and Baharom (2012) examined how learning resources were used and their supportive role in teaching and learning to read. The focus was on remedial learners in under enrolment in schools. The research revealed that the teacher's views on the usage of learning resources and the efficiency of assistive aspects could help to draw learners to teaching and learning. They agreed that learning resources helped their teaching activities in schools. Findings also showed that the management and the supportive aspects assisted in improving the performance of reading skills among learners. The study concluded that learning resources would provide a very positive influence in improving the learners reading capacities.

In Anambra's State Nigeria, Okoye et al. (2019) examined the influence of learning resources on retention and academic performance of students in business studies subject. They discovered that there existed significant difference between the mean performance scores of students taught using learning resources and those taught without the use of learning resources. Also, there is significant difference in the mean retention scores of students instructed using learning resources and those that were not instructed without learning resources. The study by Okoye et al. (2019) was quasi experimental while this study is non-experimental to establish how planning for learning resources affected students performance in upgraded national secondary schools in Western Kenya.

2.2.4 Other Instructional Materials Provision and Academic Performance of Upgraded Schools

Ayoti et al. (2016) observed that learners' academic performance in secondary schools was mainly dependent on availability and appropriateness utilisation of instructional learning materials since learners were able to acquire necessary competencies when they were used by teachers in schools. However, research findings showed that there was inadequate instructional materials in many secondary schools in most sub Saharan African nations (UNICEF, 2016). This state is not different in Kenya because past studies have shown evidence of schools suffering as a result of inadequacy of instructional learning resources. Unless secondary schools are properly provided with these resources, efficient teaching and learning could not happen which may ultimately affect performance.

In Nigeria's Ekiti State, Olayinka (2016) researched on the influence of instructional materials to secondary school students' academic performance in social studies subject. The study found that there existed significant difference between pre-test and post-test of learners who were in the experimental category. It was also discovered the sex was not a significant predictor of academic performance in social study. The research concluded that learners taught using instructional materials fared better in academic compared to those that were taught without these resources. This means that adequate planning and provision of instructional materials is key towards improving student academic performance in social studies.

In Tanzania, Tety (2016) looked at the degree in which a sample of Rombo district secondary schools utilised quality and adequate instructional materials in class and how this usage affected students' academic performance. It was found that learning

resources was pivotal to teachers' instructional delivery and student academic achievement. Further, most schools under the community management in the area did experience shortage in necessary instructional teaching and learning resources. Moreover, the study indicated that teachers utilised various measures to ensure there was quality instruction in class by borrowing books.

Omariba's (2003) studied factors that contribute to performance in national examination in rural secondary schools in Kisii County Kenya employed theoretical framework explaining the relationship between inputs and outputs of a firm. That examination results are derived from a combination of education input variables. Omariba employed correlation research design and regression analysis. Omariba study established that for better performance in national examinations avail inputs (text-books, equipment, libraries and laboratories) must be availed, the study did not focus on the influence of instructional resource dynamic and performance of the upgraded Extra County Schools to National level which this study focused on.

Olatunde and Omondi (2010) examined teaching and learning resources effect on academic performance of students in Mathematics in Siaya County. They discovered that planning for and use of teaching and learning materials by board of management affected students' academic achievement in Mathematics in the study area. The gap created from Olatunde and Omondi (2010) investigation is due to the fact that it was done in mixed schools whereas this investigation focuses in upgraded National Schools to establish how planning for resource provision affected performance of the institutions in various areas not only academic performance.

Akungu (2014) explored learning materials influence of on students' performance in KCSE examinations in secondary schools within Embakasi Sub County, Nairobi

COunty. Akungu (2014) found that instructional learning resources were available and they were used in the classroom learning and consisted of chalks, charts and dusters. Nevertheless, Akungu (2014) found that despite provision of instructional materials, the increased enrolment of students in Embakasi Sub County public secondary schools overstretched materials available hence affecting quality secondary education delivery. The research by Akungu (2014) focused on performance in KCSE while this study goes further to capture other aspects of academic performance in upgraded National Schools.

Mwili et al. (2015) investigated instructional learning materials influence on academic achievement of students in Makueni County public secondary schools. The study discovered that the performance of student was dependent on availability and use of laboratory apparatus, laboratory chemicals, classrooms, chalks, chalkboard, charts, text-books, course books, student guides, and teachers' reference books among other learning materials by teachers in classroom. The gap created in this study is that it was conducted in Makueni County (Eastern Kenya) while this one concentrated on Western Kenyan Counties to establish how planning for the instructional materials influenced performance of elevated national secondary schools in Western Kenya.

Bosibori et al. (2015) sought to establish whether presence of instructional learning materials affected inclusive education implementation among Nyamira North Sub County pre-school centres. Findings showed that teaching and learning materials were not adequate in the pre-school centres. Further, 78.0% of teachers said that the situation of inadequacy of instructional materials affected inclusive education preparedness. The gap created in this study is that it involved pre-school centres whereas this one is in public secondary schools.

Omego and Simatwa (2015) analysed instructional materials based on problems encountered by Headteachers in improving Kisumu East Sub County public secondary schools students' academic achievement. They found that school heads experienced inadequacy of instructional materials (53.6%). The gap created from Omego and Simatwa (2015) is that they did not link instructional material materials and academic performance through use of advanced statistical tests which the study endeavoured to examine.

Livumbaze and Achoka (2017) research was to examine the influence of learning materials on Hamisi Sub County public secondary schools students academic performance. The result revealed that learners recorded dismal performance in academics because of inadequate planning and provision of instructional learning resources in their schools. This study departs from Livumbaze and Achoka focus by looking at the academic performance in a wider perspective rather than on academic achievement alone.

Maina (2018) assessed the factors that affected of quality education provision in newly started secondary schools in Mathira Sub County, Nyeri County. Findings revealed that newly established schools lacked the necessary infrastructure for provision of quality education. Maina (2018) also established that the many newly established schools did not have adequate resources, were highly understaffed and admitted learners with low entry behaviour thereby compromising the provision of quality education. Further, the study found that books were inadequate and that classrooms were not enough to allow proper learning to take place. The study departs from Maina (2018) focus by conducting research among existing secondary schools that were upgraded to national status in Western Kenya. The present study

investigated whether newly upgraded secondary schools to national status had planned for new instructional materials dynamics for the aim of improving performance of schools in Western Kenya.

2.3 Infrastructure Resource Dynamics and Academic Performance of Upgraded Schools

Physical infrastructural facilities in secondary schools involve school buildings, classrooms, library, laboratories, toilet facilities, offices and other materials and infrastructures that would likely motivate students towards conducive learning (Lasoi et al., 2017). They also consist of the following structures laboratories, classrooms, libraries, playing fields, latrines among other facilities (Lukas & Mbiti, 2014). In Nigeria, Jaiyeoba and Atanda (2011) indicated that infrastructural facilities are items which facilitate a competent instructor to attain instructional goals well in situations where these materials are provided.

Olatunde and Omondi (2010) postulated that planning and provision of right infrastructural facilities that are of good quality and quantity would ensure curriculum goals are realised. An education institution with inadequate infrastructural facilities like; workshops, laboratories, libraries, lockers, chairs tables and dormitories makes student learning condition to be conducive for learning. For effective teaching and learning to happen in schools, the school board of management should plan and avail adequate infrastructural facilities for improved academic performance of their schools. Availability of physical resources like classrooms, laboratories and workshops make it possible to attain school effectiveness since they form the basic structures that guarantee quality secondary education would be provided by teachers to students. Availing and utilisation of infrastructural facilities falls under the mandate of school

board of management (National Policy on Education, 2012). Board of Management is involved in the purchase of teaching and learning resources.

Proper infrastructure facilities planned and constructed in school allows teachers and students to focus most of their time and energy on learning as there are no disruptions or congestions. Waweru (2005) observed that appearance of adequate infrastructural facilities in school is an important source of inspiration and motivation for members of the school community. The development and maintenance of infrastructural facilities in secondary schools by community, parents and sponsors should be encouraged (Republic of Kenya, 2015). This is due to the fact that unavailability of such facilities interferes with curriculum implementation in schools. This thesis investigated how upgraded Extra County Schools to National Schools infrastructural facilities changed to match their student population through proper planning strategies in Western Kenya. The study further wanted to know how community, parental and school sponsors participation in the development of infrastructural facilities to support the new status of the upgraded extra schools as some of the schools were poorly equipped in terms of physical facilities before the upgraded.

Infrastructural resource dynamics facilitates conducive learning environment which enhances efficient teaching and learning process. The significance of institutional environment to secondary schools students cannot be overstated. This is due to the fact that the environment of the schools has significant impact on the quality of instruction that students get and the degree of attention that they pay during lesson time in school (Odeh Oguche & Ivagher, 2015). This means that secondary schools that do not provide the required infrastructural facilities and develop a conducive

environment for curriculum implementation may barely put in their best in their learners specifically in academic performance areas.

Surveys done on relationship between school environment and motivation of teachers confirm the basis that the environment of the school which is not favourable to learning would lead to low motivation resulting to low achievement (Chimombe, 2011). Planning and availing of infrastructural facilities in secondary schools enhances quality and relevance of education in inculcating needed skills by students (Lumuli, 2009). Research conducted in 2014 showed that most upgraded National School in Kenya had inadequate facilities like classrooms, workshops, and laboratories (RoK, 2015). This study established whether improvements had been made to ensure that the upgraded schools had the right facilitates to support classroom instruction and later performance improvement.

2.3.1 Libraries Provision and Academic Performance of Upgraded Schools

A library is a room or building where collection of journals, tapes (audio and visual) and books among others are stored for individuals to study, read or even borrow (Oxford Advanced Learners Dictionary). Library is one of the key infrastructural facilities in the school to enable effective teaching and learning. This means that it is one of the significant facilities in secondary schools since curriculum implementation revolves around books. The significance of having a school library is to make sure that books are available to learners at their convenience. This is to enable the student access the library resources including books which may be impossible for their parents of buy as they include periodicals, newspapers, audio and visual resources found there and are significant to enhance their reading skills.

The significance of school library is anchored in various government policy documents and Act. Through the Ministry of Education, the government provides funds for setting up of school libraries across all institutions of learning in the country. This is also required for private schools to set up library facilities with books and personnel to run them. The library facility occupies a crucial and basic place in any educational system. The library assists all functions of the school instruction and provides service and directs to various stakeholders needed services from there. Okumbe (2011) argued that the library must be updated (current) and ensure that even the older resources (including books) can be accessed anytime. This means that school board of management have a responsibility of financially supporting the initiatives of constructing, expanding and stocking the libraries to provide services to the school community.

When classifying various categories of libraries, Owoeye and Olatunde (2011) indicated that in secondary schools, the library has replaced the conventional 'chalk & talk' approach in inculcating knowledge and its influence on academic achievement need not to be overstated. They indicated that a library that is well equipped should be the priority for secondary schools board of management as it would improve learning environment, raised standard of teaching and learning and ultimately performance of students in examinations. Muthamia (2009) argued that secondary school libraries may not function well if the instructional materials stored there are not up to date and adequate and its influence may only be realistic if the facility could be opened for students all the time without restrictions or limitations (including days and period). Owoeye and Olatunde (2011) however discovered that majority of secondary schools in SSA do not have functional libraries. Muthamia discovered that lack of school library would affect student learning and development in schools. This means that

majority of schools do not have this facility and board of management have a responsibility of planning and setting up libraries to improve on teaching and learning process.

Moreover, Ogunniyi et al. (2018) identified that school library was an instructional learning facility that significantly influenced students academic achievement after controlling their home background variables. Ogunniyi et al. (2018) revealed that the influence of library size and activities associated with were positive from 83.3% of analysis that were performed. In addition, in an investigation on association between infrastructural facilities and academic achievement, Owoeye and Olatunde (2011) established that library correlated with performance of schools. Institutions that had libraries that was well equipped posted high academic achievement in examinations compared to those that had no libraries.

From a study on methods of improving quality of schools in developing nations, Fuller (1986) established that availability of adequate and varied books in the library correlated with schools academic achievement. Another research by Muthamia (2009) looked at the state of library facilities in secondary schools in Kenya. result revealed that schools were not following guidelines given by MOE that at least school should construct libraries hosting more than 100 students but this was not the situation on the ground as many schools had seating capacity of less than 100 students. Considering this study was done more than 10 years ago, it is important to establish the current state of affairs in relation to capacity of libraries in upgraded Extra County Schools to national status. This study focused on evaluating adequacy of library facilities in upgraded national secondary schools and its implication on preparedness to achieve national status in Western Kenya Counties.

2.3.2 School Buildings and Academic Performance of Upgraded Schools

Past studies have revealed that success of educational system depends on the availability of school buildings. In relation to this argument, Owoeye and Olatunde (2011) indicated that the availability of physical facilities in the schools would influence academic achievement as teaching and learning activities are efficient and effective. Owoeye and Olatunde argued that opined that schools buildings that are well built coupled with lavatory, playing ground and aesthetic conditions post improved academic compared to those whose buildings are not constructed according to the standards by education ministry. The encyclopaedia of educational research noted that the whole environment in a school building facilities need to be psychologically uplifting, pleasant and comfortable for all stakeholders in the school. The school buildings should provide ambience physical setting that is learning stimulating; it should produce a sense of safety among individuals being house in them and should support the curriculum implementation process. These requirements and expectations can only be realised through collaborative efforts of school management, government, parents, teachers and public works officials at County and national level.

While mapping the history of school buildings to the past to provide credibility to the above statement, Ogunniyi et al. 92017) observed that school building sites were randomly selected with little or no justification from administrators, parents, engineers, consultants and architects. They noted the faults as there was wastage of resources that were scarce to be found. William (2008) indicated that school facilities are very important components of systems of education; stressing that even though they do not conduct instruction, their use can enhance or disrupt the learning process in schools. However, William did not see school facilities as one of important

variables influencing academic performance since there was no finding to justify that a school building that expensively built would result to improved academic performance. Providing acceptance to this result, Owoeye and Olatunde (2011) showed doubtfulness concerning important association between expensive school building and academic performance of schools. Further, in their report, they indicated that from education inspectorate report across years, there was adequate evidence and records of insufficiency in the provision and prudent use of school facilities and buildings for curriculum implementation. Owoeye and Olatunde also indicated that many classrooms were in dilapidated situations while some institutions had no ceilings, some windows and doors had no shutters while classrooms' floors were muddy. This state of school buildings was worse in rural schools and the un-conducive environment; proper learning could not be undertaken. Because of the unfavourable scenario in schools, very few secondary schools students graduated to enter tertiary institutions in Nigeria.

Owoeye and Olatunde (2011) argued that schools need buildings for effective teaching and learning. The buildings like staff quarters, laboratories, dormitories, offices, classrooms among others are required in addition to supportive equipments like furniture for students and teachers, science equipments, games equipments among others should be made adequate and in good conditions for curriculum implementation to happen. Documenting on the poor conditions of public school buildings in Nigeria, Owoeye and Olatunde bemoaned that public primary schools buildings had no windows, doors, and roof in some classrooms, some walls were cracked, and supportive facilities were not available. This made teachers to be frustrated due to inadequacy of school buildings to ensure that curriculum implementation goals were attained. This situation cannot be compared with schools

in developed nations that have better facilities which were provided in adequate number and utilised well by teachers.

Akintayo (2008) indicated that education in many developing nations like Kenya happens under situations that are totally different from those in developed worlds like UK and USA. The author opined that students in developed nation's schools are likely to go to school in modern well equipped buildings and have a curriculum which is well spelt out in relation to sequence and scope. Moreover, Lockheed and Verspoor (1991) as cited by McEwan (2015) indicated that on moderate level, they received 900 hours of learning annually. This state is not similar to Kenya where secondary schools in the Western region of Kenya grapple with rundown buildings in addition to regular increased of students' absenteeism to schools which has affected teaching and learning process in schools.

According to Ogot (2008), Kenya's attempt to fund national education specifically in targeted upgraded National Schools has been made with challenges. This study determined whether the upgraded National Schools were well funded by the government to determine whether they were able to purchase additional land for expansion since the irregularity of the funds disbursements has been reported to be causing anxiety upgraded National Schools. There was need for this study to find out how resource allocation procedures to upgraded National Schools from the MOE contributed to infrastructural resource expansion for the purpose of improving academic performance of students in Western Kenya.

2.3.3 Laboratories Construction and Academic Performance of Upgraded Schools

This is an infrastructural building constructed in a schools specifically for teaching demonstration activities in practical way in school. Owoeye and Olatunde (2011) coined the following term 'seeing is believing' as the influence of utilising laboratories in teaching and learning of science related discipline as learners appear to understand and recollect what they view than what they were told or hear. The laboratory facility is significant to science instruction and the attainment of science goals is heavily dependent on the availability and quality of laboratory facilities in schools. Agreeing with this assertion, Ogunniyi et al. (2017) argued that there is universal agreement among science teachers that laboratory occupies a significant position in science subject teaching and learning. It could be explained as an avenue where theoretical course is practised whereas practicals in any teaching experience involves learners in tasks like; carrying out field work, recording, experimenting, measuring, counting and observing. These tasks are totally different from theoretical concepts which involve listening to lectures and writing notes from such lectures.

Ongowo and Indoshi (2013) indicated that laboratory activities stimulate students' interest as they are made to individually engagement in important scientific tasks and experiments. The facility use uphold the argument that science is not only process or products; it provides the student with basic skills and scientific approaches of solving problems; and education gained through laboratory activities enhance long term remembrance. Laboratory assist to provide an opportunity where the student is provided the exercises to their beliefs, theoretical propositions, statements, ideas and subjects among others to some types of experimental tests (Owoeye & Olatunde, 2011). To sustain and stimulate students' interest in science subjects involving

laboratory activities, the instructor should be wholly involved so that knowledge and facts can be transferred to students for improved performance in science examinations. Similar to this observation, one then stops to query; to what degree has laboratory been able to attain its objectives in secondary schools? Owoeye and Olatunde (2011) commented that the educator presume a position of provider of knowledge with the laboratory acting as the medium of verification or drill. They also explicated that at the other extreme, the instructor assumes the role of director to learning and laboratory as the venue where knowledge is known. Nevertheless, there are increasing data that teachers do not portray behaviours that are corresponding to attainment of statement goals. This consists of approaches to practical work teaching; resource inadequacy for teaching and learning of practical tasks; quality and quantity of science teachers in schools.

Nwachukwu (2004) found in a study of the facilities for Biology teaching and learning in some new Lagos secondary schools was inadequate. The research also discovered that among other items; 80.0% of old secondary schools that had laboratories, they were not well equipped; 40.0% of schools that did not have laboratory building at all while 60.0% had dedicated rooms that acted as laboratories without sufficient science apparatus. The research concluded that Biology practical teaching and learning by teachers was difficult and students did not get proper content to enable their knowledge and skill acquisition. Further, Ogbu (2016) contented that no effective teaching and learning of science subject could happen in schools without proper facilities required. Elsewhere, Okoli (2005) indicated that laboratory buildings had shelves with empty bottles of chemicals in Nigeria.

In relation to academic achievement, Owoeye and Olatunde (2011) indicated that institutions with well stocked laboratory facilities posted better results in sicence examination compared to schools that had inadequate laboratory apparatus and resources. Moreover, learners taught with adequate laboratory apparatus posted higher attitude scores but lower performance scores compared to learners instructed wholly through conventional methods of learning; textbook and traditional lecture modes.

Yara and Otieno (2010) opined that no unit in mathematics and science can be termed to be complete without inclusion of practical activities. The practical activities should be conducted out by persons either in classrooms or science laboratories. In institutional level, practical activity is even more essential since students learn through doing; scientific applications and practices are hence rendered to be more relevant. It is a recognised truth that an item handled stresses itself more decisively on the mind than the item simply observed from an illustration or a distance. Hence, practical activity forms a significant aspect in any mathematics or science subjects in secondary schools (UNESCO, 2008).

Ahawo (2009) conducted a study on the significance of well furnished laboratory on science subjects improved performance in upgraded National Schools in Kisumu East Sub County, Kenya. At least two science subjects are compulsory in KCSE examinations which student must sit in. the research recorded that many laboratories in the upgraded Extra County Schools (formerly Provincial) in the Sub County were not well equipped due to inadequate finances and high cost of purchasing laboratory apparatus and reagents. This state of laboratory negatively affected performance of students because they did not participate in various practical activities while others

came to know some apparatus when they were doing practicals for their KCSE science examinations.

Mobegi et al. (2010) argued that the issue of laboratory equipments requires that institutions must have not only what is required but also what is up to date and modern if proper science education is provided in schools. The research examined the laboratory facilities and equipments status in some selected schools in Kenya. They found that some schools had no lab buildings while those that had, they were not well equipments with apparatus and chemicals for science practicals. This study departs from Mobegi et al. by examining whether the laboratory facilities in the upgraded Extra County Schools to national had expanded due to change of the status of their institution without focusing on which subject was taught in those facilities. Best (2005) indicated that effective infrastructural facilities management resulted to success of students in United States schools. Best suggested that policies needed to be implemented to ensure quality learning in schools since well stocked laboratories had a direct impact on performance of students in schools.

2.3.4 Classrooms Construction and Academic Performance of Upgraded Schools

Much of curriculum implementation process happens in classrooms. This means that schools should ensure there adequate classrooms for teaching and learning. However, a research by Owiye (2005) found that classrooms and workshops in most high schools were inadequate and thus interfered with the efficiency of education in those institutions. Norazman et al. (2019) indicated that for learning purposes to be effectively conducted, the classroom has to accommodate all learners with no crowding. They examined the regulations and guidelines of construction design standard procedures with specific references to classrooms and make

recommendations on suitable classroom carrying capacity in secondary schools. The study was mixed method. Further, data was collected through interview schedule that was semi-structured. The study measured 20 classrooms and made quantitative recordings. They discovered that 55.0% of class capacity in secondary schools had complied with regulatory guidelines, classroom area requirements and stipulated class design regulations. However, semi-structured interview showed significant points in relation to the appropriateness of classroom carrying capacity. Teachers interviewed perceived that classroom capacity influenced students' performance. This research therefore looked at the classrooms of upgraded National Schools facilitated effective learning in upgrading public secondary schools in Kenya.

Shamaki (2015) examined how school learning environment contributed to students' mathematics subject achievement in secondary schools. Results showed that there existed between learners' performance for those taught using ideal environment and those who were taught in a learning environment that was dull. The students lacked enough seats and desk in their various schools and the sitting arrangement affected underperforming students in schools. Poor ventilation made mathematics lesson boring for students. This meant that adequate air ventilation improved the learning environment making mathematics learning conducive. The classrooms were not bright enough for reading and this dull classroom painting affected the learning of mathematics.

Odeh et al. (2015) examined the impact of environment of the school on academic performance in Zone 'A' Senatorial district secondary schools in Nigeria. Results indicated that school climate and classrooms structures had significant impact on secondary school student's academic achievement. They found that inadequate and

poor classroom, outdated classrooms resources and overcrowding in classrooms resulted to poor academic performance of learners.

In northern Kenya, According to Ogada and Simatwa (2016), reported schools that lacked adequate classrooms conducted lessons in the open while others under trees. Because of poor weather, those lessons were regularly postponed while in extreme cases they were stopped. This affected completion of the syllabus; learners from those schools performed poorly in exams. The condition was aggravated by increased enrolment of students in schools due to partial payment of costs of schooling by the government and allocation of NG-CDF funds to students from poor families. This means that these schools had inadequate classrooms to fit all learners admitted resulting to overcrowding. With the introduction of Tuition Free Secondary School education programme in the country from year 2008, the issue of inadequate classrooms across public secondary schools was widespread. Okumbe (2011) found that no extra classrooms had been constructed to cater for increased enrolment of students in schools. UNESCO (2015) reported that in many Kenyan secondary schools, the classrooms infrastructure was poor. Further, Okumbe (2011) discovered that even in schools with classrooms, desks were inadequate.

As it is known, class size that is standardised inspires teachers to effective instruction because of well managed students. Lucas and Mbiti (2014) linked examinations performance to the condition of educational facilities (classrooms) in secondary schools. They noted that learners from poorly equipped schools performed poorly in exams than those from schools that have better classroom. This is due to their poor backgrounds and remoteness of their schools where adequate and quality classrooms are not available. This has created a negative attitude among students from these areas

towards learning. The research therefore deviates from Lucas and Mbiti (2014) by focusing on whether there was expansion of classroom infrastructure as a result of upgrading of Extra County Schools to national level in Western Kenya Counties.

2.3.5 Sanitation Facilities Provision and Academic Performance of Upgraded Schools

A survey done by UNESCO in the year 2014 discovered that majority of schools (primary and secondary) in Kenya did not have adequate water and sanitation facilities. Ongowo and Indoshi (2013) indicated that some schools that were upgraded had inadequate sanitary infrastructure; they did not have safe water for drinking and lacked adequate latrines. This state of affairs was disadvantageous to quality learning since it made students susceptible to common preventable diseases like diarrhea. Significant lesson time is lost if absenteeism rate of learners as a result of falling sick to the preventable diseases is widespread.

Waweru and Orodho (2013) contented that good hygiene in schools is important to ensure effective learning takes place. They also said that proper hygiene would increase enrolment for girls' students in schools and would reduce the costs associated with management of diseases and worms invasion among learners. They indicated that despite increased enrolment in Kenyan schools as a result of subsidised education programmes, the water and sanitation facilities have not changed. According to them, lack of adequate water and sanitation facilities influence participation of students in schools. Majority of educational institutions in the country do not have adequate toilets and latrines and this has affected girls' attendance in schools. Based on the above propositions examine whether there was expansion of sanitation facilities in upgraded Extra County Schools to national status in Western Kenya.

2.3.6 Other Infrastructural Facilities Provision and Academic Performance of Upgraded Schools

Waweru and Orodho (2015) observed that secondary schools Principals need to conduct periodic assessment of school infrastructural facilities in addition to playing field to ensure they are safe for use in the school. Okumbe (2011) added that schools heads needed to raise the status of infrastructural facilities in the event of new technology and knowledge like laboratory apparatus, computers and other technological appliances. Ogada and SImatwa (2016) recorded that parents via the strategy of parents' association initiatives need to support construction and improvement of physical infrastructural facilities like dorms, electricity, water storage facilities, purchase and maintenance of motor vehicles for transport, communication facilities and general repair and maintenance of existing facilities like teacher quarters, dorms, classrooms, workshops and laboratories. Their findings showed that upgraded extra County National Schools are ill equipped to facilitate proper implementation of the school curriculum in these schools. Infrastructural resource mobilization is imperative for the success of upgraded National Schools. They play a significant role in enabling provision of quality education. Upgraded National Schools require adequate facilities to ensure that the goals of secondary education are attained.

Ahawo's (2009) studied factors influencing academic performance in National Schools in Kisumu East Sub County, Kenya. Ahawo focused only on National Schools and looked at influence of school policies, domestic cores, instructional materials and parental involvement on student academic performance; Ahawo (2009) did not focus on infrastructure dynamics in upgraded National Schools, which was the subject for this study.

Njoki (2018) examined the impact of physical facilities safety situations on teaching and learning procedures in Nyeri and Nairobi Counties public secondary schools. Findings showed school physical infrastructure facilities were not safe as many schools had not adjusted the doors and windows of classrooms and other school facilities as per the requirements of the safety standards manual. The findings further showed that school safety greatly influenced teaching and learning processes in schools. Failure to follow guidelines when providing for school facilities and ignoring social environment issues, greatly influence negatively teaching and learning processes. This study sought to determine whether available school resources affected the performance of the upgraded National Schools in adapting to their currents status. In view of various conflicting and different result, this study assessed the state of existing physical and their impact on academic performance in upgraded Extra County Schools to national status Western Kenya Counties.

2.4 Human Resource Dynamics and Academic Performance of Upgraded Schools

The human resource consists of set of individuals (mainly workforce) in an institution. In secondary school, it consist of students, social groups, government officials, teaching staff, parents, community members and support staff. Yunusa (2016) argued that human resources are bedrock of academic institutions. According to Armstrong (2004), human resource planning dynamics is normally related with complementing resources to institutions needs in the long term, nevertheless it will at times tackle short term needs. In relation to schools, the government master plan document indicates that to enhance quality instruction in secondary schools, it is important to have a well competent and highly motivated workforce able to know the needs of students and the curriculum being implemented (ROK, 2012).

In organisations, human resources (teaching and non-teaching staff) are tasked with the responsibility of planning, organising, controlling, manipulation, coordination and maintenance of other resources types, its management and forecasting capacity under their administration among others facilities in the school (Yunusa, 2016). Human resource availability is not only needed in school management, their quantity and quality need to be taken into considered if effective and efficient quality education is to be met.

Human resource planning deal with the requirements of human resources in qualitative and quantitative forms (Armstrong, 2004). This answers the two basic queries of what kind of people and how many are needed. Planning for human resource also focus larges issues associated to the means in which people are recruited, developed so as to improve academic performance. Human resource planning was broken by Armstrong (2004) into; action planning, demand forecasting, supply forecasting and forecasting requirements. Mugure (2011) said that demand forecasting involves approximating the future requirements for individuals and skills with respect to functional and institutional plans. Supply forecasting estimates the supply of individuals with respect to evaluation of current resources and future availability, after permission for excess.

Forecasting requirements refers to analysis of the demand and supply estimations to detect future surpluses or deficits, with the usage of models where possible (Armstrong, 2004). Action planning is involved with making plans to address the forecast shortages by using internal organisational promotion, external recruitment and training (Mugure, 2011). Vareta (2011) argues that when preparing human resource planning programs, school management need to understand that their human

resource personnel have their own goals to attain. This is the rationale why members of staff look for employment (Mugure, 2011). Disregarding these requirements may result to low motivation which may result to poor work performance and increased industrial action activities.

2.4.1 Training and Motivation and Academic Performance of Upgraded Schools

As a factor of production, human resource is influenced by quality and quantity manifested by the level of motivation and level of training (Wilson, 2011). Based on behavioural scientists, efficient employee performances demands rewards system and motivation ability, which advances quality work output (Ivancevich, Konopaske & Matteson, 2007). Teacher performance is determined by their training level and work experience and this would be reflected by the grades the students would score during their end term examinations (Onyana, 2013). A teacher who is properly trained would posses' the required pedagogical competencies which would advance learners understanding, motivate the learner to study, hence improving their academic achievement. Further, a trained support staff would render his/her duties effectively.

Teacher motivation is another function that managers of education institutions perform aside from TSC. This can be accomplished through introducing rewards and appreciation for those employees who have achieved their targets. The school management needs to assess their employee performance regularly (Muthoni, 2015). Those workers who have found to have exceeded their targets need to be rewards for their achievement. These rewards may involve paid up holidays, end of year appreciation, provision of awards, promotion and even salary increment (on the TSC part). If BOM sustain these rewards, there would be improvement in school workers

satisfaction level. This will result to increased retention rate of both teaching and non-teaching staff.

The in-service training for instruction may have a significant influence on learners' performance (Lasoi et al., 2017). Professional development of teachers may assist to prevail over limitations which may have been part of teachers 'pre-service' training and make them to be ahead with new skills, knowledge and practices in their profession (Lasoi et al., 2017). A study by Caena (2011) showed existence of significant positive relationship between teacher professional development and provision of quality education since most significant internal-school based variables accounting for performance and between in-service training and learners, were constantly yielded from surveys. High quality teachers, those most able of assisting their learners in schooling, tend to have rich master of the subject matter content and teaching competency (Darling-Hammond, 2012).

In United Kingdom, teachers coming from programmes are only considerable better competent for difficulties that will meet them than teachers coming out of school more than thirty years ago. This shows the inactive teacher training force itself out of touch to a certain extent with new developments across schools. In UK, the return of the student to class implied that institutions were handling with more clever individuals than previously before (Kafu, 2018). Teacher development is significant for the institution to realise its broad objectives that is expected to meet (Wilson, 2011). Teachers are important actors in quality education promotion in schools since they are catalyst of transformation and change. The educators in all levels of education need to have access to in-service training and regular professional

development programmes to enable them participate nationally and internationally in issues influencing learning environments (UNESCO, 2008).

Management of secondary schools have no alternative on whether to training teachers or other staff in the schools or not. This is due to competence of members of staff will not last for long because of various variables like promotions, technological change transfers and curriculum change (Okumbe, 2011). Process of education reforms appear to sustain classical approach of including teachers when the plans have already been developed, counting teachers only as prospective trainees and executors, hence paying no attention the significance of teachers active participation, experience and knowledge in the curriculum reform course of action (Mbatia, 2004). The inadequacy of teachers who are well trained was established during Kenya development plan of 1964 – 1970 as main challenge to attainment of universal basic education. The education plan stressed the need for expanding teacher training colleges to reduce the number of untrained teachers and realise the demands of increased enrolment in schools.

It is important to develop a process of giving opportunities to educators to participate in in-service training programmes regularly. Aside from increased enrolment, more students from various backgrounds would be going to schools, hence more disabled learners and over aged learner's access schooling. In rural areas, more students from poor families who may have been exposed to herding of animals and looking after young ones at home are likely to attend school on regular basis. Henceforth, learners' requirements have increased and teachers would need additional knowledge and skills (Onyara, 2013). Therefore, the current study assessed human resource dynamics on

achievement of upgraded National Schools in Western Kenya County in regard to achieving national status.

According to Ogbu (2016), secondary school Principals normally perform their duties in schools that are poorly equipped and with teachers who are not adequately in serviced. Owiye (2005) advised that after a teacher has been employed, he/she need to be developed in order to fit well in the new job and institution. No individual is perfectly fir for the job during hiring time, and some more capacity building and training need to take place. Crawford (2016) indicates that there is hardly ever any official leadership preparation training and many school principles are selected according to their record of teaching than their leadership capacity. Support and induction are mainly restricted and school heads have to use a pragmatic strategy to management of school. Investment in school management training would assist by providing teachers and school administration with requisite skills for planning of their schools.

In India, Tamil Nadu (2011) conducted a study on In-service Teacher Training and it was found that one of the 56 sampled educators, a higher number of 53 teachers (95%) said that they have acquired confidence and clarity in planning and preparing for their classroom lessons. The present research investigated whether teachers in upgraded National Schools in Western Kenya usually receive regular in-service training to help them perform their duties well. In Nigeria, Oluwakemi (2011) study established the level of teacher professional development as predictor of teacher productivity in senior secondary schools in Oyo Metropolis. The study argued that teachers are an important component of school performance. The study found that school management had not facilitated forums for in-service training such as workshops,

seminars and conferences for teachers to improve their competencies. This is because professional development of teachers has a direct impact to the provision of quality education.

2.4.2 Recruitment of Human Resources and Academic Performance of Upgraded Schools

The academic performance of upgraded National secondary schools largely depends on the recruitment of human resources (academic and non – academic) provided for by TSC and those employed by BOM. This was due to human resource personnel are the architects and determinants of all tasks which are found in the school (Muthoni, 2015). Further, teachers' adequacy is seen through learner: teacher ratio. The learner: teacher ratio portrays the number of learners that are managed by one instructor in a stream during instructional time (Lumuli, 2009).

Low student: teacher ratio implies that an instructor will be in a position to manage fewer learners; this implies that there would be high level of attention. High student: teacher ratio means that an instructor would be managing many learners at one time. This would make teachers to use instructional approaches that are deductive making learners to be active participants (Michelowa, 2003). But, there was need to ensure a balance as very low student: teacher ratio result to under-utilisation of teachers while high student: teacher ratio compromises quality of education resulting to poor academic performance. The study sought to establish whether there was increased employment of teachers to match with increased student enrolment in upgraded Extra County Schools to national level in Western Kenya Counties.

In Pakistan, Rehman (2019) study focused on planning of curriculum and human resources in schools by examining human resource and educational planning practices

in public and private primary school levels in Punjab area. Results showed variations in private and public school practices in relation to education planning and human resource management. The study discovered that selection and recruitment of new teachers was a very tiresome responsibility and it also affected students' achievement in schools. they found that owners of private schools continue to labour and in fear of recruitment and retention of their teachers through giving extra bonuses and resources in schools like time flexibility, leave and reward as opposed to public schools. This means that for performance improvement, mobilisation of human resource is critical.

In Kenya, the Basic Education Act of 2013 and Sessional Paper No. 1 of the year 2005 indicates that for effective management of schools, the board of management need to conduct out their tasks efficiently through consideration of all areas including their members of staff (Lasoi et al., 2017). Mobegi et al. (2010) indicated that school board of management need to be in regular communication with TSC to make sure that their schools receive adequate number of teachers for quality curriculum implementation. Reviewed literature indicates that inadequate research has evaluated the input-output association at institutions level with respect to teacher recruitment aspect. This present research was designed to address this gap to establish the efforts the government and school board of management had made to make that there were sufficient teaching and non-teaching staff in upgraded National Schools in Western Kenya.

2.4.3 Attitude, Experience and Working Environment and Academic Performance of Upgraded Schools

Attitude refers to the readiness to work with other individuals to attain mutual goals through socially – agreed – upon means. Based on Oxford Advanced Learners

Dictionary, attitude is the way in which an individual feels and thinks concerning somebody or something. Bantu and Khan (2016) defined attitude as a predisposition to think or learnt tendency to act or think in a specific way either positively or negatively. Okwara, Shiundu and Indoshi (2008) said that the role of curriculum execution involves some major procedures that consist of attitudinal change by parents, teachers, supervisors, teacher trainers, administrators, policy makers and lastly students. It also consists of provision of resources and management ways to make this happen.

Banu and Khan (2016) noted that attitude is significant during implementation of new programme and therefore cannot be over emphasised. The attitudes that educational stakeholders, parents, students, Principals and teachers have towards new programmes like curriculum performs a significant role in predicting how the programme will be managed and appreciated by those it intends to target. A positive attitude towards a programme would result to effective curriculum implementation. Dialogue and deliberations with teacher colleagues, friends and observations by supervisors and keeping articles are all efficient means through which teachers may change their attitude for the purpose of ensuring they are effective in their duties (Lasoi et al., 2017).

According to Crawford (2016), teachers who have inadequate experience in teaching appear to have more influence on students' academic performance than teachers with more experience. Such a deduction could be associated to the event that teachers who have recently qualified in teaching profession continue to gain more fresh professional and pedagogical skills in their areas of expertise. Their professionalism can also be associated with their higher levels of desire to teaching. Some teachers

with more experience are certainly more experienced, however, their excessive, long years of instruction the same subject could have negatively impact on their motivation to teaching.

Schools comprises individuals and therefore acquisition of teachers' services, improving their skills and motivating them to higher level of service delivery and making sure sustain total commitment to the school is important for their performance and realisation of curriculum goals (Muthoni, 2015). Juma (2011) record that there was an effective halt by teachers after 15 years of teaching work. A research conducted by Onyara (2013) showed that the experience of teachers was a determinant for performance in Kenya than their education qualifications level. Onyara said that this could not be due to accrued years of teaching but mainly due to respect provided to old teachers from those who are young according to African social practices and behaviours and teachers who are older are rarely transferred to other schools/regions than those who are younger.

From their studies, Lucas and Mbiti (2014) confirmed that students being taught by experienced teachers performed better compared to those being taught by teachers with less experience. They question whether the government of Kenya was in a position to change on-job training and minimise costs associated with training to make secondary school education affordable for all students. Jaiyeoba and Atanda (2003) indicated that teacher experience mainly related with performance of secondary schools level and needed more investigation. Performing this production function with teacher factors would enable the research establish the effective aspects of teacher features (inputs) which can be operationally associated with achievement (output)

Puangjakta and Vinitwatanakhun (2015) conducted a study on teacher' views regarding human resource management dimensions happening in Bangkok, Prawet District Inter-National School in Thailand. The study also sought to compare teachers' perceptions classified by various demographic factors. The findings demonstrated that teacher' perceptions of human resources management in a school were at a low level and there was no significant difference in teachers' perceptions of human resource management dimensions. However, the results also revealed that Thai teacher' and Asian teachers' perceptions of professional development had a significant difference in the direction that the mean statistics of Asian teachers' perception was higher than Thai teachers'. The gap created from the study is that it was conducted in one school while this study involves eight schools.

2.4.4 Other Human Resource Dynamic Practices and Academic Performance of Upgraded Schools

In Nigeria, Osagie and Okafor (2015) examined ways through which human resource management factors influenced students in Egor Local government Area secondary schools academic performance from the year 2006-2007. Questionnaire was used to collect data from school administrators. Analysis of data was performed through Karl Pearson product moment correlation coefficient to test the hypothesis. Results showed that the three dimensions of human resource practices had significant effect on student academic achievement. Teacher workload was found to have a negative effect on student academic performance whereas staff evaluation, staff supervision and human resource planning had significant positive relationship with student academic achievement. The gap created in Osagie and Okafor research is that they used data that exceeded ten-year period. Further, the study was quantitative in nature while this study will be a mixed one.

In Kenya, Bitange et al. (2010) indicated that for positive academic performance of schools is dependent on the commitment and quality of its human resource personnel to implement the required strategies. This implies that planning for human resources through strategic plan is an ingredient for schools attainment of its mission, objectives and goals. Henceforth, it is important for secondary schools to put in place methods of ensuring that their teaching and non-teaching staffs are committed to attainment of the designed strategic plans as they are a reflection of positive academic performance.

According to Mobegi et al. (2010), Principals need to practice their responsibilities as internal quality assurance officers in their schools to make sure that there is effective delivery of instructional duties by teachers. Principals are expected to monitor teacher appraisal through TSC forms and perform classrooms observation assessment to ensure that teachers utilise various approaches to teaching and also discussion instructional methods. Principals are required to regularly welcome quality assurance and standard officers who in turn observe teachers when teaching and advice them on areas of improvement as a sign work performance improvement.

Mugure (2011) determined the human resource planning practices in private primary schools in Kahuro Sub County, Muranga County. From the findings, the survey concluded that all the schools had objectives that they wish to achieve and that most of them had a documented strategic plan that covered five years. It was clear that there was a documented human resource plan in most schools that was reviewed quarterly. The study also concludes that in linking human resource goals to the school objectives, the schools adopt discussion with various departments about manpower requirements. The study further deduced that most schools did not have a career development plan for its staff and that they did not prepare a staff movement plan.

The schools specify experience, level of education, number of employees, past performance, skill mix and age of its future staffs. It was revealed that the schools did not conduct gap analysis between supply and demand for human resources.

Akinyi and Odongo's (2015) research examined the impact of support staff working conditions on their work performance in Rarieda Sub County public secondary schools. Findings showed that school working conditions affected support staff work performance. In Rarieda Sub County public secondary schools, most of the support staff said that their working conditions were poor. Some of the challenges that staff members experienced were: overworking, inadequate housing, low salaries, inadequate working condition and poor motivation. To address the challenges, the support staff used their own tools to do school work; some were engaged in small business and odd jobs, some walked from their homes to schools while others persevered in their jobs. The gap created by Akinyi and Odongo (2015) study is that it was conducted with focus on non-academic staff (laboratory technicians, cooks, secretaries, matrons, nurses among others) while the present study focused on both academic and non-academic staffs to show how planning dynamics of human resource practices influenced academic performance.

Nyaboga et al. (2015) examined the support staff working conditions in public secondary schools in Nyamira County. They found that majority of support staff worked under very harsh working condition in schools. This means that the motivation of the support staff to discharge their duties depended on the working conditions that school management had set. This negatively affected their motivation to perform their duties effectively and efficiently. The gap created by Nyaboga et al. (20155) research is that they failed to include teaching staff as part of respondents. In

addition, they did not examine the relationship between the working conditions of support staff and academic performance.

Lasoi et al. (2017) investigated the strategies that board of management were applying and their influence on provision of quality education in Kajiado West Sub County public secondary schools. It was revealed that physical resource management and teachers professional development programmes influenced quality education provision. Lasoi et al. concluded that BOM involvement in physical resource management and professional development of teachers impacted on quality education provision. This study departs from Lasoi et al. (2017) research by investigating how human resource dynamics influenced academic performance of upgraded National Schools in Western Kenya.

Mutiso and Kilika (2017) looked at the association between HRM practices and quality service delivery in Kenya's education sector. The findigns showed that the regression model used was significant and that human resource strategy measured through 5 practices explained 45.0% of change on quality service delivery in Taita Taveta public secondary schools. They concluded that human resource strategies applied in public secondary schools in Taita Taveta County was done with leaning towards traditional human resource practices. The gap created in this study is that they did not link human resource management planning practices and academic performance, a focus of this study.

2.5 Financial Planning Dynamics and Academic Performance of Upgraded Schools

Finance is a discipline that deals with money; that is how it is generated, invested and sustained in an establishment (Bua & Adzongo, 2014). Finance is a division of

economics that is related to allocation of resources in addition to management of resources, investment and acquisition. Financial planning dynamics consists of variables of accounting which involves the procedures of identification, measurement, recording, interpretation and communication of economic activity; tracking income of business and expenditures and utilising these measurements to answer various questions concerning the tax and financial status of the enterprises which is normally a system which gives quantitative data concerning finance (Williams, 2010). Financial planning is also defined by Cole and Kelly (2010) as the formalisation of what is expected to occur in the future sometime; disquietedness actions undertaken before an occurrence, typically developing objectives and goals and then organising for resources to be availed so that to attain a desired goal.

Planning leads to budgeting, that is a statement normally, articulated in financial language, of the expected performance of a school in quest for attainment of goals, vision and mission over a specific period of time. A budget also is an action plan for yet to come, demonstrating the tactical and operational end of organisation chain planning. Cole and Kelly (2010) argue that leaders tasked with developing budget need to be involved during formulation, need to be flexible to be altered if situations arise and budgets need to be seen as ways to an end and not to and end by themselves (Kaguri, Ibuathu & Thiaine, 2014).

In history, no school has ever thrived without suitable utilisation of its financial resources. Finances are required to sustain and maintain the school infrastructural facilities and to implement the curriculum effectively, among other things. The school administrators should not fold their hands to allow the situation to get worse. Instead, they should explore other legitimate and reliable sources of finances for schools

(Amirize & Ololube, 2018). Poor management of school funds results in diversion of finance for different projects, embezzlement, and financial misappropriation, so on. School funds are utilised for the daily operations of the institutions. It is of vital magnitude to document that every school Principal is expected plan the institutional budget either annually or termly to attain school goals and for the effective financial management. It is exclusive the task of the school board of management to see to it that the essential finances regularly sought for, meet the demands of their institutions. The availability of such finances will help manage institutional projects, which will go a long way to improve better learning and teaching environment in the school (Bua & Adzongo, 2014).

Barasa (2009) recognises that efficient planning and management of financial resources is an important task for Principals. Without adequate financial resources, institutions cannot carry out their defined tasks effectively. Money must be available to run the different departments of the school (Kaguri, Ibuathu & Thiaine, 2014). The available funds will be used to purchase the required teaching and learning apparatus such as chalks, text-books, paying of the support staff and building and improvement of infrastructures.

2.5.1 Income Generating Activities and Academic Performance of Upgraded Schools

The success or failure of any educational institution depends greatly on the availability of funds (Bua & Adzongo, 2014). Mobegi et al. (2010) noted that the issue of finance is crucial to retention and the provision of quality education since it determines the quality of physical facilities, teaching and learning materials, quality of teacher motivation and teachers employed in the time of shortage. Unfortunately,

allocation to the education sector on which secondary education depends has been consistently low in spite of the strategic role of the sector in the training of manpower for the development of the economy (Akindele, 2013). This requires Headteachers to plan and strategise on how to raise more money to ensure programmes in schools run well.

According to Mobegi et al. (2010), School Board of Management should devise school income generating activities to alleviate current financial problems that result in student absenteeism, transfers, indiscipline and inadequate facilities. Amirize and Ololube (2018) suggested that school Principals must look for ways to raise money for their schools. Hence, the alternative ways to generate fund according to them, include poultry keeping, rabbitry, piggery, practical farming levies, examination fees and uniforms. Income from these activities has made some schools to build school halls, laboratories and libraries for themselves. This is why, agricultural practices such as large-scale animal husbandry, poultry, piggery, cattle rearing, fish farming, cropping, food processing and other revenue generation as welding, printing, tailoring, plumbing and photography remain plausible options for raising additional funds to support school programmes.

Ipata (2011) in a study on cost saving measures on access, retention and performance in public secondary schools in KCSE examination in Teso Sub County found that most schools were understaffed. This contributed to high expenditure for schools as they were forced to employment of BOM teachers. Quality of teaching process was also affected due to schools lacking quality buildings, science equipment, shortage of teachers, and IGAs. Availability of income generating projects in schools would help needy students through provision of bursaries to them to enhance retention and

performance. Nzoka and Aluko (2014) study sought to analyze the strategies school managers apply to improve academic performance of students in schools under Free Day Secondary School Education Programme in Embu Sub County, Embu County, Kenya. It was established that school managers used various strategies to improve students' academic performance. The strategies commonly employed included subsidising Government funding through Free Day Secondary Education Programme using income generating activities.

Ayoti et al. (2016) discovered that as a result of inadequacy of school funds, various schools have adopted a range of techniques of acquisition of extra funds among them being investing in Income Generating Activities (IGAs) to complement school budgets. Funds earned through IGAs are used to develop school infrastructure and acquisition of stationery to support learning activity (Kiveu & Maiyo, 2009). A study done by Selina (2012) revealed that schools that have IGAs generate income that is used in promotion of motivational programmes for teachers and acquisition of instructional materials. Such schools end up posting better results in national examination compared to schools that do not have such arrangements.

In an effort to improve internal efficiency of public secondary schools, Ojwang (2016) examined resource mobilisation strategies like students fee, state subsidy, and student labour, community funds, Non Governmental Organisation funds, income generation activities and schools foundations on internal efficiency measured in terms of the levels of retention, repetition and performance of students in Rachuonyo South Sub County. Results showed that more financial planning resources mobilisation strategies resulted into enhanced internal efficiency. However, funds mobilised by community had a negative relationship on internal efficiency since it was inadequate. Repetition

rates of students had a positive variation with income generating activities and state subsidy. This means that the income generating ventures by secondary schools did not fail to stop repetition of students. The study by Ojwang (2016) was on internal efficiency while this study widened to include other schools performance indicators.

Nzoka and Aluko (2014) observed that although some of the schools had started income generating activities, these were not very effective in supplementing the Government grants through Free Day Secondary Education initiatives in the country. The school facilities in some schools remained not conducive to effective learning. This results show that there exist challenges in financial planning and management on running of schools. This research determined the influence of financial planning dynamics on academic performance of upgraded secondary schools in Western Kenya.

2.5.2 Government Capitation and Grants and Academic Performance of Upgraded Schools

Olatunde and Omondi (2010) in their study found that government financial support was also significant. The implication of this finding is that without government financial support to the schools, most of the infrastructure like classroom buildings and other learning materials may not be available for use by the students. It is therefore necessary that the government should increase its support both financially and materially towards the support of teaching and learning of mathematics in all schools in Kenya.

The allocation of finances by Ministry of Education to National Schools has been a thorn in the flesh for some years. In the 2013/2014 financial year, Alliance Girls and Alliance Boys schools national received Kshs 70.3 million each for upgrading of their infrastructure. Lenana School and Kaspabet Boys (a new upgraded school) also

received Kshs 70.3 million each during that financial year (Ngoko, 2019). Further, School C Girls in Kakamega County received Kshs 10 million during that financial year. In the 2016/2017 financial year, 327 schools were allocated a total of Kshs 939 million to improve their infrastructure with majority getting a mere Kshs 1 million. Some of the lucky schools such as Moi Girls Eldoret received Kshs 50 million, Loreto Girls (Kshs 30 million), School C Girls (Kshs 15 million), Limuru Girls (Kshs 10 million) while Mary Hill school got Kshs 12 million. This means that there is no fair distribution of finances by Ministry Of Education to upgraded National Schools hence posing challenges to curriculum implementation in some schools. To cover shortfall associated with inadequate government financial allocations, Schools are expected to generate funds internally to run their schools as well as ensure that funds provided by stakeholders are properly managed (Bua & Adzongo, 2014).

Kaguri et al. (2014) study sought to address financial planning, reports and control challenges that need to be corrected in order to have an improved and sustainable FSE program. Data analysed showed that in financial planning; budgeting is either often done in a careless fashion or not done at all with minimal involvement of education stakeholders in the budgetary process; financial reports are poorly prepared while Auditing is done in an arbitrary way. The study established that all respondents said that government subsidy funds were not remitted on time and these delays affected educational managers in carrying out their managerial roles concerning Free Day Secondary Education. The Kaguri et al (2014) study also established that the government funds were inadequate to meet the school needs throughout the year and the managers devised strategies to cope with the inadequacy.

2.5.3 School Fees and Academic Performance of Upgraded Schools

Ayoti et al (2016) noted that there is no institution that functions effectively without finances. There is need to raise and manage funds appropriately to ensure effective teaching and learning since funds are required for purchasing of teaching materials and mainly come through fees contributed by students. Uwezo (2010) points that fees collection varies from school to school across the country based on the guideline provided by Ministry of Education. Ayoti et al (2016) notes that where fees collections are not enough for a school, the state of infrastructure available in those schools is in a poor state which compromises content delivery hence affecting the academic performance of schools.

In Nigeria, Bua and Adzongo (2014) investigated the impact of financial management on secondary school's administration in Zone A Senatorial District of Benue State. It was found that prompt payment of staff salaries and allowances significantly impact on the management of secondary schools. More so that school fees and other revenue generated significantly impact on the provision of instructional materials in secondary schools in Zone A Senatorial District of Benue State. In Lesotho, Mncube and Makhasane (2011) researched in secondary schools obtain and manage their finances. Thiswas a qualitative study that used interviews and document reviews to collect the required information from school Principals in Lesotho. The results showed that schools in Lesotho obtained their financial resources from a number of sources which included school fees, sponsors, fund raising activities and subvention funds. What was striking was that in all schools, there was no policy showing how funds should be utilised in schools, which would serve as a guide on how schools should utilise their finances. They suggested that school Principals, school secretaries and Heads of

Department needed capacity building on financial planning matters and that policy on the use of school funds should be developed and put in place in schools.

Ayoti et al. (2016) argues that resource utilization is an integral part of the overall management of the school. Education in a school is explored by provision of resources, their maximum utilisation and management. The purpose of this study was to establish the financial determinants of management of instructional materials for enhancing students' performance in secondary schools in Vihiga County. Findings of the study revealed that the inadequacy of financial resources in schools in Vihiga County had a negative impact on acquisition of relevant and adequate instructional materials and this in turn influenced negatively on performance of students in KCSE examinations. From the study it is concluded that procurement of resources mainly depend on fee collection, proceeds from income generating activities, fund raising activities (Harambee), bursaries, donations and government subsidies which is never attained in time thereby having a negative influence on performance of students in KCSE exams.

2.5.4 Other Financial Planning Mobilisation Activities and Academic Performance of Upgraded Schools

Educational institutions like other organisation require financial resources for their survival. In South Africa, financial planning remains a challenge in many schools because most school Headteachers lack proper training (Muofhe, 2012). Muofhe (2012) disclosed that schools are still unclear on the features and functions of a school's budget which affects the operations of various activities in schools. Further, the planning, implementation and control of the budget and evaluation remain problematic in many schools leading to underperformance.

As part of mobilising for additional funds to meet the education needs, Nzoka and Aluko (2014) in their research suggested that secondary schools Board of Management should devise strategies such as the Old Students' Associations and organize communal fundraisers to help equip schools for retention and delivery of quality education. In most cases, some Principals claim they lack enough funds to run their schools, but the reality sometimes may be that it is the manner the little funds available to the Principals is managed that constitute great management problem (Bua & Adzongo, 2014).

The acute shortage of learning resources, desks among others could be due to inadequate finance situation in schools and this affects the state of learning facilities. Inadequate supply of instructional materials like audiovisual equipment, laboratory equipment and even standard text-books are speculated to be instances of the effects of poor financial planning and management on secondary schools. The growing interest of both the public and government in how funds provided for the implementation of secondary school programmes are managed makes financial problems become a central issue. The public and the relevant stakeholders (parents) in education expect school Principals to ensure proper management of the funds provided for implementation of school programmes. This is because effective and efficient implementation of any school programme depends on the proper way financial inputs are managed.

Inyanga (2015) looked at factors that hinder formulation and implementation of school strategic plans in the in East Wanga Division of Mumias Sub County. The descriptive survey method was used in the study. The study concluded that strategic planning provides the big picture of where an institution was, where it was heading to

and how they were going to get there. To get there, schools require solid financial resources. In Nigeria, Amirize and Ololube (2018) investigated fund management strategies for effective administration of public secondary schools in Rivers State. The study found existence of significant relationships between the Principals' fund management strategies, accountability and effective administration of secondary schools. In South Africa, Sibongiseni (2016) explored the approaches of managing school finances which newly appointed Principals used in a rural context. The study revealed that Principals used the school financial management approaches of planning, organising, controlling leading to effective performance of their schools. However, rural context the schools in rural areas did not receive adequate finances as opposed to those in urban settings thereby showing disparity in performances.

Muofhe (2012) research was to establish how school funds were managed in secondary schools as guided by the South African education policies. The study found that schools were implementing financial policies in managing funds. However, it was discovered that budget in some schools was developed better than other schools within the same category (public ones). For instance, school A (public) involved all stakeholders in the drawing up of the school budget and attempts to make it a working document. But, school B (public) involved stakeholders, but did not see the budget as working document. This affected school operations hence poor academic performance of students.

Kiprop et al. (2015) investigated the challenges in financial management in public secondary schools in Kenya and suggest mitigation strategies in Nakuru Sub County. The study revealed that poor financial planning in schools was greatly hindered by leadership, resource, and policy challenges. The findings hence indicate the need for

training school management on proper resource and financial management in schools to allow for continuous improvement. Wanjiru (2014) investigated how the institutional factors influence the students' performance in Kenya Certificate of Secondary Education (KCSE) in Lari Sub County. The study's findings were that many of the schools' Board of Management (BOM) members are not trained in financial management, the Headteachers are inadequately in serviced in financial management, many of the schools have inadequate facilities and resources and many of the teachers are not able to enhance their professional skills. The gap created in Wanjiru study is that it looked on factors while this study looks at relationship between financial dynamics and academic performance of secondary schools.

2.6 Summary

The literature reviewed aspects of planning dynamics and academic performance of schools from other parts of the world, Africa and Kenya. Based on reviewed literature it is evident that upgraded National Schools lacked adequate facilities and learning resources. The status of instructional materials, equipment and facilities are inadequate, obsolete, dilapidated and unsuitable for preparing competent teachers (Nyawira, 2019). This state of affairs raises concern about the preparedness of this schools serving as National Schools which were upgraded by the Kenyan government. The proliferations of National Schools in such conditions are a manifestation of the ineffectiveness or near to total collapse of the systems of monitoring and regulation of learning institutions (Ngoko, 2019).

Nevertheless the review of empirical literature has also pointed to existence of various conceptual, methodological, geographical and contextual gaps form a number of research studies conducted inside and outside Kenya. One study by Mugure (2011)

looked at human resource planning practices in private primary schools whereas this study focused on human resource planning dynamics in secondary schools that were upgraded in Western Kenya. A research conducted in Malawi by Mncube and Makhasane (2011) focused on ways through which secondary schools were obtaining and utilising financial resources through a qualitative approach. This study established the financial dynamics practices of upgraded secondary schools through use of quantitative and qualitative approaches (mixed method research). In Kenya, Njoki (2018) did a comparative study of physical infrastructure safety towards effective teaching and learning in public secondary schools in Nyeri and Nairobi Counties. This study departed from Njoki (2018) study by establishing ways through which upgraded National Schools in Western Kenya planned for infrastructure upgrade and their influence on academic performance.

In another empirical investigation, Inyanga (2015) did a study on factors that hindered formulation and implementation of school strategic plans in Mumias Sub County of Kakamega County, Kenya. This study was conducted in all sixteen public secondary schools in the sub County irrespective of their category. The study departs from Inyanga by focusing in upgraded National Schools in Western Kenya to establish how they were implementing various planning dynamics aimed at improving their performance in academic and non-academic areas. Based on the identified research gaps form the study, the study resolved to conduct an assessment on the influence of planning dynamics on academic performance of upgraded National Schools in Western Kenya Region in regard to their current national status.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter describes the research design and methodology that were used in the study. It states and explains the, study area, philosophical paradigm, research methodology, research design, target population, sampling procedure and sample size, research instruments, validity, reliability, data collection procedures, data analysis procedures, and ethical considerations.

3.2 Location of the Study Area

The study was carried out in Western Kenya counties of Kakamega, Busia, Vihiga and Bungoma. The four counties are located in Western part of Kenya-Uganda border. It borders Kisumu, Siaya and Trans-Nzoia Counties. It has a population of about 5, 021,843 people with 52% and 48% being female and male respectively (KNBS, 2019). It has a population density of 454 people per square kilometre representing 3.6% of the national percentage (Adapted from 2019 population census). The ages are distributed as follows: 0 – 14yrs (45.9%), 15 – 64yrs (51.4%) and over 65 years (2.3%). Western Kenya has four Counties namely Bungoma, Kakamega, Busia, and Vihiga respectively.

Western Kenya has a number of tertiary institutions including Kibabii University in Bungoma, Masinde Muliro University in Kakamega, University of Nairobi ODEL in Kakamega and Bungoma Counties and Moi University Alupe Campus in Busia County. There are also tertiary institutions also known as middle level colleges, polytechnics, technical training institutes and vocational training centres (public and private). The main economic activity is farming due to the fertile soils and available

rainfall. There are many business opportunities in the region owing to the large population and fairly good security.

There are eight upgraded National Schools with an estimated student population of 5600 and 270 members of the teaching staff. The western region had did not have a national school until the Ministry of Education expanded the initial 18 National Schools to more than 100 in ensuring educational access and equity in education provision. Furthermore, the performance of these upgraded National Schools from Extra County status was another reason that prompted this investigation as they have recorded increased in students' admission but decline in academic performance as reflected in KCSE results. Incidents of students being transferred from some of the upgraded schools to Extra County and county schools also necessitated this study.

3.3 Philosophical Paradigm

This study was based on the pragmatic world-view paradigm. It is an approach which looks at 'what works' rather than what could be considered objectively and absolutely 'real' or 'true' (Tashakkori & Teddlie, 2010). It is a deconstructive paradigm, which advocates for use of mixed method research approaches (Bryman, 2016). This is a research approach that combines both qualitative and quantitative methods in a single study (mixed methodology).

The choice and use of pragmatic approach was informed by the fact that there are aspects of both the positivist and phenomenological paradigms in the study. For instance, the study used quantitative methods where concepts was operationalised so that they can be measured, as opposed to using multiple methods to establish different views of the same phenomenon as done in the qualitative paradigm. The study also used large samples to infer the characteristics of the population from the sample

(positivist approach) as opposed to having small samples investigated in-depth over time as it was done in the phenomenological paradigm.

3.4 Research Methodology

The study utilised mixed method research paradigm. The reasons why the study used this methodology is because qualitative and quantitative data was collected during the study (Bryman, 2016). Therefore, the study collected both quantitative and qualitative data. For instance, the quantitative data was collected using questionnaire and school records such as the admission registers, school inventory while the qualitative data was collected using interviews and document analysis.

The mixed methodology adopted as it allowed observation and description of the phenomena under study from both objective and subjective viewpoints as the study is an empirical research. For data analysis, the study employed quantitative techniques such as statistical techniques so as to describe and relate the variables, while qualitative techniques such as texts and images were also used for coding data and developing themes.

3.5 Research Design

The study was based on the descriptive survey research design. The design was appropriate since there was no manipulation of the independent variable in the study. Surveys also enabled the study to obtain data about practices, situations or view at one point in time through questionnaire and interviews. According to Cooper and Schindler (2013), a descriptive study is concerned with finding out who, what, where and how of a phenomenon which is the concern of this study.

The study deemed this research design as appropriate for the study. Descriptive Survey design related to the study at hand since the study was able to obtain data about the attitudes of Principals, Heads of Department and teachers on planning dynamics and academic performance of upgraded extra County National Schools without manipulating the study variables. This information could be obtained by use of teachers' questionnaire and interviewing Heads of Department and Principals in the study Western Kenya Counties.

3.6 Target Population

According to Cohen, Manion and Morrison (2007), a target population is that population which the study aims to generalise the findings of the study. It is generated from a population, which is the entire group of individuals, objects having similar observable characteristics / traits. The present study was conducted in eight upgraded Extra County Schools to national status in Western region. These institutions were: Lugulu Girls, Bunyore Girls, Friends School Kamusinga, Butula Boys, Kakamega Boys, Butere Girls, Kolanya Girls and Chavakali Boys.

The target population for this study comprised of the Principals and teachers totalling 303 respondents which comprised of 8 Principals and 295 teachers. The Principals were targeted to provide information on how various planning dynamics happened in their schools after they were upgraded to national status. The teachers (TSC employees) were targeted in this study to provide information on how various planning dynamics strategies had and were being implemented in their schools. These two categories of respondents were in a better position to provide answers to the research problem. Students were not included in this research because they could not

provide information on the academic performance of their schools before and after it was upgraded. Table 3.1 show the accessible target population for this investigation.

Table 3.1 Target Population for the Study

Respondents	Number
Teachers	295
Principals	8
Total	**303**

Source: Counties Director of Education (2019)

Therefore, the target population consisted of 295 teachers (employed by TSC) and 8 Principals of the upgraded national schools in Western region.

3.6 Sampling Techniques and Sample Size

Sampling is the process of selecting a sub-set of cases with an aim of drawing conclusions about the entire set (Cooper & Schindler, 2013). A sample is a small part of a population which is thought to be representative of the larger population (Cohen, et al., 2007). Sampling in education research is generally conducted in order to permit the detailed study of part rather than the whole population. This information acquired from the resulting sample was customarily employed to develop useful generalisation about the population, which may be in form of estimates of one, or more characteristics related to the population. They were likely to be concerned with estimates of the strength of relationship between characteristics with the population (Kothari, 2014).

3.6.1 Sample Size Determination

A sample is a subset of a population selected to participate in the study, it is usually a fraction of the whole, selected to participate in the research project (Kombo & Orodho,

2008). In this research, Principals of upgraded was selected using census method (all) and only teachers were the ones who were sampled. The sample size for the study was determined by formula proposed by Role (2013) for known size of the population.

$$n = \frac{N}{1 + Ne^2}$$

Where: n = sample size

N = population size = 263

e = margin of error (e≤0.05)

This was computed as

$$n = \frac{295}{1 + (295 * 0.05^2)} = 169.78$$

Therefore the final sample size for the study involved 170 teachers and 8 Principals. Table 3.2 below shows the sample size for the study.

Table 3.2 Sampling frame

Respondents	**Target**	**Sample Size**	**Sampling procedure**
Teachers	295	170	Systematic random sampling
Principals	8	8	purposive sampling
Total	**303**	**178**	

Source: Counties Director of Education (2019)

3.6.2 Sampling Procedures

The respondents for this research were selected through probability and non-probability sampling techniques. Probability samples were those that stemmed from simple random sampling, systematic sampling, stratified sampling, cluster or area sampling. On the other hand, non-probability samples were based on convenience sampling, judgment sampling and quota sampling techniques (Kothari, 2014). The

Principals of upgraded secondary schools were selected using non- probability sampling method.

This study used systematic random sampling technique in selecting teachers who participated. According to Kothari (2014), this sampling technique gives the population an equal chance of being selected hence eliminating sample bias thereby getting a true representative sample. It is represented using the following formular:

$$k = \frac{N}{n}$$

Where: k= systematic sampling interval

N = population size

n = sample size

Therefore, the systemic interval can be computed thus:

$$k = \frac{295}{170} = 1.735$$

Therefore, the constant interval for this study was 2. In using this method, in going to school A, a random starting point was picked (for instance Teacher No. 2), from which the next teacher to be selected after interval is No. 4, 6, 8, 10, and nth. This method was done until the 170 sample size was obtained for all schools. The decision to use this method is because it guarantees high validity and reliability of the findings since it is better than simple random sampling in situations when there is low risk of data manipulation (Bryman, 2016). The assumption was: that there were representative of most normal populations since random characteristics did not disproportionately exist. This means that the population of teachers exhibited a natural degree of randomness along the chosen sampling interval (2).

Additionally, purposive sampling was used to select secondary school Principals. Purposive sampling is used to select participants based on the specific information they hold and which is necessary to attain the objectives of the study (Moser & Kalton, 2017). It was assumed that Principals had the necessary information concerning the planning dynamics and academic performance of upgraded Extra County Schools to national status in Western Kenya Counties.

3.7 Data Collection Instruments

Questionnaire, interview schedule and document analysis were used as the main instruments for data collection. Selecting these tools was based on the nature of the data to be collected, timeframe and the objectives for the study. The main objective for this study was to assess the influence of planning dynamics on academic performance of upgraded secondary schools to national status in Western Kenya Counties. The respondent views, opinions, feelings and perceptions were important to answer the research questions. Such information could only be collected through questionnaire and interview schedules (Oso & Onen, 2009).

3.7.1 Questionnaire for Teachers

According to Oso and Onen (2009), a questionnaire is collection of items to which a respondent is expected to react, usually in writing. It aimed at collecting a lot of information over a short period. Questionnaire is useful for gathering data from respondents thought to be representative of a population, using closed structure and / or open-ended items. This was designed to make sure that respondents identify the main issues of the study. A questionnaire was developed to get responses from teachers on the degree to which planning dynamics has academic performance in Western Kenya.

The research questionnaire captured the objectives of the study and was subdivided into six sections as discussed in the next paragraph. A questionnaire was chosen as the best instrument to use in collecting data from teachers because their sample size was quite large owing to the distance and time constraints. Therefore, the instrument was the ideal tool for collecting data for this investigation. The target population was also largely literate and therefore very unlikely to have difficulties responding to the questionnaire items.

In terms of structure, the questionnaire was divided into six sections. Section A covered demographic information of respondents. Section B – E contained Likert scale items on various planning dynamics; instructional, infrastructural, human and financial resource practices evident in upgraded Extra County Schools to national status in Western Kenya. The Likert scale used ranged from Strongly Disagree (1), Disagree (2), Undecided (3), Agree (4) and Strongly Agree (5). The last section F contained questions that checked on the performance of National Schools in various key areas by checking the performance of the upgraded institutions before and after they were upgraded. The scale used to determine performance was; Very high (5), High (4), Average (3), Low (1) and Very Low (1). Appendix II presents the questionnaire for teachers. Furthermore, the questionnaire had open ended items from which the study sought teachers' opinion on various issues pertaining to the study topic.

3.7.2 Interview Schedule for Principals

This is an oral administration of questions which require a face to face interaction between interviewer and interviewee (Kothari, 2014). The Principals of eight upgraded National Schools were the main participants involved in these interview

sessions. The Principals of secondary schools were the key persons involved in planning and management of secondary schools. This implied that they were the informative and knowledgeable subjects / population. Since the purpose of qualitative research was to understand a phenomenon in depth, it was important to purposively select subjects that have adequate and relevant information on the role of planning dynamics and academic performance. The interview schedule was structured according to the objectives of the study as seen from Appendix III.

3.7.3 Observation Checklist

Observation checklist was used to collect data for this research through examining and analyzing various records available in the upgraded national schools in Western Kenya. It involves collecting information through observation or analysing documents to enable get sufficient information in relation to the research problem (Tashakkori & Teddlie, 2010). The study collected data on number of teachers in a school, number of students enrolled, number of classrooms (including streams), libraries, laboratories, dining hall, kitchen, dormitories, playing field, and school bus among other facilities that are available in upgraded National Schools (See Appendix IV).

The study also analysed historical and public documents to gain additional information on the upgraded National Schools. Again, the study obtained unobtrusive information at the pleasure of the study and without interrupting the research. Information on notice boards and school routines was beneficial to the study. The advantage of choosing to use this instrument is because it enabled the study to collect a large amount of textual information that complemented the information which was collected using questionnaire and interviews. The document analysis was also used to

confirm and remedy the limitations of questionnaire and interviews and assisted the study to cross check the data collected.

3.8 Validity and Reliability of Research Instruments

3.8.1 Validity of Research Instruments

Validity is the extent to which the instrument measures what it is designed to measure according to subjective assessment (Creswell, 2013). Validity deals with the adequacy of the instruments for example, the study needs to have adequate questions in the written task in order to collect the required data for analysis that can be used to draw conclusion.

Fraenkel and Wallen (2004) suggest that the individual who is supposed to give an intelligent judgment about the adequacy of the instruments should be given the instruments before the actual research is carried out. The content and face validity of the instruments was addressed. Content validity enables data being collected to be reliable in representing the specific content of a particular concept. An instrument that yielded valid data is designed and then subjected to respondents of similar samples; inferences are then made and compared to the existing theories.

Content validity was established by critically considering each item in the research instrument to ascertain if it is a real representation of the desired content and to see if it would measure what it was supposed to measure. Developed instruments were then presented to the supervisors and the research experts to assess the applicability and appropriateness of the content, clarity and adequacy of items in the instrument from a research perspective. Upon completion of examination, data was reviewed and the items that were not clear were modified accordingly. The instruments were amended according to the expert's comments and recommendations before being administered.

3.8.2 Reliability of Research Instrument

Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials (Creswell, 2013). According to Bryman (2016), reliability is the extent to which data collection procedures and research tools are consistent and accurate. In this study, the split-half method was employed to assess the reliability of the research instruments. The result was used to compute the Cronbach alpha correlation coefficient. Cronbach's α alpha formula was used to determine the reliability as follows:

$$\alpha = \frac{k\bar{r}}{1+(k-1)\bar{r}}$$

Where k is the number of responses and $\bar{r}$ is the average rank correlation.

The rank correlation formula is $r = 1 - \frac{6\sum d^2}{n(n^2-1)}$. Cronbach's alpha is said to be equal to the stepped-up consistency version of the intra-class correlation coefficient, which is commonly used in social science studies. This was acceptable as outlined in Table 3.3.

Table 3.3 Reliability Decision Table

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent (High-Stakes testing)
$0.8 \leq \alpha < 0.9$	Good (Low-Stakes testing)
$0.7 \leq \alpha < 0.8$	Acceptable (Surveys)

Source: Bryman (2016)

A reliability coefficient is computed to indicate how reliable data is, where a coefficient of 0.80 or more implied that there was a higher degree of reliability of the data. The reliability results are provided in Table 3.4.

Table 3.4 Split-Half Reliability Analysis Output

	Variable(s)	No. of items	Benchmark	Cronbach's Alpha	Decision
1	Instructional materials dynamics	5	0.8	0.822	Reliable
2	Infrastructural resource dynamics	10	0.8	0.816	Reliable
3	Human resource dynamics	7	0.8	0.803	Reliable
4	Financial resource dynamics	9	0.8	0.811	Reliable
5	Academic performance	8		0.859	Reliable
	Average scores / Total	**39**	**0.8**	**0.822**	**Reliable**

The results in Table 3.4 show that the five variables items were within the acceptable limit of r=0.8 and above. The average reliability score was 0.822 which is acceptable according to guidelines provided by Bryman (2016). Higher reliability indicator was recorded on the academic performance with the least being recorded on human resource planning dynamics.

3.8.3 Pilot Study

Piloting is trying out of the research instruments on the respondents who were not involved in the main study. It is important for a pilot study to be carried out before any research is done. Therefore, it was necessary to pre-test the instruments of the research on a small sample of respondents in a preparatory exercise to find out if there is any weakness so that it can be corrected. In order to establish the suitability and clarity of the instruments, a pilot study was carried out in two upgraded national secondary schools in Trans-Nzoia County which are St. Joseph Boys, Kitale and St. Brigid's Girls High School, Kiminini. This County did not participate in the final study. The desirability of piloting was to ensure that survey questions operate well and also that the research instruments function well. The information obtained from the pilot study was used to refine the instruments.

Pilot testing provided the study with an opportunity to detect and remedy a wide range of potential problems with research instruments. These problems included: questions that respondents did not understand, ambiguous questions, questions that combine two or more issues in a single question (double cast questions) and questions that make respondents uncomfortable. The pilot testing also helped the study to identify ways of improving the administration of instruments. For example, if respondents showed fatigue while completing the instrument, then the study looked for ways to shorten the instrument. If respondents were confused about how to return the completed instrument, then the study provided clarifications on how they were supposed to fill.

3.8.4 Trustworthiness and Authenticity of Qualitative Tools

This study used triangulation approach to establish the dependability and authenticity of qualitative data that was collected from interviews. Using triangulation, the study collected qualitative data from Principals. McMillan and Schumacher (2010) argue that triangulation is a technique for improving the trustworthiness and authenticity of qualitative tools. In the view of Patton (2002), the use of triangulation strengthens a study because it involves application of several methods including using both quantitative and qualitative approaches in data collection process.

3.9 Data Collection Procedures

Kombo and Tromp (2006) observed that data collection is the gathering of specific and relevant information aimed at providing or refuting some opinions and facts. Permission to conduct research was obtained from National Commission for Science, Technology and Innovation (NACOSTI). The study then reported to the County Education Officers to seek approval to conduct research in selected upgraded national secondary schools in Bungoma, Busia, Kakamega and Vihiga Counties. The study

then carried out reconnaissance trip of selected schools to seek consent of the heads of schools and to familiarised herself with what went on in the selected schools. The study administered research questionnaire by herself in all eight upgraded national schools.

3.9.1 Administration of Questionnaire to Teachers

The sampled teachers of upgraded National Schools were first contacted to get their consent to be involved in the study. The study informed them about the purpose of the study in addition to their rights with regard to participation in the research. To show their approval, the teachers were asked to provide their signatures in the letter of introduction form (Appendix I). Thereafter, the study issued copies of the questionnaire to them and came back to collect the filled questionnaire one week later. The period of collection of data from teachers lasted two months. Considering teachers in these schools are always busy, they were therefore provided with adequate time to answer the research instruments.

3.9.2 Administration of Interview with Principals

The study conducted interviews with Principals of the upgraded national secondary schools in Western Kenya. The interview sessions was conducted face to face. The study used tape recorder to record responses during interview. The interviews conducted by the study after making arrangements with the Principals on the right time (day) of conducting the interviews. Face-to interview was done with principals in their office to determine their views with regard to various planning dynamics that their institutions were using to ensure improve performance of their schools. Most interview session lasted for 20-30 minutes.

3.9.3 Collection of Data through Observation Checklist

The study also collected data through observation checklist form on various aspects as can be seen in Appendix IX. Data was collected through the assistance from the Principals, deputy Principals, heads of subjects, librarians, accountants and also study's own verification. This was done for the eight schools during the day of conducting the interviews with the Principals. Appendix IX to X show the kind of information collected through document analysis.

3.10 Data Analysis

Collected data was examined for completeness, comprehensiveness, consistence, relevance and reliability (Mugenda & Mugenda, 2003). The data collected for this study was analysed through quantitative and qualitative forms. At first, the three instruments used for data collection were arranged well so that the process of data collection could happen. After the data was collected, the study did data editing which involved the process of examining the collected raw data to detect errors and omissions and to correct these where possible.

At first, quantitative data from questionnaire and document checklist were coded, entered and analysed with the help of computer software Statistical Product Service Solutions (SPSS) Version 23. This software helps in computation of various analysis after data has been entered. According to Kothari (2014), the purpose of the coding would be to classify the answer to a question into meaningful categories so as to bring out their essential pattern. Coding refers to the process of assigning numerals or other symbols to answers so that responses can be put into a limited number of categories or classrooms.

After data entry, quantitative analysis was done using descriptive statistics; frequencies, percentages, means and standard deviation. Inferential statistics was also used to test the research hypotheses for the study; one sample t-test and Karl Pearson correlation coefficient. The one sample T-Test was computed to check on the significant difference in KCSE performance before and after the institutions were upgraded to national status in the region. Further, to test the four hypotheses for the study, Karl Pearson Correlation was computed to determine the relationship (direction and strength) between different planning dynamics and academic performance of upgraded to national status secondary schools in Western Kenya. All the tests were based on 95.0% confidence level. If the p-value is less than 0.05, the study reject the null hypothesis (α=0.05) and if the p-value is greater than 0.05, the study accept the null hypothesis.

Qualitative data from the interview schedule was analysed using thematic content analysis. Yin (2014) argues that thematic analysis provides the opportunity to understand issues from a wider perspective. Consequently, data related to participants' views, attitude or feelings, as is the case in this study, is best handled thematically. The procedure involved making notes, patterns, themes and making contrasts helped to device meaning from a particular set of data (Creswell, 2013). The data was transcribed and put into themes and sub-themes of the study. Data analysis is therefore combined with theory generation for the purposes of discovering common themes embedded in theory. After data analysis, the findings of the study were presented using tables, line graphs and narrations in chapter 4. Table 3.5 presents the data analysis matrix for the hypotheses for the study.

Table 3.5 Hypothesis Testing Matrix

Hypothesis	Independent variable	Dependent variable	Statistics	Decision rule
H_{01} There is no significant relationship between instructional material dynamics and academic performance of upgraded secondary schools	Ordinal scores of Instructional material dynamics	Academic performance of schools (after upgrading)	Karl Pearson Correlation	p<0.05 reject p>0.5 accept
H_{02} There is no significant relationship between infrastructural resource dynamics and academic performance of upgraded secondary schools	Ordinal scores of infrastructural resource dynamics	Academic performance of schools (after upgrading)	Karl Pearson Correlation	p<0.05 reject p>0.5 accept
H_{03} There is no significant relationship between human resource dynamics and academic performance of upgraded secondary schools	Ordinal scores of human resource dynamics	Academic performance of schools (after upgrading)	Karl Pearson Correlation	p<0.05 reject p>0.5 accept
H_{04} There is no significant relationship between financial resource dynamics and academic performance of upgraded secondary schools	Ordinal scores of financial resource dynamics	Academic performance of schools (after upgrading)	Karl Pearson Correlation	p<0.05 reject p>0.5 accept

Consequently, the analysis of data formed the basis for data presentation, interpretation and discussion. After the data analysis was done, results, conclusions and recommendations were made based on the findings of the study.

3.11 Ethical Considerations

Various ethical considerations were followed by the study as it is expected by the University Board of Post Graduate Studies. At first, the study sought the authority of

the university to apply for a research permit at the NACOSTI. Once the research permit was obtained, the study obtained an authorisation letter from the County education offices to be permitted to visit Principals of the eight upgraded National Schools in Western Kenya to be allowed to carry out the study among the teachers in their schools. The respondents were informed that their participation in the study was voluntary and that they were free to withdraw from the study at any point in time.

Another ethical guideline that was followed related to confidentiality and anonymity. The upgraded schools, principals and teachers from the eight National Schools in Western Kenya were not identified by schools or individual names. The names of the schools were denoted with the following letters (A, B, C, D, E, F, G & H) as seen in chapter four. The study ensured that all information collected from the respondents was treated as confidential.

Another ethical conduct related to permission. The study requested National School Principals to allow collection of use documentary materials related to study variables on; KCSE performance, number of infrastructural facilities, student population and instructional materials. At the same time, the study findings was open to all interested parties with a belief that they helped to improve educational planning practices in secondary schools in Kenya and beyond. The study also ensures that that all authorities cited are acknowledged in the reference section. Moreover, the level of similarity in the whole document was kept at below 20.0% through the use of Turn-It-In software recommended by UOE library.

3.12 Summary

This chapter has described the methodology that was used by the study in the course of the study. It has described the research area, research paradigm, methodology,

study design, target population, sampling size and data collection instruments. The validity and reliability of the research tools has also been discussed in the chapter, as well as the data collection procedures, data analysis and ethical considerations on the influence of planning dynamics on academic performance of upgraded Extra County Schools to National Status in Western Kenya counties of Kakamega, Vihiga, Busia and Bungoma.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSIONS

4.1 Introduction

This chapter presents the analysis of research data collected through document analysis, interview guide and questionnaire for teachers. The study investigated at the planning dynamics and their influence on academic performance of eight upgraded National Schools located in the Western region of Kenya (in Kakamega, Busia, Bungoma and Vihiga Counties). The presentation of findings in this chapter is through quantitative and qualitative forms. Quantitative analysis involved use of frequencies, percentages, means, standard deviation and Karl Pearson correlation analysis.

The specific objectives focused on; determining instructional material dynamics influence on academic performance of upgraded National Schools, examine the infrastructure dynamics and academic performance of upgraded National Schools, establish how human resource dynamics influence academic performance of upgraded National Schools and to assess the financial resource dynamics on academic performance of upgraded National Schools in Western Kenya Counties. The discussion of the findings of the study is done in comparison to previous studies that were conducted before to examine the occurrence of similarities or differences.

4.1.1 Response Rate

Table 4.1 presents the response rate from the research instruments based on the return rate from the field.

Table 4.1 Response Rate

Instruments	Sample	Response	Percentage
Teachers questionnaire	170	158	92.94
Principals interviews	8	5	62.5
Document Analysis	8	8	100.0
Total	**186**	**171**	**85.14**

Source: Field data (2019)

Out of the 186 responses expected from the sample, 171 responded to the research instrument signifying an 85.14% responses rate. This is above 75.0% as recommended by Mugenda and Mugenda (2003) for descriptive studies. Nevertheless, the research did not manage to conduct interview with Principals of three upgraded National Schools as they were unavailable in their work stations even after booking several appointments with them. For teachers, the response rate was considered to be high as those who failed to return their instruments were the ones who were out of their work stations during the period of collecting back the research instruments. This agrees with Lasoi et al. (2017) research whose response rate of 95.4% for Board of Management members and a response rate of 87.5% for Principals were very good for the study in Kajiado County.

4.1.2 Demographic Data of Teachers in Upgraded National Schools

The study collected background information of teachers based on their sex, level of education and number of years they had been teaching in those upgraded National Schools. Their responses are summarised in Table 4.2.

Table 4.2 Demographic Data of Teachers

Variable	Options	Frequency	Percent
Sex	Male	90	57.0
	Female	68	43.0
	Total	158	100.0
Academic qualification	Diploma	14	8.9
	Bachelors degree	60	38.0
	Postgraduate diploma	72	45.6
	Masters degree	12	7.6
	Total	158	100.0
Period of stay in current school	Less than 1 year	10	6.3
	2-3 years	30	19.0
	4-6 years	42	26.6
	More than 6 years	76	48.1
	Total	158	100.0

Source: Field data (2019)

Responses from Table 4.2 on sex show that 90 (57.0%) of teachers in the upgraded National Schools were male while the rest 68 (43.0%) were female. This show that teacher distribution in these schools is almost equal to ensure sex parity. This is in contrast to Livumbaze and Achoka (2017) research in Hamisi Sub County that established that the ratio of male teachers was higher compared to females in majority of secondary schools.

Secondly, concerning academic qualifications, 14 (8.9%) respondents had diploma level of education, 60 (38.0%) had bachelors degree level of education, 72 (45.6%) had postgraduate diploma level of education, 12 (7.6%) indicated to have masters degree level of education. The findings imply that most teachers are qualified to teach in public secondary schools. Further, the results show that majority of teachers have

advanced their level of education. This show a desire by a significant number of teachers to undertake postgraduate degree programmes. In addition, these teachers have attained a requisite academic qualification, that is diploma and above to enable them discharge teaching responsibility effectively and supervise the implementation of the curriculum to ensure quality academic achievement. The study results coincide with Nzoka and who Aluko (2014) established that all schools were staffed with human resource of acceptable and relevant academic qualification. Even in Thailand, Puangjakta and Vinitwatanakhun (2015) found that majority of those respondents had a Bachelor's degree and those respondents represented 65.2%. This shows that teachers teaching in upgraded National Schools have teachers who are qualified.

With regard to their stay in the current school, 10 (6.3%) teachers had stayed for less than a year, 30 (19.0%) for 2-3 years, 42 (26.6%) for 4 – 6 years and 76 (48.1%) for more than 6 years. The above confirms that majority of teachers had stayed in their current school. This finding is in agreement Puangjakta and Vinitwatanakhun (2015) who found that majority of the respondents worked at this school for between 5 and 10 years. Therefore, they would provide the required information on planning dynamics and academic performance. In addition, teaching experience in their present stations appears to show their familiarity with the challenges and opportunities that came up because of their institutions being upgraded to national status.

4.2 Academic performance of upgraded National Schools (Before and After)

The dependent variable for this study was academic performance of upgraded National Schools in Western Kenya by looking at the situation before and after upgrade. Data was collected through questionnaire, interview schedule and document

analysis. KCSE Performance data collected from seven schools out of eight related to KCSE mean score. The outcome are summarised in Table 4.3.

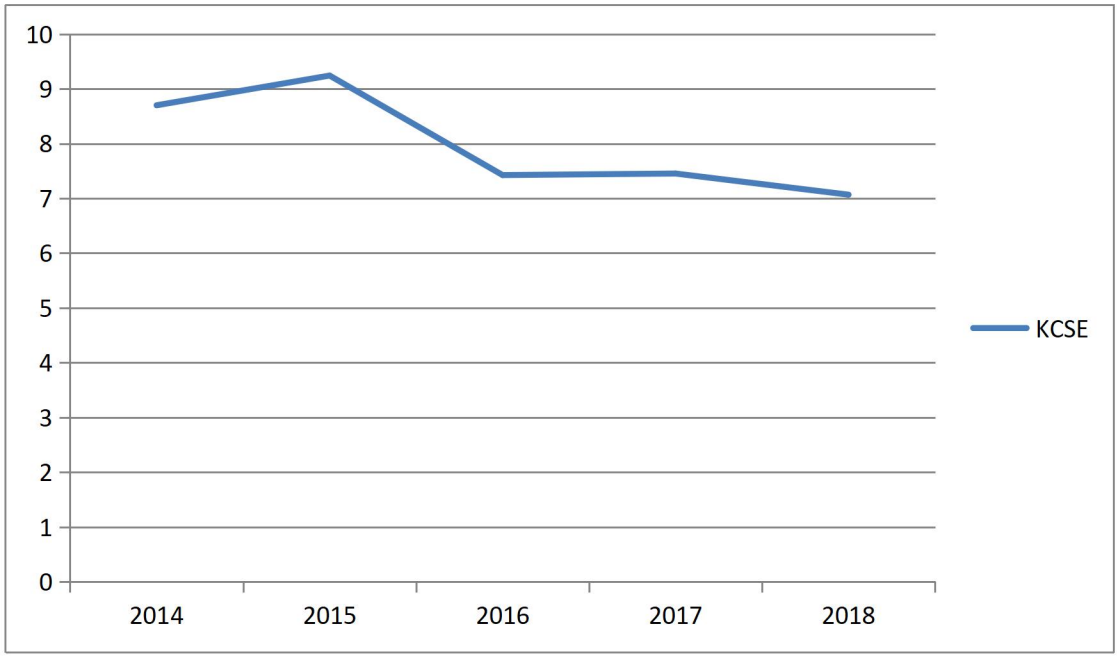
Table 4.3 KCSE Academic performance of upgraded National Schools between 2014-2018

	KCSE Mean score in Years					Avera	Grade	%
Schools	**2014**	**2015**	**2016**	**2017**	**2018**	**ge**		**change**
School A	10.1	10.2	9.6	9.8	8.33	9.6060	B+	17.5
School B	7	9.781	5.287	6.227	6.1954	6.8981	C+	11.5
School C	8.213	8.801	7.107	6.69	6.64	7.4902	B-	19.2
School D	8.7	9.04	7.8	7.62	6.88	8.0080	B-	20.9
School E	9.285	9.156	8.34	7.831	7.73	8.4684	B	16.7
School F	7.93	8.907	5.67	5.92	6	6.8854	C+	24.3
School G						0.0000	n/a	0.0
School H	9.68	8.82	8.18	8.09	7.7	8.4940	B	20.5
Average	8.7011	9.2436	7.4263	7.4540	7.0679	7.9786	B-	18.7

Source: Field data (2019)

The statistics show that in the year 2014, the average KCSE performance for the seven school was 8.7 which rose to 9.2 in 2015, slumped to 7.42 in the year 2016 (there was dismal performance of schools across the country – Kenya in the year as noted from KNEC KCSE statistics) and maintained the same score in the year 2017 (M=7.45) but performance slumped to 7.06 in the year 2018. The data show that there has been a significant decrease in performance from the year 2014 by 18.6% for the seven schools. Analysis of individual KCSE performance by the upgraded National Schools show that School F recorded a big slump in performance by 24.3% followed by School D (20.9%) and thirdly School H (20.5%). Only School B performance change was marginal (11.5%) among the upgraded secondary schools. Odanga (2019)

indicated that in 2019 examinations not a single student posted grade A in School F for the last four years. School F recorded six A- and a mean score of 6.7 points and this decline in performance was worrying to stakeholders in education. The performance of students in KCSE over the 6 – year period is given in Figure 4.1



Source: Field data (2019)

Figure 4.1 Academic Performance of Upgraded National Schools between 2014-2018

KCSE Figure 4.1 statistics show that the performance of students from the schools has dipped from 2015 – 2018.

The study also collected enrolment data of students in Form 1 over the same period. The results are as shown in Table 4.4.

Table 4.4 Enrolment of Students in Form 1 in Upgraded National Schools from 2014-2019

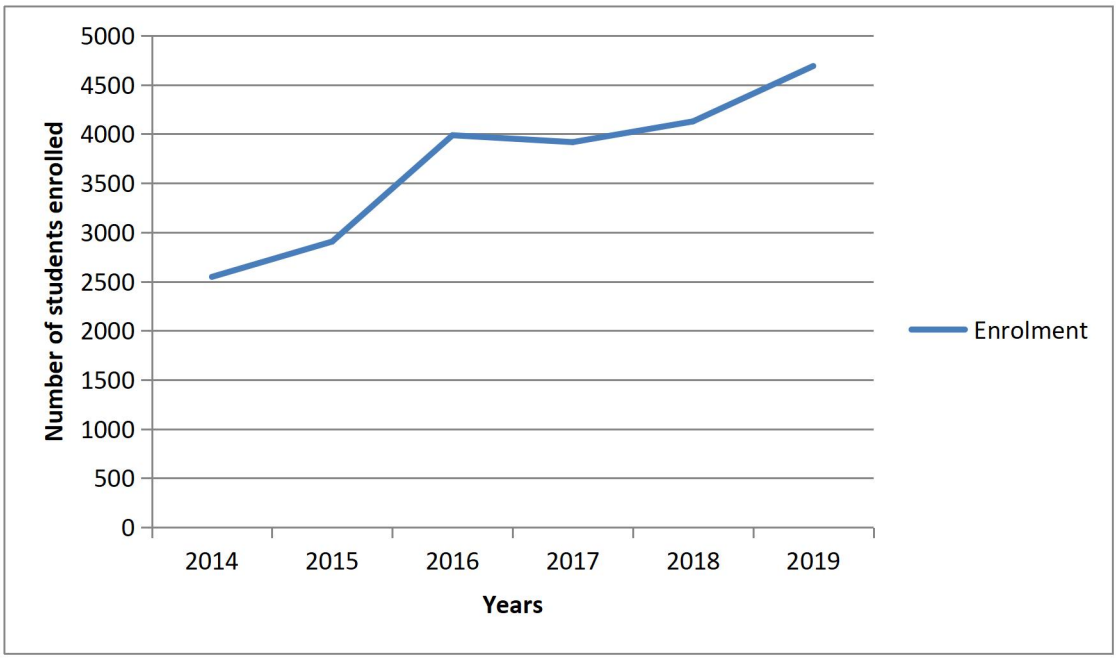
Schools	Enrolment of Students in Form I						Diff (2014-2019)	% change (2014 - 2019)
	2014	2015	2016	2017	2018	2019		
School A			300	360	455	520		
School B	376	492	535	573	564	582	206	54.8
School C	320	340	480	540	600	600	280	87.5
School D	322	360	398	401	502	506	184	57.1
School E			336			485	149	44.3
School F	284	299	298	312	317	327	43	15.1
School G	885	1025	1180	1241	1270	1247	362	40.9
School H	360	390	460	490	420	424	64	17.8
Average	425	484	527	593	612	596	171	40.4

Source: Field data (2019)

The results above show that because of upgrading of Extra County Schools to National Status, there was significant increase in enrolment in the upgraded National Schools to different levels from the year 2014 to date (2019). The institution that recorded 87.5% increase in enrolment was School C from the initial 320 to 600 students. The second institution that recorded highest increase in enrolment (57.1%) was School D from 322 to 506 whereas the third was School B from the initial 376 to 582 students showing a 54.8% increase. During the interview, the Principal of School F indicated that the school had a population of 1,200 students by the year 2019. He indicated that:

> *The population of students has increased but the facilities have remained the same. The situation in School F does not reflect its status as a National School."*

This means that enrolment has increased over the years over the period and it can be graphically shown as shown in Figure 4.2.



Source: Field data (2019)

Figure 4.2 Enrolment of Students in Form 1 in Upgraded National Schools from 2014-2019

Average statistics show that the upgraded secondary schools in Western Kenya experienced 40.4% increase in enrolment over the five year period. This means that proper planning measures were expected to be put in place to address the compounding demands that came with increased enrolment in public secondary schools in the region.

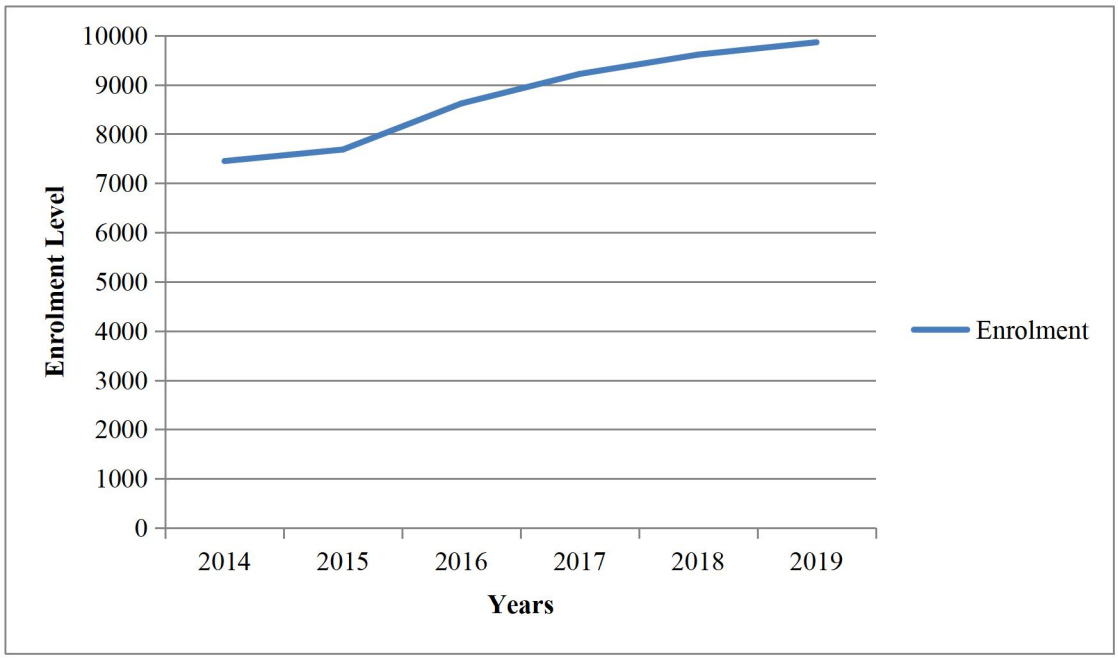
From the document analysis, the study collected data on student population from the selected upgraded National Schools from Form one to Form Four over the same period. The findings are as shown in Table 4.5.

Table 4.5 Students Population – Form 1 to Form Four (2014-2019)

Schools	Students Population – Form 1 to Form Four						Diff (2014-2019)	% change (2014 - 2019)
	2014	2015	2016	2017	2018	2019		
School A							0	0
School B	1589	1644	1800	1866	1870	1872	283	17.8
School C	1562	1502	1820	1911	1962	1956	394	25.2
School D	1602	1710	1810	1822	1899	1900	298	18.6
School E	899	989	1041	1189	1172	1250	351	39.0
School F	998	979	1012	1012	1109	1225	227	22.7
School G							0	0
School H	800	860	1137	1420	1600	1660	860	107.5
Total	7450	7684	8620	9220	9612	9863	2413	32.4

Source: Field data (2019)

Results in Table 4.5 show that six schools student population by 2014 was 7450 but rose significantly to 9863 representing a rise in 32.4% in the year 2019. The results show that despite enrolment of students, the four years showed a great increase in students' enrolment for some schools. For instance, School H students' population rose by more than 100% to record 1660 students from the initial 800 population in the year 2014. The least student population recorded was for School B that had 283 students more from the initial 1589 in the year 2014. The outcomes show that the schools therefore needed to have come up with proper planning strategies to meet the curriculum needs for the increased institutional capacity. The information on student population can be graphically as shown in Figure 4.3 from all schools over the same period.



Source: Field data (2019)
Figure 4.3 Students Population – Form 1 to Form Four (2014-2019)

Further, the study requested the teachers to show the performance of their schools in various areas before and after the upgrading process using a Likert scale of five; Very high (5), high (4), moderate (3), low (2) and very low (1). The descriptive data are presented in Table 4.6 below.

Table 4.6 Academic Performance of upgraded National Schools (Before & After)

	Before upgrade			After upgrade		
Performance area	**N**	**Mean**	**Std. D**	**Mean**	**Std. D**	**Mean diff**
Students enrolment	158	3.5190	.84251	3.7595	2.56242	-0.2405
Student retention	158	3.7595	.75232	4.1139	.98378	-0.3544
Student completion rate	158	3.8734	.64575	3.7975	.97588	0.0759
Syllabus coverage	158	3.5823	.77554	3.4937	.98231	0.0886
KCSE performance	156	3.6795	.90152	2.8608	.96742	0.8187
Performance in extracurricular activities	158	4.0759	1.06803	3.6538	1.14528	0.4221
Teacher retention	158	2.9747	1.05848	3.0127	2.60814	-0.038
Quality education provision	158	3.5949	1.04081	3.6076	2.62238	-0.0127
Valid N (Listwise)	**156**	**3.6324**	**0.8856**	**3.5374**	**1.6060**	**0.0950**

Source: Field data (2019)

The results in Table 4.6 show that student enrolment had increased after upgrade of the eight school to national status through the mean difference obtained (Mean difference =-0.24). This show that most schools did record increase in the enrolment of students after they were upgraded (Table 4.6). This could be because the government through MOE was posting more teachers in those schools. Observation by the study showed that in the eight schools visited, the students' population exceeded 1,000.

Additionally, in terms of retention, there was increased in retention rate as seen where the mean changed from 3.75 to 4.1. This explains the positive contribution of the transformation of these schools as more students are seen to be retained in schools. Nevertheless, completion rate show a marginal decrease among students by 0.0759. This can be seen with the case for syllabus coverage which the majority of teachers said that it changed from high (M=3.58) to low (M=3.49). In terms of their KCSE performance, there was lowering in performance from 3.67 to 3.49. This show that there existed reduction in KCSE means score for institutions that were upgraded. This agrees with findings of a research conducted by Livumbaze and Achoka (2017) who found that students' academic achievement in public secondary schools in Hamisi sub-County is very low. Nevertheless, Odanga (2019) reported that one of the former students of School F said that as an alumnus of this school, they were making relevant efforts from various fronts to ensure the school begins to post good performance in KCSE.

The same drop was in co-curricular activities performance was observed from a mean of 4.07 to 3.6 that is quite high. This show that the new upgraded schools reduced emphasis on sporting activities while focusing on other activities. When looking at

retention, this research points a different picture where it is seen that majority of teachers were retained (from 2.97 to 3.01). This show that majority of teachers remained in their schools despite the challenges that they encountered after they were upgraded from extra county to national level. Lastly, in terms of teachers rating of provision of quality education, the statistics showed a significant increase from a mean of 3.59 to 3.60. This show that upgrading of National Schools came with minimal improvement in quality education provision in schools.

Average data from the two periods (before and after) show that the academic performance changed from a mean of 3.66 from teachers' perspective to 3.50. This shows that there was a significant shakeup by schools because of the eight schools being upgraded to national status.

To establish if there existed significant difference between KCSE performances before the institutions were upgraded to national status and the situation after they were upgraded, a one-sample t-test was computed at 95% significant level. The findings are as shown in Table 4.7.

Table 4.7 One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Performance before	158	3.6592	.60025	.04775
Performance after	158	3.5037	.73313	.05832

Source: Field data (2019)

Table 4.7 shows that the performance before the upgrade was 3.6 but this dropped to 3.50 after they were upgraded. Table 4.5 shows whether there difference was significant using a test value of 2.5.

Table 4.8 One-Sample Test

	Test Value = 2.5					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Performance before	24.274	157	.000	1.15918	1.0649	1.2535
Performance after	17.208	157	.000	1.00367	.8885	1.1189

Source: Field data (2019)

The research findings (Table 4.8) show that there existed significant difference ($p<0.05$) in upgraded National Schools performance before and after they were upgraded. The research concludes that there exists significant difference in performance before and after upgrading of the schools to national status in Western Kenya. This implies that there was change in academic performance after the eight schools in the four Counties of Western region were upgraded to national status. That is there was a drop in performance in academics

Further, teachers were asked to indicate the average enrolment per class before and after their school were upgraded from Extra County to national status. The results are shown in Table 4.9.

Table 4.9 Class Enrolment Before and After Upgrade

	Before		After	
Range	**Frequency**	**Percent**	**Frequency**	**Percent**
2-19	7	4.4	0	0.0
20-49	18	11.4	4	2.5
50-99	33	20.9	42	26.6
100-199	14	8.9	14	8.9
200 and above	86	54.4	98	62.0
Total	**158**	**100.0**	**158**	**100.0**

Source: Field data (2019)

The result in Table 4.9 show that majority of teachers 86 (54.4%) said that their average class size (depending on the number of streams) was 200 and above before upgrading and this number increased after enrolment as 98 (62.0%) said. In addition, for classrooms that had 2-19 students (4.4%), they ceased to exist. The above data show that there has been significant increase in class size after the schools were upgraded to national status in Western region of Kenya. Therefore, the results show that the upgraded National Schools in this region due to pressure experienced in varied performances in terms of academic and non-academic areas.

4.3 Planning Dynamics and their Influence on Academic Performance of Upgraded National Schools

The independent variable for this study endeavoured to establish how the four planning dynamics; instructional material, infrastructure facilities, human resource and financial resource dynamics affected academic performance of upgraded National Schools in the Western region of Kenya. The analysis of analysed data, presentation and discussion of each independent variable against the dependent variable are presented as follows:

4.3.1 Instructional material Dynamics and Academic Performance of Upgraded National Schools

The first objective of the study was to investigate how instructional material dynamics were conducted at the upgraded schools in the Western region of the country and their influence on performance. For improved performance in both curricular and co-curricular activities in schools, school management (BOM) need to ensure that they provided adequate instructional materials. Ayoti et al. (2016) opined that every academic institution should ensure that the instructional materials provided meet the desired needs of learners. The teachers were asked to indicate the degree to which instructional dynamics had been done in their institutions. Their responses are presented thus in Table 4.10.

Table 4.10 Instructional material Dynamics in Upgraded National Schools

Adequacy	SD	D	UD	A	SA	M	SD
Text books were increased to aid in student learning after upgrade	18(11.4%)	10 (6.3%)	16 (10.1%)	82 (51.9%)	32 (20.3%)	3.6329	1.20696
Learning resources were provided and they are adequate to assist teachers in classroom instruction after upgrade	34 (21.5%)	68 (43.0%)	30 (19.0%)	18 (11.4%)	8 (5.1%)	2.3544	1.09472
Instructional process was effectively implemented and conducted by all concerned to ensure curriculum goals are achieved after upgrade	48 (30.4%)	50 (31.6%)	26 (16.5%)	32 (20.3%)	2 (1.3%)	2.3038	1.14385
Stationery resources are in plenty and adequate after upgrading to ensure that quality education is provided in school	28 (17.7%)	66 (41.8%)	10 (6.3%)	34 (21.5%)	20 (12.7%)	2.6962	1.32928
Computers are available and adequate in our school to ensure that teachers and students acquire ICT knowledge after upgrade	58 (36.7%)	62 (39.2%)	14 (8.9%)	16 (10.1%)	8 (5.1%)	2.0759	1.14849
Composite values						**2.6126**	**1.1847**

Source: Field data (2019)
Key: SD-Strongly Disagree, D-Disagree, U-Undecided, A-Agree, SA-Strongly Agree, M-Means and SD-Standard Deviation

The research data in Table 4.4.10 show that 82 (51.9%) of teachers agreed and 32 (20.3%) strongly agreed that text-books ratio was increased after the upgrade to assist in students learning. This show that majority of teachers agreed with the statement (M=3.63, SD=1.20). Considering there was increased in enrolment on these schools, textbook ratio had to be standardised and therefore appropriate plans and measures had to be put in place to ensure the required books are availed on time and adequately. The outcome is supported by study observation and interview with the Principals who said that the current text-books ratio was 1:1 in compulsory subjects. One Principal No. 1 had this to say with regard to textbook ratio:

> *Fair, with text-books but not other things like learning resources* (Field note on 1/07/2019)

Another (No. 2) Principal remarked that:

> *The text-books ratio is currently 1:1, white boards and marker pens are adequate. One digital screen (smart board) is adequate* (Field note on 1/07/2019).

This shows that efforts have been made to avail the required text-books in schools. The principals interviewed indicated that they have managed to ensure textbook: student ratio is at 1:1. The result differ with Wanjiku (2013) who discovered that text-books were not adequate as more than three students shared different number of books in Mbeere South Sub County, Kenya. However, in terms of student book ratio for non-compulsory subjects, the ratio was 1:5. These non-compulsory subjects consisted of Agriculture, Home Science, Music, and Woodwork. Different from the study findings, Omego and Simatwa (2015) established that only 4(13.3%) of the schools had well equipped libraries, the rest had some sought of book stores with very few relevant books for reference most of which were irrelevant foreign donations. In

addition, Mwili et al. (2015) found that both Headteachers and teachers agreed that most of public secondary schools had inadequate text-books for students and this negatively affected the final outcome in KCSE examinations.

When asked on whether learning resources for teachers were increased, 68 (43.0%) of respondents disagreed and 34 (21.5%) strongly disagreed. This means show most school did not receive additional learning resources (*M*=2.35*, SD*=1.09) hence providing less assistance to teachers during classroom instruction. Learning resources for teachers (including reference books) were not adequately provided to these schools. When learning resources are inadequate, it may affect the delivery of curriculum content in classrooms hence affecting students' performance in the subject. In support of teachers' responses, the study observation revealed that schools had very few learning resources compared to the student population hence influencing academic performance. The study agrees with findings of Mwili et al. (2015) research in Makueni County that established that 78.0% of respondents agreed that reference books and guides were inadequate in most secondary schools. This state of inadequacy of reference guides affected academic performance of schools.

Thirdly, 50 (31.6%) of teachers disagreed with the notion that instructional process was effectively implemented and conducted by all officials concerned to ensure curriculum goals were attained after upgrade. Descriptive data also show that majority of teachers disagreed with the statement (*M*=2.30*, SD*=1.14). This means that there existed instructional leadership gaps after the eight schools were upgraded and in most cases, teachers were left on their own to plan and organise how curriculum goals with the acquired goals were going to be realised.

On provision of stationery to support curriculum work after upgrade, 66 (41.0%) of respondents disagreed that these materials was provided and only 34 (21.5%) agreed that they were provided with those resources. Mean statistics reveal that the provision of stationery and other materials attached to them were moderately (*M*=2.69*, SD*=1.32) provided to schools. This implies that despite some schools receiving stationery, they were not adequate to cater for the increased instructional needs in public secondary schools in the region. With regard to provision of current and modern information technological resources like computers after the upgrade, 58 (36.7%) of respondents strongly disagreed and only 16 (10.1%) said they were provided with. This implies that computers and other ICT resources were not adequately provided (*M*=2.07*, SD*=1.14) in schools to help in students acquisition of ICT knowledge in schools. This agrees with Livumbaze and Achoka (2017) who found that only 1(8.3%) school had ICT (Internet / Intranet connection) and infrastructure. This meant that majority (91.7%) of the schools lacked ICT infrastructure. This show that the situation of inadequacy is not only in upgraded schools but across all the spectrum of schools in the country.

To those schools that had ICT infrastructure, the computers could not serve the whole student population well. In line with the government agenda of promoting ICT knowledge, the study discovered that ICT resources like computers were not adequately provided after the Extra County Schools in the region were upgraded to national status in Western Kenya. These results coincide with Mwencha (2012) who discovered that majority of schools in Isinya Sub County, Kajiado County were not well equipped with ICT facilities. This was due to poor planning and low level of ICT skills among teachers and students.

Average values show that teachers were undecided (*M*=2.61, *SD*=1.18) meaning that some were provided with additional instructional materials while others did not receive the instructional materials in adequate. The study discovered that there were instructional materials that were adequately increased in schools to ensure that quality instructional happened in the classrooms after the classrooms were upgraded while others were not adequately increased in those schools. This concurs with Lasoi et al. (2017) who indicated that planning of instructional materials helps in attainment of quality education in secondary schools calling for the need for school board of management to prioritise this management function in discharging their duties. For instance, the study found that aside many instructional materials required in schools, only text-books for students were supplied in adequate quantity.

The first null hypothesis stated that:

H_{01} There is no significant relationship between instructional material dynamics and academic performance of upgraded secondary schools in Western Kenya Counties

To test this hypothesis the Karl Pearson correlation coefficient was computed at 95.0% significant level. The results are as shown in Table 4.11.

Table 4.11 Instructional material Dynamics and Academic performance

		Instructional materials dynamics	**Performance after**
Instructional materials dynamics	Pearson Correlation	1	.074
	Sig. (2-tailed)		.357
	N	158	158
Performance after	Pearson Correlation	.074	1
	Sig. (2-tailed)	.357	
	N	158	158

Source: Field data (2019)

The correlation statistics (Table 4.11) show that there exist no significant relationship between instructional materials dynamics and academic performance of upgraded National Schools in the Western region of Kenya. Therefore, the first null hypothesis was accepted ($p>0.05$) leading to the conclusion that there exist no significant relationship between instructional material dynamics and academic performance of upgraded schools to national level in Western Kenya. Hence, even after upgraded of extra county schools to national status, these institutions do not have adequate instructional materials thereby having little or no effect on academic performance. The findings of this study concurs with those of Mwili et al. (2015) that showed that availability of teachers' reference books and guides was not associated with student's academic performance. Specifically, schools that recorded better performance had adequate instructional materials compared to schools that did not have. Nevertheless, results were encouraging (positive correlation) suggesting that if instructional materials were provided in adequacy, academic performance would increase significantly.

4.3.2 Infrastructure Dynamics and academic performance of upgraded National Schools

The second objective of the study investigated how infrastructure facilities dynamics influenced academic performance of upgraded National Schools in the four Counties of Western Kenya. The infrastructural facilities are key to facilitate academic and non-academic programmes in schools. Owoeye and Olatunde (2011) argues that infrastructural facilities are key to academic achievement in secondary schools and therefore plans have to be put in place by school management to realise this. With the upgraded of the Extra County Schools to national status, it was expected that the existing facilities would be expanded to handle the increased enrolment. The research

collected information on infrastructure dynamics with regard to classrooms were constructed after the upgrade. They are as shown in Table 4.12.

Table 4.12 Classroom Number before and after Upgrade

Schools	Students Population – Form 1 to Form Four						Diff (2014-2019)	% change (2014 - 2019)
	2014	2015	2016	2017	2018	2019		
School A							-	-
School B	27	27	27	27	27	27	0	0.0
School C	37	37	37	37	37	37	0	0.0
School D	32	32	32	32	32	32	0	0.0
School E	22	22	22	24	24	26	4	18.2
School F							0	0
School G	20	20	20	20	20	20	0	0.0
School H	25	25	25	25	26	26	1	4.0
Total	163	163	163	165	166	168	5	3.1

Source: Field data (2019)

Table 4.12 shows that not much had been done by the upgraded public secondary schools to national status in Western Region. The statistics show that there was only an addition of five classrooms from the six schools that provided the data reflecting 3.1% increase. Research results showed that only five classrooms had been built across the eight schools from the year 2014 to 2019. This means that the existing classrooms in the eight National Schools in the region were overcrowded. The result is somewhat different from Norazman et al. (2019) who discovered that at least half of classrooms had complied with existing guidelines on spacing hence promoting quality education. The result therefore shows that despite increased students' numbers, there was no corresponding increase in the number of classrooms. This could affect

effective curriculum delivery since students would be learning in classrooms that are congested and lack proper spacing to allow classroom learning.

The study also collected information on the number of laboratories existing in 2014 and the ones available as at July 2019. The findings are as shown in Table 4.13.

Table 4.13 Number of Science Laboratories from 2014-2018

Schools	Students Population – Form 1 to Form Four						Diff (2014-2019)	% change (2014 - 2019)
	2014	2015	2016	2017	2018	2019		
School A							-	-
School B	2	2	2	2	2	2	0	0.0
School C	3	3	3	3	3	3	0	0.0
School D	1	1	1	1	1	1	0	0.0
School E	1	1	2	3	3	3	2	200.0
School F	3	3	2	2	2	2	-1	-33.3
School G	3	3	3	3	3	3	0	0.0
School H	2	2	2	2	2	2	0	0.0
Total	15	15	15	16	16	16	1	6.7

Source: Field data (2019)

Table 4.13 results show that there has been an additional of 6.7% in construction of new laboratories. In some institutions like School F, they had initial three laboratories which were later downgraded to 2 because of inadequate materials required to operate the three laboratories. An increase was recorded for School E. Further, only one laboratory was constructed over the period with one school forced to close one laboratory to make them classrooms. Even one Principal indicated that with a population of more than 1200 students, they have two laboratories which are insufficient. Similar to the study present study findings, Ahawo (2009) discovered

that many laboratories in Kisumu East Sub County were ill equipped to ensure students performed science subject practicals hence poor academic performance.

The distribution of laboratories shows that there has been no expansion or additional laboratories for use. These findings confirm the Auditors General Report's (2018) which showed that majority of upgraded National Schools in the country were expected to have adequate and well stocked laboratories but the situation on the ground during audit session showed that the number of laboratories against the student population (streams) did not match the experienced suggesting planning challenges (Nyawira, 2019).

The teachers were asked to indicate the degree to which they agreed or disagreed with various statements on how infrastructure was developed provided as a result of the upgrade of their respective schools. The findings are summarised in Table 4.14.

Table 4.14 Infrastructure Dynamics in Upgraded National Schools

Infrastructure facilities	SD	D	UD	A	SA	M	SD
The library facility has been expanded to accommodate all students enrolled after upgrading	98 (62.0%)	30 (19.0%)	14 (8.8%)	10 (6.3%)	6 (3.8%)	1.7089	1.10761
More classrooms have been built to accommodate more students being admitted after upgrading	72 (45.6%)	40 (25.3%)	10 (6.3%)	22 (13.9%)	14 (8.9%)	2.1519	1.36460
Laboratories have been constructed i.e. science lab, computer lab, workshops to aid in practical teaching approaches after upgrading	88 (55.7%)	36 (22.8%)	20 (12.7%)	10 (6.3%)	4 (2.5%)	1.7722	1.05817
play grounds have been Expanded to include different kind of sports to ensure students participate in co-curricular activities after upgrading	96 (60.8%)	30 (19.0%)	18 (11.4%)	8 (5.1%)	6 (3.8%)	1.7215	1.09354
Dormitories have been increased and expanded to accommodate more students after upgrading	86 (54.4%)	34 (21.5%)	18 (11.4%)	12 (7.6%)	8 (5.1%)	1.8734	1.18770
Washrooms/latrines have been constructed and expanded to improve on sanitation after upgrading	78 (49.4%)	30 (19.0%)	28 (17.7%)	16 (10.1%)	6 (3.8%)	2.0000	1.19447
The dining hall has been expanded and built to improve students services after upgrading	104 (65.8%)	20 (12.7%)	24 (15.2%)	4 (2.5%)	6 (3.8%)	1.6582	1.06939
Enough lockers, tables and other classroom facilities have been increased since upgrading to National School to aid in learning process	76 (48.1%)	34 (21.5%)	28 (17.7%)	12 (7.6%)	8 (5.1%)	2.0000	1.19447
Our school land has been expanded, purchases or being put to use (non-used land) after upgrading to national status to ensure expansion of facilities	78 (49.4%)	46 (29.1%)	18 (11.4%)	6 (3.8%)	10 (6.3%)	1.8861	1.15088
The school has purchased bus or added another one to ease transport of students during field trips after upgrading	74 (46.8%)	40 (25.3%)	14 (8.9%)	18 (11.4%)	12 (7.6%)	2.0759	1.30430
Composite values						**1.8848**	**1.1725**

Source: Field data (2019)

Key: SD-Strongly Disagree, D-Disagree, U-Undecided, A-Agree, SA-Strongly Agree, M-Means and SD-Standard Deviation

Research findings in Table 4.14 show that the majority 98 (62.0%) of teachers strongly disagreed that their library buildings were expanded or new ones constructed to accommodate all students who were enrolled after upgrading. Most teachers appeared to disagree with the statements (M=1.70, SD=1.10). This implies that the library facilities in most upgraded schools experienced congestions and therefore learners are not in a position to conduct their own private studies, research or provide reading as the space and volume of books are inadequate. This research observed that libraries were still the same as they were before the upgrade which was inadequate to accommodate two classrooms per each sitting. This was likely to affect learners' interest in learning hence influencing their academic performance in national examinations at form four level. In line with the study result, Omego and Simatwa (2015) established that inadequate library facilities meant that limited source of information for teachers' preparation and students' personal study in the Kisumu East sub-County hence accounting for the poor performance of the sub-County. In addition, Livumbaze and Achoka (2017) research in Hamisi Sub County found that library facilities were inadequate. Further, the existing ones were found to be poorly equipped. To conclude on this observation Auditor General Report (Nyawira, 2019) noted that there was strain in libraries use on the upgraded National Schools and this denied the enrolled children privilege to do research compared to their counterparts in the original 18 National Schools in the country that had better facilities.

Further, the study discovered that the number of libraries constructed from the time the institutions were upgraded was low. This agrees with studies by Ogunniyi et al. (2018) and Owoeye and Olatunde (2011) found that in Nigeria majority of secondary schools had minimal number of libraries against high student population.

Research data also show that close to half 72 (45.6%) of teachers also strongly disagreed that additional classrooms were built to accommodate more students who were admitted after their institutions were upgraded. This show that incidents of overcrowding in class (with more than 50 students) are common across these schools as the carrying capacity of the school is less compared to the number of learners who are enrolled. The study during classroom visit found that classrooms that were designed to accommodate fourty students, but majority had student population of between 60-70 students. This resulted in overcrowding in class and teacher inability to move around the classroom to supervise the on student's work. In agreement with the study findings, Omego and Simatwa (2015) found that classrooms were essential for effective learning and teaching to take place. In a situation where the classrooms are inadequate learning and teaching is done outside the classroom, this becomes very inconveniencing as Omego and Simatwa found in Kisumu East Sub County. Thus is in contrast to observations made by Lasoi et al. (2017) research in Kajiado County where majority of the BOM members 62.2 percent agreed that board mobilizes resources to put up physical structures like dorms classrooms, library, and lab.

In addition, the study found that the majority of teachers also strongly disagreed 88 (55.7%) that new laboratories were constructed after the upgrade of the schools to national status to help in practical teaching. During the study visit to these schools, it was found that there some had laboratories under construction and some of them had delayed in being completed due to inadequate funding. In other schools, it was found that the laboratory, stores and workshop facilities were not well stocked thereby affecting students' ability to conduct some experiments in various subjects like Woodwork, Power and Electricity, Biology, Physics, Computer Studies and Chemistry. In some schools, some teachers explained that due to high number of

students, they were forced work outside since the available lab could not accommodate all students. Even during interview Principal (No. 2) said that:

> *No, because there are two science laboratories only against 1,247 students are insufficient. Small computer laboratory for up to 10 students is inadequate* (Field note on 1/07/2019).

This means that despite increased enrolment of students, the facilities like laboratories were not enough to facilitate learning by all students. The findings agree withOmego and Simatwa (2015) who found that inadequate laboratories was a significant factor contributing to poor performance in Sciences and Mathematics in secondary schools in Kisumu East Sub County. A lot of science is taught theoretically. This has led to failure in KCSE where some students are forced to tackle practical papers for the first time.

With regard to co-curricular activities, 96 (60.8%) of respondents strongly disagreed that playgrounds had been expanded to include various sport activities after their schools were upgraded. This show that majority of schools still utilised the same facilities that they had before they were upgraded to national status thereby limiting majority of students for co-curricular activities. Because learning has to be holistic, research findings suggests that the upgraded schools students are not motivated to nurture the sporting talents of learners in their schools playing facilities were acutely inadequate to serve all of them.

With regard to dormitory expansion and increase, 86 (54.4%) respondents strongly disagreed, 34 (21.5%) disagreed, 18 (11.4%) were undecided, 12 (7.6%) agreed and 8 (5.1%) strongly agreed. The above findings confirm that majority of students sleep in overcrowded dormitories (M=1.87, SD=1.18) which could pose health and security

risks in case of emergency. In this case, some respondents admitted that their dormitories were not built according to Ministry of Education and Ministry of Public Works standards. Agreeing with the study results, Nyawira (2019) reported that a report by Auditor General on 22 upgraded National Schools found that more than half did not have adequate dormitories for the students enrolled there. Seven of the upgraded National Schools had students in excess of their capacity by between 29.0% and 71.0%. To cope with the situation, some of the National Schools introduced triple-decker beds in their dormitories, contrary to Ministry of Education Quality Assurance and Standards requirements that provide beds to be either single or double-decker in a room.

The lack of adequate dormitory facilities explains the variation in student retention over the years. During observation, it was found that a dormitory that was supposed to have 150 students had more than 200 students sleeping there. All schools had congestion in dormitories with beds being pushed together leaving no space where students would walk when getting to their bed. This situation contributed to an environment that was unhygienic as it was impossible to conduct cleaning activities to properly remove dirt. As a contingency measure, a visit by the study in one particular school showed one laboratory block was converted to dormitory but still the problem of congestion remained.

On provision and adequacy of washrooms after upgrading of schools to national status, most 78 (49.4%) teachers strongly disagreed that they were available and only 16 (10.1%) appeared to indicate that bathrooms, latrines and toilets were constructed to meet the demand of their new status as national schools in the eight schools. When there exist inadequacy in sanitation facilities, incidents of health risks are high thereby

putting the life of students at risk. The study through observation found that with respect to the number of students enrolled in the most of the eight upgraded National Schools, the number of toilets and latrines were inadequate. In some cases, the study was informed that support staff regularly unclogs blocked sewage lines because the materials used were not planned to support the current number of students. The study observed that out of the eight schools, only two did not experience student queuing when going for toilet. This led to time wastage during morning break, lunch and supper breaks. In line with the study findings, Omegoa and Simatwa (2015) found that toilets were inadequate and this meant that a lot of time was wasted in lining up by students to relieve themselves, Class time was at times eaten into as student's queue waiting for each other to use the toilet. Also one of the school, School G Girls High School appeared in the media where pictures of students trekking to look for water was seen suggesting that despite being a National School, there were inadequate water facilities (Ngoko, 2019).

On whether the dining hall was expanded or new ones built, 104 (65.8%) strongly disagreed, 20 (12.7%) disagreed, 24 (15.2%) were undecided, 4 (2.5%) agreed and 6 (3.8%) strongly agreed. This show that majority of teachers disagreed with the statement (M=1.65, SD=1.06). The situation was worse in a school visited during the month of May where students were eating their meal under a tree while others as a result of rainy season did take their lunch and breakfast inside the classroom. Therefore, students take long to be served as the facilities for dining are inadequate with their huge population number. The results coincide with auditor general report on National Schools where 18 out of the 22 schools dining halls were overstretched (Nyawira, 2019). Due to inadequacy in dining halls, students in eight schools ate in shifts while in five other schools; the students took their meals outside in the hot sun

or under trees leading to loss of instructional time hence poor performance in academics.

On seating and writing facilities, 76 (48.1%) of teachers strongly disagreed that there was provision of enough lockers, tables and other classroom facilities had been increased after the upgrade. In most cases, parents enrolling their children to form one are required to come or purchase lockers for their students to bridge the shortfall that currently exists in schools. When these schools have inadequate lockers, tables, chairs and other classroom facilities, lesson instruction cannot be effectively conducted. Moreover, the students have to share these resources thereby compromising the quality of secondary education being provided in those institutions.

Research also showed that most teachers strongly disagreed 78 (49.4%) that their school land was expanded and areas that were not properly used put into use in their schools. the result confirms that despite the upgrade, the school land size of majority of them were not increased thereby affecting further development of infrastructural facilities in them. This could explain the reason as to why majority of schools did not put up adequate facilities as a result of lack of space to put up such structures. The study found that almost all schools needed more land to set up infrastructure and other facilities like playing ground in the school.

On whether their institutions added the fleet of their vehicles (especially buses), 74 (46.8%) strongly disagreed, 40 (25.3%) disagreed, 14 (8.9%) were undecided, 18 (11.4%) agreed and 12 (7.6%) strongly agreed. This shows that most schools have maintained the current number of their fleet even after the upgrade. In some schools, they were barred from taking up commercial bank loans to purchase new buses. For instance, considering that one school had over 1,000 students, the same bus that was

used during the time when the population was below 1,000 is still in use thereby affecting transport activities in the school. In some schools visited, when they had an academic trip, they had to hire buses from their neighbouring schools to carry their students.

The lack of adequate means of transport did in some way affect school operations and also transport of students to academic visits and sport tournaments. Composite values show that majority of teachers disagreed (M=1.88, SD=1.17) that new infrastructural facilities were set up after their institutions were upgraded to national status. This show that no major facility improvements or uplifts were dedicated to the eight upgraded National Schools in the four Counties of Western Kenya. In line with the study findings, Omego and Simatwa (2015) finding showed that physical facilities were rated at 4 by majority 388 (53.6%) which meant that they were often a challenge to Principals in their endeavours to enhance student academic achievement in Kisumu East Sub County.

The second null hypothesis stated that:

H_{02} There is no significant relationship between infrastructural resource dynamics and academic performance of upgraded secondary schools in Western Kenya Counties

To test the hypothesis, the Karl Pearson correlation coefficient was computed at 95.0% confidence level. The results are summarised in Table 4.15.

Table 4.15 Infrastructure facilities Dynamics and Academic Performance of Upgraded National Schools

		Infrastructure dynamics	Performance after
Infrastructure dynamics	Pearson Correlation	1	.063
	Sig. (2-tailed)		.432
	N	158	158
Performance after	Pearson Correlation	.063	1
	Sig. (2-tailed)	.432	
	N	158	158

Source: Field data (2019)

Research data (Table 4.15) show that there exists no significant relationship (r=0.063 and p=*0.*432) between infrastructure facilities dynamics and academic performance of upgraded National Schools in the Western region of the country. The calculated p-value (0.432) is higher than the critical value (p=0.05) leading to acceptance of the null hypothesis and conclusion that there exists no significant relationship between infrastructural resource dynamics and academic performance of upgraded National Schools in Western Kenya. This means that when the population increased as a result of enrolment of students, the infrastructural facilities remained the same. This suggests that even after the upgrading of schools to national status, it happened only on paper and the elevation did not result of improvement and expansion of facilities, and therefore, have minimal impact on performance of schools in different areas presented early. Nevertheless, the low positive relationship suggests that if the right and adequate infrastructure facilities are put in place, performance of the upgraded schools would improve significantly. The results of this study are different from those of Lasoi et al. (2017) in Kajiado County who found that management of school physical resources influence school mean scores in national examinations. The

inadequacy of physical resources in schools is a major factor responsible for learning outcome of students. Management of physical resources necessitates the achievements of quality education in secondary schools. Every educational establishment has responsibility to monitor the effectiveness of the service and the quality of resources being provided for its children and young people. This was not the case for the upgraded extra county to national status schools in Western.

Another observation made by the study is that few schools (3) had teachers' quarters and those that had (5) but could not accommodate all teachers to reside there. Therefore, most teachers had to commute daily from their homes to school. This made the evening preps to be supervised by teachers who resided in the school and most morning preps were unattended due to lateness by teachers in getting to the school. In addition, some schools did not have offices for heads of department as some of them were found to be operating from the staff rooms. This made it difficult for them to conduct their curriculum instructional and evaluation processes well. The findings of this study agree with those of Ngoko (2019) who showed that the management of School G Girls High School in Busia County sought help from Ministry of Educaiton to improve its infrastructure. Also during the interview, the Principal of School F Boys High school in Busia County remarked that:

> *The school was in dire need of improved infrastructure to match the ever rising number of students. For example, the building which was planned and earmarked for a biology laboratory has been turned into a dormitory.*

The Principal said quality grades go hand in hand with infrastructural development in schools but this was not the case for most of the schools under the study. In general,

correlation statistics showed that there existed no significant relationship ($p>0.05$) between infrastructural dynamics and academic performance of upgraded National Schools in Western Kenya. This implied that proper planning strategies have not been actualised to ensure that the conditions of learning match with the student number in schools as available facilities are overstretched thereby affecting the quality of education being provided in those institutions.

4.3.3 Human Resource Dynamics and academic performance of upgraded Secondary Schools

The third objective of the study was designed to determine how human resource dynamics influenced the performance of the upgraded secondary schools to national status in the four Counties of Western Kenya. In secondary schools, teaching and non-teaching staff are key towards actualisation of goals and objectives. Muthoni (2015) indicated that performance of education institutions is dependent on the human resource that is available. The expectations by schools management was that after they were upgraded, the TSC was to send additional teachers to address the increased enrolment of students.

Through document analysis, this study collected information on the number of teachers in these institutions from the four years. The results are as shown in Table 4.16.

Table 4.16 Distribution of TSC Teachers from 2014 – 2019

Schools	TSC Teachers Numbers						Diff (2014 - 2019)	% change (2014 - 2019)
	2014	2015	2016	2017	2018	2019		
School A								
School B	74	74	74	74	72	75	1	1.4
School C	44	43	41	42	44	46	2	4.5
School D	59	60	58	56	60	61	2	3.4
School E	66	62	67	61	68	68	2	3.0
School F	36	28	37	45	44	45	9	25.0
School G	32	30	28	30	32	32	0	0.0
School H	34	36	43	43	42	44	10	29.4
Total	345	333	348	351	362	371	26	7.5

Source: Field data (2019)

The presented results show that there was a 7.5% increase in number of teachers posted by TSC in upgraded public secondary schools in Western Kenya. This means that the increase 32.4% increase in student population did not match a similar proportion in teacher distribution. The school that received a high number of teachers was School F, which had 36 in 2014, but in the year 2019, they had 45 teachers. School G did not record any increase in teachers' while School B had an additional of one teacher. The results therefore show that despite high enrolment, few teachers were posted to the upgraded public secondary schools in Western Kenya.

Secondary data showed that only 26 teachers had been added to these schools by TSC reflecting a rise in 7.5% over the period of 2014 – 2019. This is low and Mobegi et al. (2010) recommended that BOM should constantly liaise with TSC to ensure that the human resource gap is addressed effectively. To cover the shortfall associated with lack of supply of teachers by TSC, the BOM are expected to plan and hire additional teachers to ensure that students' instructional needs are met. Research findings revealed that majority of schools BOM resorted to employment of BOM teachers to cover the shortfall by 62.8% from the year 2014 – 2019. The 6.28% is higher than

TSC 7.5% implying that schools had to make their own plans to ensure that teacher: learner ratio is according to the standard educational guidelines. This is a situation associated with private institutions as argued by Rehman (2019) who said that meeting various human resource needs of tutors employed was a challenge because of the inadequate supply of finances to such institutions.

To address the above challenge, it is expected that the school's BOM develop strategies of employing TSC registered teachers under their terms. The distribution of BOM teachers employed by the upgraded schools to national status is given in Table 4.17.

Table 4.17 Employment of BOM Teachers from 2014 to 2019

	BOM Teachers Employment						Diff	% change
Schools	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**(2014-2019)**	**(2014 - 2019)**
School A								
School B	10	10	10	9	8	10	0	0.0
School C	40	39	40	40	42	42	2	5.0
School D	11	16	14	16	16	19	8	72.7
School E		18	16	16	35	36	18	100.0
School F	10	11	9	12	15	16	6	60.0
School G	6	5	6	8	8	8	2	33.3
School H	17	18	20	20	18	22	5	29.4
Total	94	117	115	121	142	153	59	62.8

Source: Field data (2019)

The research results show that there was a 62.8% increase in number of teachers contracted by BOM to fill the shortfall occasioned by the failure of TSC to post teachers to schools. The highest number of BOM staff employed was recorded in School E in Bungoma County which was to enable them serve their students. Out of the seven schools, only School B maintained their BOM teachers at ten over the

period of the study. The results therefore show that appropriate interventions to address teaching staff shortage had been taken by upgraded public National Schools in Western region. This shows that school board of management are taking the initiative of ensuring that the curriculum is implemented by providing enough teachers. This also comes with additional costs to the schools making parents to meet the additional human resources that are not provided by the government, specifically the Teachers Service Commission.

The study also collected information on the distribution of laboratory technicians from the year 2014 to 2019. The results are as shown in Table 4.18.

Table 4.18 Distribution on Laboratory technicians Number from 2014-2018

Schools	Lab 2014	2015	2016	2017	2018	2019	Diff (2014 - 2019)	% change (2014 - 2019)
School A								
School B	2	2	2	2	2	2	0	0.0
School C	3	3	3	3	3	3	0	0.0
School D	3	3	3	3	3	3	0	0.0
School E	2	3	3	3	3	3	1	50.0
School F	3	3	3	3	3	3	0	0.0
School G	3	3	3	3	3	5	2	66.7
School H	3	3	3	3	3	3	0	0.0
Total	19	20	20	20	20	22	3	15.8

Source: Field data (2019)

The results show the number of laboratory technicians had increased by 15.8% in the year 2015. Further, analysis of showed that only two out School E and School G had increased their laboratory technicians by one and two respectively. The lack of

increase in the number of laboratory technicians could be because of not putting up new science laboratories occasioned by inadequate funding from the Ministry of Education.

Further, teachers were asked to indicate the extent to which they agreed or disagreed on how human resource improvements were done in their respective schools. Their responses are as shown in Table 4.18.

Table 4.18 Human Resource Dynamics in Upgraded National Schools

Human resource	SD	D	UD	A	SA	M	SD
More teachers have been posted in our school by TSC since it was upgraded to address shortage	86 (54.4%)	34 (21.5%)	8 (5.1%)	24 (15.2%)	6 (3.8%)	1.9241	1.24432
The school BOM has hired extra non-academic support staff since the school was upgraded to improve on service delivery	32 (20.3%)	24 (15.2%)	8 (5.1%)	78 (49.4%)	16 (10.1%)	3.1392	1.36129
The school BOM has hired extra academic support staff (PA) since the school was upgraded to improve on quality education	16 (10.1%)	22 (13.9%)	18 (11.4%)	90 (57.0%	12 (7.6%)	3.3797	1.13209
Teachers have been provided with opportunities for further training since the school was upgraded to improve their pedagogic competencies	92 (58.2%)	32 (20.3%)	24 (15.2%)	4 (2.5%)	6 (3.8%)	1.7342	1.05527
Employees are competitively rewarded since the school was upgraded to increase their motivation and commitment	84 (53.2%)	40 (25.3%)	16 (10.1%)	10 (6.3%)	8 (5.1%)	1.8481	1.15200
Employment and other opportunities are offered on merit to ensure fairness	62 (39.2%)	40 (25.3%)	12 (7.6%)	24 (15.2%)	20 (12.7%)	2.3671	1.44696
Promotion is based on one's performance and is done competitively to rewards top performers after upgrade	76 (48.1%)	24 (15.2%)	6 (3.8%)	24 (15.2%)	28 (17.7%)	2.3924	1.60745
Composite values						**2.3978**	**1.2856**

Source: Field data (2019)

Key: SD-Strongly Disagree, D-Disagree, U-Undecided, A-Agree, SA-Strongly Agree, M-Means and SD-Standard Deviation

The results of the study (Table 4.18) show that more than half 86 (54.4%) of teachers strongly disagreed that more teachers were posited to their schools by TSC after the upgrade. Only 24 (15.2%) agreed while 6 (3.8%) strongly agreed with the statement. The descriptive data show that most respondents disagreed (M=1.92, SD=1.24) with the statements. Most Principals indicated that they were not provided with additional teachers as per curriculum establishment (CBE) standards for secondary schools in kenya. They indicated that teaching personnel in majority of the eight schools visited, even in those schools that were seen to be having adequate staff, the additional ones had been employed by BOM at the cost of the parents. Most teachers strained a lot as the population of students was high and the TSC teachers' numbers remained the same. This study results agree with the work of Mutiso and Kilika (2017) who found that schools were not given enough teachers by TSC.

In most cases, when there exist a situation of inadequate teachers, teachers workload increases and this makes it difficult for them to evaluate each learner's academic progress. In some serious cases, some teachers seek transfer while others opt to resign because the workload is too high for them to carry as revealed from the information from principals interviewed. The present study found that in one girl's school, five teachers transferred in the year 2018 though they had not been replaced by the time of collecting this data in early January 2019.

As a planning strategy, 78 (49.4%) of teachers agreed that their institutions had hired extra non-academic staff to support school operations. The mean values show that respondents were undecided (M=3.13, SD=1.36). The positive responses by these teachers could be due to the fact that non-academic staff salaries are not high and therefore manageable by a majority of schools in the region. Further, they are usually

casuals and are not permanent and pensionable except the bursar, secretary and accounts clerk. This confirms what Nyaboga et al. (2015) research that established that most support staff in the upgraded national schools was employed with no defined terms of service with a significant number of them were casuals and therefore they did not benefit from jobs security and benefits associated with working on permanent and contract terms.

Further, majority of schools had an average of one matron per a student population of 1,000. This contributed to burnout and work overload. Two out of eight schools were found to have more than one nurse (2) with the rest having only one nurse serving student population of more than 1000 in the upgraded national schools in Western Kenya. Another problem that was identified by the study during the study is that the government provides for hiring of four grounds men and ladies which majority of Principals felt that it was low as per the student population. In line with this observation, Nyaboga et al. (2015) had found that 69.0% of support staff mentioned that they did not receive allowances which affecting work productivity. The study further established through interviews that most of the Principals were not bothered about the welfare of the support staff under them.

The number of librarians working in the upgraded national schools in the region did not match with the required number of students admitted. Most institutions had one librarian who had to be assisted by the teacher on duty to provide facilitate library services. In addition, the numbers of laboratory technicians were found to be low with some schools having one against a student population of more than 1,000. Research results showed that within the period, schools had experienced a 15.8% but this

happened in two schools only whereas the rest of the schools (6) maintained their laboratory technicians even after their institutions were upgraded.

Further, 59.5% of respondents agreed that their institutions had hired extra BOM non-academic staff (cooks, cleaners, matrons, secretaries, security) after their schools were upgraded. Nevertheless, the Principals during interview indicated that they still require more non-academic staff to ensure schools operations run smoothly since the current ones are usually overworked. This agrees with Osagie and Okafor (2015) found that teachers' workload was so high in Nigerian secondary schools. This show that despite the schools being upgraded to national status, the money provided by the government for hiring extra non-teaching support staff was not adequate to ensure smooth operations in the school.

In addition to the above, 90 (57.0%) of teacher respondents also agreed that their institution had hired extra BOM teachers to bridge the human resource shortfall occasioned by inability of TSC to provide teachers. The money paid to BOM teachers could have been directed to other votes in the school but because students need to be taught, the schools have no other way but to hire those teachers on contractual terms. In most cases, these teachers may leave their employment at any point in time as their jobs are not secure. When a situation and condition like this exist, performance of students may be affected because of lack of smooth transition from one teacher to another. This study observed that despite having employed teachers, the number was not adequate to provide proper service to the higher number of students enrolled in such institutions.

Professional development is very important for schools to train new teachers and maintain the effectiveness of teachers in the school. Despite employing additional

teachers, the study found that 92 (58.2%) of teachers strongly disagreed with the statement that they were always provided with opportunities for further training after upgrade of their school. This shows that the majority of schools are not financially able to sponsor their teachers to go for training and further their education. To some schools, were not in a position to recommend their teachers for advanced education because there the TSC did not provide immediate replacement.

In other institutions, the school leadership does not support continuous professional development of teachers. This study agrees with Mutiso and Kilika (2017) study that established that most respondents disagreed on the level of training and development of teachers. In addition, Puangjakta and Vinitwatanakhun (2015) research in Thailand found that the mean score of teachers' perception of this was low. This indicated that there was a weakness in providing formal training for both new and serving teachers' needs. Teachers might not get enough training or the rightly training programmes that did not meet their needs.

When teachers do not update their knowledge and skills, they may fail to provide adequate pedagogical direction to their students when implementing the school curriculum. With regard to reward and recognition, 84 (53.2%) of teachers strongly disagreed that all school staff (teaching and non-teaching) were rewarded for their performance. This statement appeared to be disagreed with a majority of respondents (M=1.84, SD=1.15). Despite efforts made teachers and non-teaching staff in curriculum implementation, the school board of management appears to cast a blind eye in rewarding them. This makes majority of school staff to be demotivated and discouraged in their service delivery. Therefore, many may not perform to their best as their efforts are not recognised by the school administration. Employee reward and

recognition programmes could in one way or another increase teacher satisfaction hence improve their productivity in duties. This present study finding agrees with those of Lasoi et al. (2017) in Kajiado county who found that board of management action of motivating teachers through rewards, addressing teachers' welfare needs, conducting annual appraisals for teachers, respond to teachers training needs, teacher involvement in professional development and finance refresher courses for teachers would improve their service delivery.

When respondents were probed further to explain whether employment among other opportunities were offered on merit in their school to ensure fairness, equity and equality, 62 (39.2%) strongly disagreed, 40 (25.3%) disagreed, 12 (7.6%) were undecided, 24 (15.2%) agreed and 20 (12.7%) strongly agreed. The mean values show that respondents disagreed with the statements (M=2.36, SD=1.15). The result implies that there exists no transparency by schools when hiring staff in their schools. In most cases, the employees who are employed through the backdoor may not be properly qualified and hence may not reach the performance targets. Most of these employees end up slowing down the performance of the schools. Therefore, as part of human resource dynamics, most of the upgraded National Schools in Western Kenya region have not taken measures of improving their human resource recruitment processes. To justify these claims, Nyaboga et al. (2015) found that some support staff were semi-literate and could not see the importance of being given job description so long as they were on employment the other issues were not relevant.

When asked as to whether individuals promotion in the school was based on one's performance, 76 (48.1%) strongly disagreed, 24 (15.2%) disagreed, 6 (3.8%) were undecided, 24 (15.2%) agreed and 28 (17.7%) strongly agreed. The findings show that

less than 32% of schools promotion criteria are done competitively based on an individual performance. According to the data obtained, this denotes skewed promotion based criteria, which are not based on one's achievement of targets but other factors to which the study was not open. The lack of true, fair, competitive and transparent promotion criteria may influence teacher motivation to teach hence affect student performance in academics. In some cases, teachers who feel that they were not properly rewarded (based on their institutional plans) end up seeking transfer to other institutions that offer competitive promotional rewards. In agreement with the study findings, Nyaboga et al. (2015) found that majority of secondary schools support staff were hardly getting internal promotions as promotional rewards. This shows that the issue of promotion is not only restricted to academic staff in secondary schools but also to support staff.

Composite scores (means) show that majority of teachers disagreed (M=2.39, SD=1.28) that human resource dynamics plans had been taking place in their schools to improve the academic performance of upgraded extra county to schools to national status in Western Kenya. This show that not much has taken place in terms of human resource transformation as a result of the eight public secondary schools being upgraded to national status.

The third null hypothesis stated that:

H_{03} There is no significant relationship between human resource dynamics and academic performance of upgraded secondary schools in Western Kenya Counties

To test the hypothesis, Karl Pearson correlation statistics was computed at 95.0% confidence level. The findings are as shown in Table 4.19.

Table 4.19 Human Resource Dynamics and Academic Performance of Upgraded Secondary Schools

		Human resource dynamics	Performance after
Human resource dynamics	Pearson Correlation	1	.070
	Sig. (2-tailed)		.380
	N	158	158
Performance after	Pearson Correlation	.070	1
	Sig. (2-tailed)	.380	
	N	158	158

Source: Field data (2019)

Findings in Table 4.19 show that there exist no significant relationship (r=0.070 and $p=0$.038) between human resource dynamics and academic performance of upgraded secondary schools in Western region of the country, Kenya. The computed p-value (0.380) is greater than the critical value (p=0.05) leading to acceptance of the third null hypothesis that there is no significant relationship between human resource dynamics and academic performance of upgraded secondary schools to national status in Western Kenya. This implies that human resource dynamics activities have not resulted in improvement of academic performance. This outcome is in agreement with that of Nyaboga et al. (2015) who established that working conditions affected work performance of support staff and needed to be checked by the Principals because it lowers the workers morale hence poor academic performance.

However, this study is somewhat different from that of Mutiso and Kilika (2017) who found that human resource management practices had significant ($p<0.05$) coefficient on service quality delivery level in Taita Taveta County public secondary schools. Even in Nigeria, Osagie and Okafor (2015) found that the calculated correlation

coefficient r-value was 0.392. Though it was not significant, there was a positive relationship. Hence, the more there is human resources planning the better is the students' performance. This shows that when human dynamics practices are planned and implemented well, there is likelihood of attaining positive academic performance.

Nevertheless, the (correlation statistics) suggest that if there would be appropriate and open human resource dynamics practices, academic performance of upgraded secondary schools would improve significantly. In addition, some of the non-teaching staff in some schools like nurses, matrons in boarding schools did not have their own offices where they could plan and conduct their work well. They relied on temporary structures to plan their work activities.

Since it was discovered that there existed no significant relationship ($p>0.05$) between human resource planning dynamics and academic performance of upgraded Extra County Schools to national status in Western Kenya, this meant that most of these schools had not raised adequate number of teaching and no-teaching staff to ensure quality education was produced hence dismal performance in KCSE examinations. The results are different from Osagie and Okafor (2015) who found that human resources planning had a positive correlation to students' academic performance. It means that even with incidents of teacher work overload, other aspects of human resource planning resulted to performance improvement in these schools.

4.3.4 Financial Dynamics and academic performance of upgraded National Schools

The fourth objective of the study sought to establish the relationship that existed between financial dynamics and academic performance of upgraded National Schools in Western Kenyan Counties of Bungoma, Busia, Vihiga and Kakamega. For all

school operations to run well, finances have to be made in the right quantity. Even other three planning dynamics are dependent on the availability of finances. Due to limited budget that schools receive from Ministry of Education, it is expected that board of management should devise ways and means of ensuring that the financial gaps/deficits are addressed for proper running of the school. The school fees in National Schools is Kshs. 53,540/= meaning that schools do not have power to add any fees unless directed by the Ministry of Education. To address the funding shortfall, it is expected that there have to be plans on how additional money can be raised by these upgraded extra county schools to national status to ensure full implementation of quality secondary education. At first, teachers were asked to indicate the frequent to which financial dynamics practices were prevalent in their schools. The results of the analysis are shown in Table 4.20.

Table 4.20 Financial Dynamics in Upgraded National Schools

Financial dynamics	SD	D	UD	A	SA	M	SD
The school has initiated income generating projects to provide more funds for running of the school after upgrading to national status	74 (46.8%)	34 (21.5%)	12 (7.6%)	12 (7.6%)	26 (16.5%)	2.2532	1.50978
The school mobilises financial resources (through fundraising) in order to construct and expand facilities after upgrade to national status	72 (45.6%)	26 (16.5%)	12 (7.6%)	36 (22.8%)	12 (7.6%)	2.3038	1.43082
The school has increased fee payment in order to meet the demands of being upgraded to national status	93 (58.9%)	14 (8.9%)	25 (15.8%)	14 (8.9%)	12 (7.6%)	1.9747	1.33998
The government funds for upgrading for upgrading of our school has enabled us to expand and construct new facilities	68 (43.0%)	26 (16.5%)	28 (17.7%)	30 (19.0%)	6 (3.8%)	2.2405	1.28900
The school regularly seek support from CDF in order to upgrade our facility to national standards	54 (34.2%)	42 (26.6%)	28 (17.7%)	20 (12.7%)	14 (8.9%)	2.3544	1.30689
The school hires school facilities e.g. buses and school compound during holidays to provide more finances for upgrading of facilities	74 (46.8%)	24 (15.2%)	18 (11.4%)	34 (21.5%)	8 (5.1%)	2.2278	1.36330
The school has installed financial management systems to track income and expenditure hence good financial management	66 (41.8%)	26 (16.5%)	30 (19.0%)	18 (11.4%)	18 (11.4%)	2.3418	1.40867
Budget adjustment to match the money available to schools	61 (38.6%)	24 (15.2%)	43 (27.2%)	16 (10.1%)	14 (8.9%)	2.3481	1.33033
Purchase of goods and services on credit to pay a later date	70 (44.3%)	33 (20.9%)	25 (15.8%)	18 (11.4%)	12 (7.6%)	2.1709	1.31233
Composite values						**2.2461**	**1.3657**

Source: Field data (2019)

Key: SD-Strongly Disagree, D-Disagree, U-Undecided, A-Agree, SA-Strongly Agree, M-Means and SD-Standard Deviation

Research results in Table 4.20 revealed that 74 (46.8%) of teachers strongly disagreed that their institutions had initiated income generating initiatives to provide more funds for running of school activities. Only 12 (7.6%) agreed and 26 (16.5%) strongly agreed that this did happen in their school. This means that only 24.1% of the upgraded National Schools were found to have set up income generating activities to cover the shortfall that they experienced. This is different from studies by Mncube and Makhasane (2011) and Ayoti et al. (2016) that showed that secondary schools initiated IGAs as a means of generating additional income to fund budget deficits in their institutions.

As part of addressing Ministry of Education capitation grant shortfall, the upgraded National Schools board of management have not taken up initiatives of starting income generating activities to supplement the resources that they have. This could explain the reason as to why few developments were evident in the schools that were visited by the study. Nzoka and Aluko (2014) established that few secondary schools had viable income generating activities in Embu North Sub County. This shows that as part of planning strategy for income generation, majority of schools have not taken this initiative. One Principal from one of the National School who said that:

> *Because of the money that the school receives form MOE is inadequate and majority of parents are not able to pay the required fees on time, we decided to look for other sources of income to supplement the existing sources of income to enable schools run well. The agricultural projects are not only for money generation but helpful to students undertaking their projects*

Nevertheless, some secondary schools in the County of Vihiga have been found to upscale the rate of income generating ventures. A research by Ayoti et al. (2016)

found that 86.2% of teachers that their institutions had generated income from IGAs to enable them get sufficient instructional materials. This situation appears not to have taken root in upgraded National Schools in Western region. The study results are in line with those of Mncube and Makhasane's (2011) research in Malawi showed that some schools depended on agricultural products as a means of additional income for their institutions. Some schools farmed vegetables and beans, others reared poultry and pigs. The agricultural produce like vegetables, beans and eggs were used to supplement students' food and the surplus thereof was sold to students, teachers and the local community.

When asked as whether their institutions mobilised additional financial resources through fundraising initiatives to construct and expand the existing facilities, 72 (45.6%) strongly disagreed that they mobilised additional financial resources, 26 (16.5%) disagreed, 12 (7.6%) were undecided, 36 (22.8%) agreed and 12 (7.6%) strongly agreed that they mobilised additional financial resources. The results show that most of the respondents appeared to disagree (M=2.30, SD=1.43) with the statement that their schools regularly hold fundraising initiatives to construct and expand the existing facilities after upgrade. This means that only 30.4% of upgraded schools held fundraising events to purchase extra infrastructural and instructional materials for quality education provision. The result agrees with Nzoka and Aluko (2014) that showed that few schools were mobilising financial resources to help meet budget deficits for their schools.

The result implies that either the BOM do not have the capacity for initiating such mobilisation efforts or they do not have strategic plan that could have identified ways and means of raising additional funds to bridge the shortfall from government

capitation grants to each student in each school that in most cases is usually inadequate. The result agrees with Nzoka and Aluko (2014) by establishing that that few day secondary schools had alumni to help them raise funds to subsidize the free secondary education funds thus performance has remained poor in public secondary schools in Nandi North Sub County. The present study results are somewhat different from Mncube and Makhasane's (2011) discovered in Malawi that fund raising activities were used to supplement the parents' financial contribution through fees in secondary education.

Research results also showed that 93 (58.9%) of the respondents strongly disagreed that their institution increased school fees to meet the demands of new national status. This is because the Ministry of Education has set up the fixed fee payment for all National Schools around the country and therefore school administrations have to comply with or face disciplinary action. Even in most cases, parents are usually aware of the Kshs. 53,540/= annual fee for National Schools. Nevertheless, due to contingencies and emergencies, some parents are required by school management to make extra fees so that other budgetary areas can be facilitated upon and majority of parents in the region always meets this with resistance.

The teachers also appeared to strongly disagree (43.0%) that the money they receive from MOE is enough to facilitate expansion and construction of new infrastructure facilities in their schools. Only 30 (19.0%) appeared to indicate that the finances were adequate for that purpose together with 6 (3.8%). Earlier, the research found that most schools had not yet developed or expanded new structures and this could be due to this situation where the money received from the government capitation is not enough to support expansion and construction of new facilities. This present study agrees with

the work of Odanga (2019) who discovered that one of the upgraded National Schools School F Boys High School in Busia County faced myriad financial challenges which was the reason behind its poor performance in national examinations.

On whether their institutions regularly sought CDF support to expand their facilities to national standards, 54 (34.2%) of teachers strongly disagreed, 42 (26.6%) disagreed, 28 (17.7%) were undecided, 20 (12.7%) agreed and 14 (8.9%) strongly agreed that their schools regularly sought CDF support. This implies that majority of eight schools do not regularly (M=2.35, SD=1.30) apply or write funding proposal to their constituency development funds for expansion and construction of new facilities. During interviews, some Principals mentioned that due to politics and corruption incidents (known as *kick back*), most of the schools wrote proposal to the CDFC committee but they do not receive the support required. In contrast to the above, Ayoti et al. (2016) research found that 53.8 % of teachers reported that schools received financial support through NG-CDF. This shows the role that NG-CDF support can play towards improving academic performance.

Therefore, failure to meet the new national standards could be also be related with the fact that some NG-CDF committees feel that a bigger chunk of the students enrolled in such institutions do not come to their area so it would not provide adequate returns (through votes during election) as a result of them committing development funds to such institutions. Further, the research outcomes showed that close to half 74 (46.8%) of teachers strongly disagreed that their institutions hired school facilities (when not in use and during school holidays) to add more finances to supplement recurrent and developmental votes in their annual budget.

Means statistics show that majority of teacher seemed to disagree with this statement from descriptive data computed (*M*=2.22*, SD*=1.36). The lack of hiring of school facilities and buses to individuals and organisation could also be related to policies in place within the school or a previous bad experience that could have happened before. In one case, the study was informed that some individuals who had hired school premises (for a youth empowerment conference) destroyed classrooms and halls of residents (dorms) thereby making the school administration to bar such events in their school in future. In relation to vehicles, some schools reported that their buses had been arrested by the police for operating beyond the official hours leading to payment of huge fines. To ensure prudent use of resources, 66 (41.8%) of teachers strongly disagreed that the schools had installed financial management systems to track income and expenditure hence good financial management. This implies that incidents of fraud and corruption could be prevalent in schools as there exist no funds audit and monitoring procedures to ensure prudent use of resources.

The lack of improvement in instructional and infrastructural facilities could be due to lack of systems in place to ensure income and expenditure balances. In terms of budget adjustments to align with the resources that are available in schools, 61 (38.6%) strongly disagreed, 24 (15.2%) disagreed, 43 (27.2%) were neutral, 16 (10.1%) agreed that budget adjustments were made and 14 (8.9%) strongly agreed. This research therefore show that most schools do not adjust their budgets (*M*=2.34*, SD*=1.33) and this may affect how school programmes are run because of rigidity. The delay by the government to disburse tuition funds on time makes schools to experience delays in delivery of essential resources and materials to support quality education programmes. The lack of proper financial planning skills was found in selected South African schools by Sibongiseni (2016) who identified existence of budget planning errors

occasioned by inability to use the "other" budget items appropriately, improper implementation of the school budget and inability to formulate and develop school financial policy.

On whether schools were purchasing goods and services on credit in their schools, 70 (44.3%) of teachers strongly disagreed that their schools normally purchased goods and services on credit, 33 (20.9%) disagreed, 25 (15.8%) were undecided, 18 (11.4%) agreed and 12 (7.6%) strongly agreed with the statement. This show that schools do not have good credit record and therefore suppliers cannot supply materials and services to schools until they are paid. In some instances, some Headteachers were forced to use their own money to purchase product and services as the government money often delays. Overall values show that the level of financial dynamics in upgraded public secondary schools to national level was low (M=2.25, SD=1.36). This implies low-level use of planning strategies in establishing the survival and progression of upgraded National Schools.

The fourth null hypothesis stated that:

H_{04} There is no significant relationship between financial resource dynamics and academic performance of upgraded secondary schools in Western Kenya Counties

To test the hypothesis, the Karl Pearson correlation statistic was computed at 95.0% confidence level. The research findings are as shown in Table 4.21.

Table 4.21 Financial Dynamics and Academic Performance of Upgraded Schools

		Financial Dynamics	Performance after
Financial Dynamics	Pearson Correlation	1	.191*
	Sig. (2-tailed)		.016
	N	158	158
Performance after	Pearson Correlation	.191*	1
	Sig. (2-tailed)	.016	
	N	158	158

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

Source: Field data (2019)

The computed results show that there exist a weak significant positive relationship (r=0.191 and p=*0*.016) between financial resource dynamics and academic performance of upgraded National Schools in the four Counties of Western Kenya. The computed p-value (0.016) was lower than the critical p-value (0.05) leading to rejection of the fourth null hypothesis and conclusion that there existed significant relationship between financial resource dynamics and academic performance of upgraded secondary schools to national status in Western Kenya. This finding suggests that increased in financial dynamics would result to performance of institutions. In agreement with the study of Nzoka and Aluko (2014) in Embu North Sub County found that showed that financial resource mobilisation through IGAs was on small scale and cannot subsidize the free learning funds enough to improve facilities and good performance of students hence the performance has remained poor. In addition, Ayoti et al. (2016) established that there was a positive correlation between financial determinants of instructional materials management and students' performance (r = 0.069, n = 318, and p = 0.044).

Considering that these schools are categorised as national, it was discovered that they did not regularly benefit from NG-CDF money because the local constituency offices deemed that majority of students enrolled in those institutions do not come from the regions but other areas of the country. Correlation statistics showed that there existed a weak significant positive relationship (r=0.191 and p=*0*.016) between financial resource dynamics and academic performance of upgraded National Schools in the four Counties of Western Kenya. This means that when financial dynamics plans are actualised in secondary schools, there is guaranteed performance in such schools.

4.6 Summary

This chapter has tackled the presentation and interpretation of findings on the planning dynamics and academic performance with specific reference to upgraded National Schools in the Western region of the country. The findings and discussions have shown inadequate planning processes done by schools to enable them cope with the increased enrolment in their institutions. This has resulted to incidents of overcrowding due to resource inadequacy.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The following chapter presents the summary of the findings made in the previous chapters with regards to planning dynamics and academic performance of upgraded National Schools in the Western region of Kenya Counties; Vihiga, Kakamega, Busia and Bungoma. The chapter also presents the main conclusions for the study, suggests recommendations to be made and proposes recommendations for future research studies.

5.2 Summary of Findings

This section presents the main synopsis of what was analysed and presented in chapter with regard to planning dynamics and academic performance of upgraded National Schools in Western Kenya. The study involved participation of teachers from the 8 schools together with their principals. The study also conducted personal observation in those institutions to see the level at which planning dynamics had been applied after they were upgraded to national status.

Performance data collected shows that there was marginal from the time before they were upgraded to current through a marginal mean of 3.66 before to 3.50 now. This showed that in some schools, the upgrading status led to the increased in enrolment of students, low completion rate of students as some are transferred to other schools or drop out, reduced performance in KCSE and co-curricular activities. The performance areas that improved as a result of upgrading was on student retention, teacher retention and quality education provision. The computed t-test statistics show that difference was significant ($p<0.05$) which resulted to conclusion that there existed

significant difference in KCSE mean score before and after the schools were upgraded to national status in Western Kenya.

5.2.1 Instructional material Dynamics and academic performance of upgraded National Schools in Western Region

The first objective of the study determines how instructional material dynamics influence performance of the upgraded schools. Research data revealed that out of the five instructional material dynamics studied, only text-books for students was the one that was planned for and provided in adequate amounts in the above mentioned schools. The provision of books was seen as a priority area to address curriculum goals in the schools. In addition, text-books were found to have been increased to aid in student learning after upgrade.

Nevertheless, provision of ICT resources like computer related materials was found to be rare in the schools despite the current curriculum policy document recommending the adoption in teaching and learning processes. The second most provided items were stationery to ensure quality education was provided in the upgraded schools in the region. Computed correlation data showed that there existed no significant relationship ($p>0.05$) between instructional material dynamics and academic performance of upgraded National Schools in Western region of the country. The second null hypothesis was accepted implying that resource provision was not provided despite the upgraded National Schools enrolling students in numbers. This means that majority of these schools have not yet attained the required number of instructional materials to enable quality learning to schools and it could be attributed to their ineffective planning process that they use. Considering instructional materials were not provided in adequate amounts (lack of proper planning) to meet the

increased student numbers, this state of affairs did not result to improved academic performance. Nevertheless, the study is optimistic that if proper plans were put in place on how to acquire instructional materials, academic performance would improve significantly.

5.2.2 Infrastructural Resource Dynamics and academic performance of upgraded National Schools in Western Region

The upgrading of previously Provincial secondary schools to National Schools in Western region of Kenya was aimed at increasing student enrolment to attain government goal of ensuring 100% of students from primary to secondary schools. As a way of ensuring equity and equality in education as espoused by the Ominde (1965) across the country, the infrastructural facilities are expected to match other National Schools which had been in existence before these were upgraded in the year 2014. However, research data showed that majority of teachers strongly disagreed that they have enough resources and facilities to classify their schools in a national perspective. For instance, the infrastructure dynamic scores were found to be low (M=1.88, SD=1.17).

The teachers reported that some classrooms were overcrowded since the classrooms constructed were inadequate to carry the number of students enrolled in their institutions. Further, this state of affairs with regard to shortage of adequate classrooms made some parents to withdraw their students and transfer them to other County and Extra County Schools. Situations that were observed by the teachers were that some school libraries were congested as the reading area was inadequate; some students were eating under trees because their school dining halls could not accommodate the increased student numbers among other facilities. On student

participation in co-curricular activities, research findings showed that the playgrounds have not been expanded. This limited the students' participation in various sport activities that are valuable for their social and physical development. The dormitories were not also expanded and this created congestions in those facilities. The carrying capacities of existing dormitories were above the required number in most of the upgraded National Schools.

A comparison of infrastructure dynamics and academic performance displayed exist of no significant correlation ($p>0.05$) leading to acceptance of the second null hypothesis that there existed no significant relationship between infrastructural resource dynamics and academic performance of upgraded National Schools in Western Kenya. This implied that infrastructure facility dynamics did not in one way or another result to increase of academic performance in the Western region Counties of Bungoma, Kakamega, Vihiga and Busia. This is due to the fact that the population of students increased but the infrastructural facilities remained the same for the upgraded National Schools in Western Kenya. Despite this state of affairs, the statistics provided hope that once the ongoing infrastructural works have been completed (classrooms, dining halls, dormitories, laboratories and classrooms), performance would improve as more students will not learn in overcrowded classrooms or laboratories.

5.2.3 Human Resource Dynamics and academic performance of upgraded National Schools in Western Region

For the basic education curriculum to be well implemented it is not only physical and material resources that are needed, human resources play a critical role. In situations where there exists no adequate human resource, curriculum implementation

challenges are evident. The third objective of the study was designed to establish the relation that existed between human resource dynamics and academic performance of upgraded schools in the four Counties of Western Kenya. Various outcomes were observed under this objective where teachers moderately (M=3.37, SD=1.13) said that their institution did hire extra academic staff to bridge the shortfall occasioned by the upgrading and also to those teachers who have transferred, resigned or retired from the school. This practice was however, not same across all schools considering that the funds available could not bridge the existing shortfall in schools. Secondly, the teachers were undecided (M=3.13, SD=1.36) that at times non-academic support staff were employed after the upgrade while others had different opinion. Among the human resource dynamics, the two (academic and non-academic) human resource areas were given more attention compared to promotional activities, reward, recognition and even being sponsored to go for further training (seminars and workshops).

Overall results on this variable revealed that human resource dynamics had received less attention (M=2.39, SD=1.28). The third hypothesis was accepted leading to the conclusion that human resource planning dynamics did not have significant relationship (p>0.05) with academic performance of upgraded National Schools in Western Kenya. The lack of appropriate planning on human resources (academic and non-academic) and investment (capacity building, training and motivation to those available) led to increased workload for existing teachers and lack of motivation to all staff in the school.

Principals said that if appropriate human resource dynamics are taken into consideration by the school Board of Management (BOM), TSC and the Ministry of

Education, academic performance would improve significantly. The government should recruit adequate staff in terms of quantity and quality and in particular to fill the areas of the most pressing needs. In service training of staff should be a continuous exercise, especially in their subject areas. Staff should be given the opportunity to attend seminars and workshops on professional development which would expose them to new methods of teaching and learning.

5.2.4 Financial Resource Dynamics and academic performance of upgraded National Schools in Western Region

The fourth objective of the study sought to determine how financial resource dynamics influence academic performance of upgraded National Schools located in Kakamega, Vihiga, Bungoma and Busia Counties. These schools once upgraded required the injection of money from national government to support various projects that were initiated. Most of the schools had no proper and standard facilities that would make them classified as National Schools. Financial resources are key to ensure that all areas of the schools are functioning. This is because resources (infrastructure and materials) have to be purchased and also employees have to be paid using money. Because of delay and inadequate capitation grants from the ministry, it is expected that school administration would devise way of mobilising more financial resources to bridge shortfall experienced in the budget. However, the study found that the level of financial resource mobilisation strategies was low in the eight upgraded public high schools in the region (M=2.24, SD=1.36). For instance, few schools took the initiative of applying for grants for infrastructure development as it was unlikely for them to receive due to their national status.

In addition, not all institutions could adjust their budget to match the current resources at their disposal which affected provision of quality education hence decline in academic performance in examinations. As a way of ensuring prudent use of school funds, the study established that measures of financial management to control pilferage were not adhered to thereby making the schools unable to fulfil their obligations to suppliers. Despite having resources that could generate more income (for example land, buses and also dormitories), income generating activities within those schools were limited. This explains why a weak positive correlation was found to existing between financial resource mobilisation and academic performance of upgraded National Schools in the Western region. The fifth null hypothesis was rejected ($p<0.05$) leading to the conclusion that there existed significant relationship between financial resource dynamics and academic performance of upgraded National Schools in Western Kenya Counties.

5.3 Conclusions

The purpose of conducting this study was to find out the influence of planning dynamics on academic performance of upgraded National Schools in the Counties of Busia, Bungoma, Kakamega and Vihiga Counties. The study established that planning dynamics were rarely applied and it showed those schools reliance on government interventions to plan and implement plans. This explains why mean values computed on academic performance showed a significant drop ($p<0.05$) of performance from the time the schools were upgraded compared to their previous performance.

With regard to the first objective, the study found that with increased enrolment in the upgraded schools, the instructional learning materials (reference notes, lesson guides, and stationery) were not adequately provided for to ensure quality education was

provided. The upgraded national schools had made significant progress in providing adequate text-books for students but felled short of providing learning resources for teachers. The lack of planning initiatives for provision of learning resources affected teaching learning process hence the drop in performance in KCSE examinations from the presented in chapter four. Nevertheless, the computed correlation statistics is promising since planning and provision of adequate instructional learning materials by government, school administration and parents would result to improvement in academic performance.

On the second objective of the study, the research established that as the upgraded learning institutions enrolled more students, new facilities to accommodate the students were not constructed or the existing ones were not expanded. For instance, in most schools, classrooms had 60 or more students and to some schools the available tables and chairs (inclusive of lockers) were in poor condition (breakages). To those who had planned and implemented some infrastructural facilities, most projects initiated in schools (classrooms, laboratories, dining halls and boarding facilities) had stalled for more than five years thereby not benefiting the learners enrolled in them. This made many learners not to consider applying for such schools during selection processes. Even land for co-curricular activities was found not to have expanded as the focus seemed on academic (classroom matters).

On the third objective of the study, research found that there was no significant relationship between human resource planning dynamics and academic performance. The study found that the upgraded National Schools faced shortage of teachers to ensure proper curriculum delivery took place. The action by Ministry of Education did not correspond with provision of adequate teaching staff which affected both

curriculum and co-curriculum activities. Further, the government was not committed to hiring extra non-academic staff in this schools and this made many schools to be understaffed in these areas. Despite some schools employing BOM teachers, the financial resources available could not cater for the higher number of students enrolled in these institutions. This explains why some extra curriculum activities like sports, drama and clubs were not given much emphasis since teachers available concentrated much on academic matters.

On the fourth objective, the study found that the main source of finances for schools was from fees paid by parents and government capitation funds being provided to each student in schools. However, the demand required to ensure improved performance did match with the resources available in the upgraded National Schools in Western Kenya. The study found that financial resource dynamics were inadequate to address the demand monetary needs of the school. The failure to apply planning dynamics resulted to decreased academic performance. This has also resulted to those schools not competing with the previous eighteen National Schools in terms of KCSE performance. In general, analysis of planning dynamics showed that the four; instructional, infrastructural, human resource and financial dynamics were rarely being used in improving curriculum improvement efforts in their schools hence affecting academic performance in the eight upgraded extra county to national status schools in Western Kenya.

5.4 Recommendations

Based on the findings of the study, the study wishes to make the following recommendations as a way forward of improving the performance of the upgraded national secondary schools in the four Counties of Bungoma, Busia, Kakamega and

Vihiga. The recommendations are for various stakeholders involved inside and outside the school environment.

1) To address the issue of instructional dynamics, there is need for schools to consider adoption of new instructional media in teaching and learning. Focus of acquiring print media resources would not match the current global standards where it is expected that the learners are technological literate. In addition, the plan by the government through the Ministry of Education to provide text-books to schools should be enhanced to ensure they reach the target students on time. This will enhance effective curriculum process. Teachers need also to update themselves on technological knowledge on how to operate the new media devices in teaching.

2) To address the issue of infrastructural dynamics, there is need for schools to consider stakeholder consultation when planning for projects. Majority of projects were found to have stalled in schools because parents were kept away during planning stages leading to the stall of ambitious project. There is also need for schools to have a workable plan through which it will guide on the infrastructural projects to be prioritised first before moving to others. The government also needs to commit in ensuring that the standards of infrastructure in these schools match the previous National Schools.

3) To address the issue of human resource dynamics, the study suggests that TSC should commit itself to provision of adequate teachers to these schools. In most cases, the number of teachers per each school was not equal to the expected standard as per the student population (1 teacher for 30-45 student per classroom). There is also need for schools to improve the working conditions of BOM teachers so that they will commit themselves to fixed term

contract rather than situations whereby some do resign at any point in time. As part of improving workers productivity, there is need for school to ensure fairness in promotion and recognition.

4) To address the issue of financial resource mobilisation, there is need for school administration to work with stakeholders to identify profitable projects that can be implemented in their school to earn income. Moreover, there is need for schools to consider ensuring that their budgets are flexible to change with the financial situation of their schools. This will help them address the debt situation that is currently being experienced in most schools.

5.5 Recommendations for Further Research

Based on the findings of the study, conclusions drawn from the findings and subsequent recommendations, the study proposes the following as the possible studies in the established gaps in planning dynamics and performance of the upgraded National Schools.

1) A similar research need to be conducted in other upgraded National Schools in the republic of Kenya
2) Involvement of parents and other stakeholders in planning dynamics and academic performance also needs to be focused on.
3) A research on the influence of planning dynamics on internal efficiency of these upgraded National Schools needs to be done
4) A research on planning dynamics and teacher level of satisfaction in the upgraded National Schools also needs to be conducted.

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APPENDICES

APPENDIX I: LETTER OF INTRODUCTION

Dear Respondent,

My name is Violet Wekesa; I am a student at University of Eldoret undertaking a doctoral programme in education Planning and Management. In order to complete the programme, I am required to research, write and present work on '**Planning Dynamics and Its Influence on Academic Performance of upgraded National Schools in Western Kenya Counties**.' This study is purely for academic purposes and this information will be held in strict confidentiality.

Please append your signature here if you have accepted to participate in the research study

Signature _____ Date _____

Thanks

Violet Wekesa

Postgraduate Student

University of Eldoret

APPENDIX II: TEACHERS QUESTIONNAIRE

Instruction

Please, do not indicate your name anywhere on this questionnaire. Tick in the options provided in the bracket and write your opinion on open spaces requested.

Section A: Background Information

1. What is your sex?

Male ( ) Female ( )

2. What is your academic qualification?

Diploma ( ) Undergraduate ( ) Postgraduate diploma ( )

Masters ( ) Other _____

3. For long have you taught in this school?

Less than 1 year ( ) 2-3 years ( ) 4-6 years ( ) More than 6 years ( )

4. What is the average enrolment in the school per class before your school was upgraded National School?

2-19 ( ) 20 – 49 ( ) 50 - 99 ( ) 100 - 199 ( ) 200 and above ( )

5. What is the average enrolment in the school per class after your school was upgraded National School?

2-19 ( ) 20 – 49 ( ) 50 - 99 ( ) 100 - 199 ( ) 200 and above ( )

Section B: Instructional Material Dynamics

6. (a) Indicate the adequacy of the following instructional materials in regard to schools preparedness to National School status using the Likert Scale provided of 1-5 where 1 is Strongly Disagree (SA), 2 Disagree (D), 3 Undecided (UD), 4 Agree(A), 5 Strongly Agree (SA).

	Adequacy of Instructional materials	**5**	**4**	**3**	**2**	**1**
1	Text books were provided to aid in student learning after upgrade					
2	Learning resources were provided and they are adequate to assist teachers in classroom instruction after upgrade					
3	Instructional process was effectively implemented and conducted by all concerned to ensure curriculum goals are achieved after upgrade					
4	Stationery resources are in plenty and adequate after upgrading to ensure that quality education is provided in school					
5	Computers are available and adequate in our school to ensure that teachers and students acquire ICT knowledge after upgrade					

(b) What other instructional materials have been added since your school was upgraded to national status .....

.....

(c) What is the relationship between resource provision and performance of your

institutions since it was upgraded in terms of: student retention, academic performance, students' enrolment, teacher retention over the past three years?
.....
.....

Section C: Infrastructure Dynamics and Academic Performance of Upgraded National Schools

7. (a) Indicate the adequacy of the following infrastructure in regard to planning dynamics for infrastructure development and expansion in your school after being upgraded to national status. Indicate your level of using the Likert Scale provided of 1-5 where 1 is Strongly Disagree (SA), 2 Disagree (D), 3 Undecided (UD), 4 Agree(A), 5 Strongly Agree (SA).

	Adequacy of Infrastructure Dynamics	**5**	**4**	**3**	**2**	**1**
1	The library facility has been expanded to accommodate all students enrolled after upgrading					
2	More classrooms have been built to accommodate more students being admitted after upgrading					
3	Laboratories have been constructed i.e. Science Lab, Computer Lab, Workshops to aid in practical teaching approaches after upgrading					
4	Play grounds have been expanded to include different kind of sports to ensure students participate in co-curricular activities after upgrading					
5	Dormitories have been increased and expanded to accommodate more students after upgrading					
6	Washrooms/latrines have been constructed and expanded to improve on sanitation after upgrading					
7	The dining hall has been expanded and built to improve students services after upgrading					
8	Enough lockers, tables and other classroom facilities have been increased since upgrading to National School to aid in learning process					
9	Our school land has been expanded, purchases or being put to use (non-used land) after upgrading to national status to ensure expansion of facilities					
10	The school has purchased bus or added another one to ease transport of students during field trips after upgrading					

(b) What other infrastructure facilities have been added or expanded or ongoing since your school was upgraded to national status? .....
.....

(c) What is the relationship between infrastructure facilities provision and

performance of your institutions since it was upgraded in terms of: student retention, academic performance, and students' enrolment over the past three years?

.....

.....

Section D: Human Resource Dynamics in Upgraded Secondary Schools

8. (a) Indicate the adequacy of the manpower in regard your schools' preparedness to National School status using the Likert Scale provided of 1-5 where 1 is Strongly Disagree (SA), 2 Disagree (D), 3 Undecided (UD), 4 Agree(A), 5 Strongly Agree (SA).

	Human Resource Dynamics	**5**	**4**	**3**	**2**	**1**
1	More teachers have been posted in our school by TSC since it was upgraded to address shortages					
2	The school BOM has hired extra non-academic support staff since the school was upgraded to improve on service delivery					
3	The school BOM has hired extra academic support staff (PA) since the school was upgraded to improve on quality education					
4	Teachers have been provided with opportunities for further training since the school was upgraded to improve their pedagogic competencies					
5	Employees are competitively rewarded since the school was upgraded to increase their motivation and commitment					
6	Employment and other opportunities are offered on merit to ensure fairness					
7	Promotion is based on one's performance and is done competitively to rewards top performers after upgrade					

(b) Which other human resource dynamics has happened in your school since the upgrading to national status? .....

.....

(c) What is the relationship between human resource provision and performance of your institutions since it was upgraded in terms of: student retention, academic performance, and students' enrolment over the past three years?

.....

.....

Section E: Financial Dynamics in Upgraded National Schools

9. (a) Indicate the extent to which financing dynamic has been implemented in your school since it was upgraded. Indicate your level of agreement/disagreement using the following scale: 5 where 1 is Strongly Disagree (SA), 2 Disagree (D), 3 Undecided (UD), 4 Agree (A) and 5 Strongly Agree (SA).

	Financing Dynamics	**5**	**4**	**3**	**2**	**1**
1	The school has initiated income generating projects to provide more funds for running of the of the school after upgrade to national status					
2	The school mobilises financial resources (through fundraising) in order to construct and expand facilities after upgrade to national status					
3	the school has increased fee payment in order to meet the demands of being upgraded to national status					
4	The government funds for upgrading of our school has enabled us to expand and construct new facilities					
5	The school regularly seek support from CDF in order to upgrade our facilities to national standards					
6	The school hires school facilities e.g. buses and school compound during holidays to provide more finances for upgrading of facilities					
7	The school has install financial management systems to track income and expenditure hence good financial management					
8	Budget adjustment					
9	Purchase goods and services on credit					

(b) What other financial planning dynamics has your school done during upgrading to national status? _____

_____

(c) What is the relationship between resource provision and performance of your institutions since it was upgraded in terms of: student retention, academic performance, and students' enrolment over the past three years?

.....

.....

Section F: Academic Performance of National Schools After and Before Upgrade

10. (a) Kindly indicate the performance of your school in the following areas before and after upgrade using the following options: Very high (5), High (4), Moderate (3), Low (2) and Very Low (1) in items presented in the table below.

	Academic Performance areas	**Academic Performance before upgrade**					**Academic Performance after upgrade**				
1	Student enrolment	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
2	Student retention										
3	Student completion rate										
4	Syllabus coverage										
5	KCSE performance										
6	Performance in co-curricular activities										
7	Teacher retention										
8	Quality education provision										

(b) What else has changed in terms of performance (whether good or bad) since your school was upgraded to national status?

.....

.....

11. What other challenges does your school after it was upgraded to national status?

.....

.....

12. What can be the solutions for the problems you have mentioned above?

.....

.....

The End

Thanks for Participating In the Study

APPENDIX III: INTERVIEW GUIDE FOR PRINCIPALS

Dear Sir/Madam,

I am Violet Wekesa, Doctoral of Philosophy of Education student from University of Eldoret. I am carrying out a research on "**Planning Dynamics and Its Influence on Academic Performance of Upgraded Extra-County Schools to National Status in Western Kenya Counties**". Welcome to this interview session. I am going to ask you questions on the above mentioned topic. Please note that the information you provide will be treated with utmost confidentiality and will be only be used for the purpose of these study. Please feel free and respond appropriately.

To begin with, the following questions will guide us in this interview.

1. Are instructional materials adequate in your school to meet the current national status?

Prompt……

……

……

2. Are physical infrastructures adequate in your school to meet the current national status?

Prompt……

……

……

3. Is manpower (human resource) adequate your school to meet the current national status?

Prompt……

……

……

4. What is the financial planning on academic performance of your school since it was upgraded to national status?

Prompt……

……

……

5. What are the challenges facing your school in regard to national status?

Prompt……

……

……

6. How can the above mentioned challenges be addressed? ……

……

……

The End

Thank You

APPENDIX IV: DOCUMENT ANALYSIS

Current status of infrastructure facilities

Resource	**Adequacy**	**Conditions**	**Further Comments**
Classrooms			
Laboratories			
Academic Blocks			
Kitchen			
Fence			
Desks			
Chairs			
Tables			
Bus			
land			
Playground			
Library			
Store			
Sanitary facilities (toilets, latrines)			
Water sources			

Document to Cross Check at the Institution over the Past five years (2013 – 2018)

Resource	**Quantity, number....**					**Comments**
	2014	**2015**	**2016**	**2017**	**2018**	
Volume of books						
Student register						
Fee payment register						
Income generating register						
Academic performance (KCSE)						

Kindly assist in filling in the details below (form the Principals records)

		Instructional material		Enrolment	
		Before 2014	After 2016	Before 2014	After 2016
	Actual				
	Expected				
	Deficit				
	Surplus				

APPENDIX V: UOE LETTER

University of Eldoret
Flame of knowledge and innovation

P.O. Box 1125-30100,
ELDORET, Kenya
Tel: 053-2063111 Ext. 242

Our Ref: UoE/EMP/POG/33
4th April, 2019

The Executive Secretary,
National Council for Science and Technology & Innovation
P.O. BOX 30623-00100,
NAIROBI.

Dear Sir/Madam

RE: RESEARCH PERMIT FOR: VIOLET WEKESA REG.NO EDU/PhD/EP/020/14

This is to confirm that the a
work and has successfully

She is currently prepari
"Planning Dynamics and its influence on institutional Performance of upgraded national Schools in Western Kenya County". The proposal has been approved by this Institution.

Any assistance accorded to her to facilitate successful conduct of the research and the publication will be highly appreciated.

Yours faithfully,

H.O.D
Dept. Of Educational Management
& Foundations of Education
UNIVERSITY OF ELDORET

Dr. Alice Limo
HOD, EDUCATIONAL MANAGEMENT AND FOUNDATIONS OF EDUCATION
Copy to: Permanent Secretary,
Ministry of Higher Education, Science & Technology,
P.O. Box 9583-00200 **NAIROBI.**

APPENDIX VI: RESEARCH AUTHORISATION LETTER

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone:+254-20-2213471,
2241349,3310571,2219420
Fax:+254-20-318245,318249
Email: dg@nacosti.go.ke
Website : www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/19/67715/29504**

Date: **24th April, 2019**

Violet Wekesa
University of Eldoret
P.O. Box 1125-30100
ELDORET.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Planning dynamics and its influence on institutional performance of upgraded national schools in Western Kenya Counties, Kenya"*** I am pleased to inform you that you have been authorized to undertake research in **selected Counties** for the period ending **23rd April, 2020.**

You are advised to report to **the County Commissioners and the County Directors of Education of the selected Counties** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioners
Selected Counties.

The County Directors of Education
Selected Counties.

APPENDIX VII: RESEARCH PERMIT

THIS IS TO CERTIFY THAT:
MS. VIOLET WEKESA N/A
of UNIVERSITY OF ELDORET, 1125-30100 eldoret,has been permitted to conduct research in *Bungoma , Busia , Kakamega , Vihiga Counties*
on the topic: *PLANNING DYNAMICS AND ITS INFLUENCE ON INSTITUTIONAL PERFORMANCE OF UPGRADED NATIONAL SCHOOLS IN WESTERN KENYA COUNTIES,KENYA*
for the period ending:
23rd April,2020

Permit No : NACOSTI/P/19/67715/29504
Date Of Issue : 23rd April,2019
Fee Recieved :Ksh 2000

.....
Applicant's Signature

.....
Director General
National Commission for Science, Technology & Innovation

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014.

CONDITIONS

1. The License is valid for the proposed research, location and specified period.
2. The License and any rights thereunder are non-transferable.
3. The Licensee shall inform the County Governor before commencement of the research.
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
5. The License does not give authority to transfer research materials.
6. NACOSTI may monitor and evaluate the licensed research project.
7. The Licensee shall submit one hard copy and upload a soft copy of their final report within one year of completion of the research.
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice.

National Commission for Science, Technology and innovation
P.O. Box 30623 - 00100, Nairobi, Kenya
TEL: 020 400 7000, 0713 788787, 0735 404245
Email: dg@nacosti.go.ke, registry@nacosti.go.ke
Website: www.nacosti.go.ke

REPUBLIC OF KENYA

NACOSTI

National Commission for Science, Technology and Innovation

RESEARCH LICENSE

Serial No.A 24124

CONDITIONS: see back page

APPENDIX VIII: LETTERS OF AUTHORISATION TO COLLECT DATA

REPUBLIC OF KENYA

THE PRESIDENCY

MINISTRY OF INTERIOR & CO-ORDINATION OF NATIONAL GOVERNMENT

Office Mobile No: 0707 085260
Email-cckakamega12@yahoo.com

When replying please quote

Ref No: ED/12/1/VOL.IV/182

COUNTY COMMISSIONER
KAKAMEGA COUNTY
P O BOX 43-50100
KAKAMEGA.

Date: 18th July, 2019

VIOLET WEKESA
UNIVERSITY OF ELDORET
P O BOX 1125-30100
ELDORET

RE: RESEARCH AUTHORIZATION

Following your authorization vide letter Ref: NACOSTI/P/19/67715/29504 dated 24th April, 2019 by NACOSTI to undertake research on ***"Planning dynamics and its influence on institutional performance of upgraded national schools in Kakamega County, Kenya."*** I am pleased to inform you that you have been authorized to carry out the research on the same.

COUNTY COMMISSIONER
KAKAMEGA COUNTY

E. ARIWO
FOR: COUNTY COMMISSIONER
KAKAMEGA COUNTY

APPENDIX IX: DOCUMENT ANALYSIS OUTPUT RESULTS

1. School H

Academic performance Data			**Years**			
Variables	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Population (Form 1 to Form Four	800	860	1137	1420	1600	1660
Enrolment in Form 1	360	390	460	490	420	424
KCSE Mean Score	9.68	8.82	8.18	8.09	7.7	
Instructional materials	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Text-books	800	840	400	603	1320	1660
Learning resources	12	12	11	10	8	8
Reference Books	22	22	22	22	24	
Computers						
Realia						
Projectors						
Laptops						
Infrastructure Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Classrooms	25	25	25	25	26	26
Libraries	1	1	1	1	1	1
Laboratories	2	2	2	2	2	2
Dormitories	9	9	9	9	9	9
Washrooms						
Dining Hall	1	1	1	1	1	1
Lockers						
Chairs	1260					
Kitchen	1	1	1	1	1	1
Tables	1	1	1	1	1	1
Dining Tables	1	1	1	1	1	1
Laboratory Tables	1	1	1	1	1	1
Store	1	1	1	1	1	1
Tanks	2	2	2	2	2	2
Playground	2	2	2	2	2	2
Vehicles	2	2	2	2	2	2
Whiteboard	1	1	1	1	1	1
Biometric	1	1	1	1	1	1
Human Resource Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
TSC Teachers	34	36	43	43	42	44
BOM Teachers	17	18	20	20	18	22
Laboratory technicians	3	3	3	3	3	3
Cooks	12	12	12	12	12	12
Ground People	23	24	21	21	20	18
Secretary	1	1	1	1	1	1
Accountants/Storekeepers	2	2	2	2	2	2
Matron	1	1	1	1	1	1
Nurses	1	1	1	1	1	1
Financial Resource Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Total income for school fees						
Total income from MOE						
Total Income from IGA						
Total income from bursaries						
Total income from grants						
Total income from fundraising						

2. School G

	Years					
Academic performance Data	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Population (Form 1 to Form Four	885	1025	1180	1241	1270	1247
Enrolment in Form 1	240	280	339	321	331	257
KCSE Mean Score						
Instructional materials	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Text-books	1009					
Learning resources						
Reference Books					20	15
Computers	1	1	1	1	1	1
Realia						
Projectors	1	1	1	1	1	1
Laptops	1	1	1	1	1	1
Infrastructure Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Classrooms	20	20	20	20	20	20
Libraries	1	1	1	1	1	1
Laboratories	3	3	3	3	3	3
Dormitories	9	9	9	9	9	9
Washrooms	4	4	4	4	4	4
Dining Hall	1	1	1	1	1	1
Lockers	883	1025	1180	1230	1120	1146
Chairs	885	1025	1180	1250	1120	1146
Kitchen	3	3	3	3	3	3
Tables	1					
Dining Tables	30	30	30	30	30	25
Laboratory Tables	31	33	33	33	33	33
Store	1	1	1	1	1	1
Tanks	1	1	1	1	1	1
Playground	1	1	1	1	1	1
Vehicles	1	1	1	1	1	1
Whiteboard						
Biometric	1	1	1	1	1	1
Human Resource Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
TSC Teachers	32	30	28	30	32	32
BOM Teachers	6	5	6	8	8	8
Laboratory technicians	3	3	3	3	3	5
Cooks	6	6	6	7	7	7
Ground People	12	12	12	12	12	12
Secretary	1	1	1	1	1	1
Accountants/Storekeepers	1	1	1	1	1	1
Matron	1	1	1	1	1	1
Nurses	1	1	1	1	1	1
Financial Resource Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Total income for school fees						
Total income from MOE						
Total Income from IGA						
Total income from bursaries						
Total income from grants						
Total income from fundraising						

3. School F

	Years					
Academic performance Data	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Population (Form 1 to Form Four	998	979	1012	1012	1109	1225
Enrolment in Form 1	284	299	298	312	317	327
KCSE Mean Score	7.93	8.907	5.67	5.92	6	
Instructional materials	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Text-books						
Learning resources	50	53	62	70	77	73
Reference Books	48	48	48	48	52	59
Computers						
Realia				1	1	1
Projectors				1	1	1
Laptops	1	1	1	1	1	1
Infrastructure Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Classrooms						
Libraries						
Laboratories	3	3	2	2	2	2
Dormitories						
Washrooms	13	13	13	13	13	13
Dining Hall	1	1	1	1	1	1
Lockers						
Chairs						
Kitchen	1	1	1	1	1	1
Tables						
Dining Tables						
Laboratory Tables	1	1	1	1	1	1
Store	1	1	1	1	1	1
Tanks	2	2	2	2	2	2
Playground	2	2	2	2	2	2
Vehicles						
Whiteboard				3	3	3
Biometric						
Human Resource Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
TSC Teachers	36	28	37	45	44	45
BOM Teachers	10	11	9	12	15	16
Laboratory technicians	3	3	3	3	3	3
Cooks	18	18	18	18	18	20
Ground People	34	34	34	34	34	34
Secretary	2	2	2	2	2	2
Accountants/Storekeepers	1	1	1	1	1	1
Matron	1	1	1	1	1	1
Nurses	2	2	2	2	2	2
Financial Resource Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Total income for school fees						
Total income from MOE						
Total Income from IGA						
Total income from bursaries						
Total income from grants						
Total income from fundraising						

4. School E

	Years					
Academic performance Data	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Population (Form 1 to Form Four	899	989	1041	1189	1172	1250
Enrolment in Form 1	287	234	336	304	318	421
KCSE Mean Score	9.285	9.156	8.34	7.831	7.73	
Instructional materials	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Text-books	1842	2989	5792	9066	10883	1651
Learning resources	74	80	92	92	109	186
Reference Books	160	200	240	280	1300	325
Computers	1	1	1	1	1	2
Realia						
Projectors	2	2	2	2	2	2
Laptops						
Infrastructure Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Classrooms	22	22	22	24	24	26
Libraries	1	1	1	1	1	1
Laboratories	1	1	2	3	3	3
Dormitories						
Washrooms						
Dining Hall	1	1	1	1	1	
Lockers						
Chairs						
Kitchen	1	1	1	1		
Tables						
Dining Tables	12	14	16	16	18	18
Laboratory Tables						
Store	2	2	2	2	2	3
Tanks						
Playground	4	4	4	4	4	4
Vehicles	3	4	5	5	5	5
Whiteboard	20	20	20	20	25	26
Biometric						
Human Resource Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
TSC Teachers	66	62	67	61	68	68
BOM Teachers		18	16	16	35	36
Laboratory technicians	2	3	3	3	3	3
Cooks	18	18	18	18	18	18
Ground People	7	7	8	8	8	8
Secretary	2	2	2	2	2	2
Accountants/Storekeepers	3	3	3	3	3	3
Matron						
Nurses	1	1	1	1	1	1
Financial Resource Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Total income for school fees						
Total income from MOE						
Total Income from IGA						
Total income from bursaries						
Total income from grants						
Total income from fundraising						

5. School D

	Years					
Academic performance Data	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Population (Form 1 to Form Four	1602	1710	1810	1822	1899	1900
Enrolment in Form 1	322	360	398	401	502	506
KCSE Mean Score	8.7	9.04	7.8	7.62	6.88	
Instructional materials	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Text-books	2					
Learning resources	12	12	12	12	12	12
Reference Books	20	20	18	18	18	17
Computers	5	5	5	5	5	5
Realia						
Projectors	3	3	3	3	3	3
Laptops						
Infrastructure Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Classrooms	32	32	32	32	32	32
Libraries	1	1	1	1	1	1
Laboratories	1	1	1	1	1	1
Dormitories	22	22	22	22	22	22
Washrooms	3	3	3	3	3	3
Dining Hall	1	1	1	1	1	1
Lockers						
Chairs	1602	1700	1800	1820	1882	1900
Kitchen	1	1	1	1	1	1
Tables						
Dining Tables	28	28	28	28	28	28
Laboratory Tables						
Store	2	2	2	2	2	2
Tanks	2	2	2	2	2	2
Playground	2	2	3	3	3	3
Vehicles	2	2	2	2	2	2
Whiteboard	5	5	5	5	5	5
Biometric						
Human Resource Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
TSC Teachers	59	60	58	56	60	61
BOM Teachers	11	16	14	16	16	19
Laboratory technicians	3	3	3	3	3	3
Cooks	12	12	12	12	12	12
Ground People	17	17	17	17	17	17
Secretary	2	2	2	2	2	2
Accountants/Storekeepers	2	2	2	2	2	2
Matron	1	1	1	1	1	1
Nurses	1	1	1	1	1	1
Financial Resource Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Total income for school fees						
Total income from MOE						
Total Income from IGA						
Total income from bursaries						
Total income from grants						
Total income from fundraising						

6. School C

Academic performance Data	**Years**					
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
Population (Form 1 to Form Four	1562	1502	1820	1911	1962	1956
Enrolment in Form 1	320	340	480	540	600	600
KCSE Mean Score	8.213	8.801	7.107	6.69	6.64	
Instructional materials	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Text-books						
Learning resources	5	5	5	5	5	5
Reference Books						
Computers	5	5	5	5	5	5
Realia						
Projectors	2	2	2	2	2	2
Laptops						
Infrastructure Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Classrooms	37	37	37	37	37	37
Libraries	1	1	1	1	1	1
Laboratories	3	3	3	3	3	3
Dormitories						
Washrooms	18	18	18	18	18	18
Dining Hall	1	1	1	1	1	1
Lockers						
Chairs	1	1	1	1	1	1
Kitchen	1	1	1	1	1	1
Tables						
Dining Tables	42	43	42	42	42	42
Laboratory Tables						
Store	2	2	2	2	2	2
Tanks	2	2	2	2	2	2
Playground	3	3	3	3	3	3
Vehicles	2	2	2	2	2	2
Whiteboard	4	4	4	4	4	4
Biometric						
Human Resource Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
TSC Teachers	44	43	41	42	44	46
BOM Teachers	40	39	40	40	42	42
Laboratory technicians	3	3	3	3	3	3
Cooks	19	19	19	19	19	19
Ground People	12	12	12	12	12	12
Secretary	2	2	2	2	2	2
Accountants/Storekeepers	1	1	1	1	1	1
Matron	1	1	1	1	1	1
Nurses	2	2	2	2	2	2
Financial Resource Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Total income for school fees						
Total income from MOE						
Total Income from IGA						
Total income from bursaries						
Total income from grants						
Total income from fundraising						

7. School B

Academic performance Data	**Years**					
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
Population (Form 1 to Form Four	1589	1644	1800	1866	1870	1872
Enrolment in Form 1	376	492	535	573	564	582
KCSE Mean Score	7	9.781	5.287	6.227	6.1954	
Instructional materials	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Text-books						
Learning resources	5	6	6	6	6	6
Reference Books	20	20	15	20	21	21
Computers						
Realia				3	3	3
Projectors						
Laptops				1	1	1
Infrastructure Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Classrooms	27	27	27	27	27	27
Libraries	1	1	1	1	1	1
Laboratories	2	2	2	2	2	2
Dormitories	8	8	8	8	8	8
Washrooms						
Dining Hall	1	1	1	1	1	1
Lockers						
Chairs	1589	1644	1800	1866	1866	1872
Kitchen	1	1	1	1	1	1
Tables	1	1	1	1	1	1
Dining Tables	1	1	1	1	1	1
Laboratory Tables	5	5	5	5	5	5
Store	2	2	2	2	2	2
Tanks	2	2	2	2	2	2
Playground	1	1	1	1	1	1
Vehicles	1	1	1	1	1	1
Whiteboard						
Biometric						
Human Resource Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
TSC Teachers	74	74	74	74	72	75
BOM Teachers	10	10	10	9	8	10
Laboratory technicians	2	2	2	2	2	2
Cooks	11	11	11	11	11	11
Ground People	15	15	15	15	15	15
Secretary	2	2	2	2	2	2
Accountants/Storekeepers	2	2	2	2	2	1
Matron	1	1	1	1	1	1
Nurses	1	1	1	1	1	1
Financial Resource Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Total income for school fees						
Total income from MOE						
Total Income from IGA						
Total income from bursaries						
Total income from grants						
Total income from fundraising						

8. School A

Academic performance Data	**Years**					
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
Population (Form 1 to Form Four						
Enrolment in Form 1						
KCSE Mean Score	10.11	10.2	9.6	9.1	8.33	
Instructional materials	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Text-books						
Learning resources						
Reference Books						
Computers						
Realia						
Projectors						
Laptops						
Infrastructure Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Classrooms						
Libraries						
Laboratories						
Dormitories						
Washrooms						
Dining Hall						
Lockers						
Chairs	1589	1644	1800	1866	1866	1872
Kitchen						
Tables						
Dining Tables						
Laboratory Tables						
Store						
Tanks						
Playground						
Vehicles						
Whiteboard						
Biometric						
Human Resource Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
TSC Teachers						
BOM Teachers						
Laboratory technicians						
Cooks						
Ground People						
Secretary						
Accountants/Storekeepers						
Matron						
Nurses						
Financial Resource Dynamics	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Total income for school fees						
Total income from MOE						
Total Income from IGA						
Total income from bursaries						
Total income from grants						
Total income from fundraising						

APPENDIX X LIST OF NATIONAL SCHOOLS IN KENYA

	National School	County
1	Alliance Girls	Kiambu
2	Alliance High School	Kiambu
3	Kenya High School	Nairobi
4	Lenana School	Nairobi
5	Limuru Girls	Kiambu
6	Loreto Limuru	Kiambu
7	Mangu High School	Kiambu
8	Mary Hill Girls	Kiambu
9	Maseno School	Kisumu
10	Moi Forces Academy	Nairobi
11	Moi Forces Lanet	Nakuru
12	Moi Girls Eldoret	Uasin Gishu
13	Nairobi School	Nairobi
14	Nakuru Boys	Nakuru
15	Starehe Boys Centre	Nairobi
16	Starehe Girls	Nairobi
17	UtumiKshs i Academy	Nakuru
18	Nakuru Girls	Nakuru
19	Asumbi Girls	HomaBay
20	Bunyore Girls High School	Vihiga
21	Bura Girls	Taita Taveta
22	Chogoria Girls	Tharaka Nithi
23	Friends School Kamusinga	Bungoma
24	Garissa High School	Garissa
25	Kagumo Boys	Kirinyaga
26	Kakamega High School	Kakamega
27	Kanga High School	Migori
28	Kapsabet Boys	Nandi
29	Karima Girls	Nyandarua
30	Kenyatta High School	Taita Taveta
31	Kipsigis Girls	Kericho
32	Kisii School	Kisii
33	Lugulu Girls High	Bungoma
34	Machakos Boys	Machakos
35	Makueni Boys	Makueni
36	Mama Ngina Girls	Mombasa
37	Maranda High School	Siaya
38	Meru School	Meru
39	Moi Girls Isinya	Kajiado
40	Moi High School - Mbiruri	Embu
41	Murang'a High School	Murang'a
42	Muthale Girls	Kitui
43	Nyabururu Girls	Kisii
44	Pangani Girls	Nairobi
45	Ribe Boys	Kilifi
46	St Brigids Girls Kiminini	Trans-Nzoia
47	St Patricks Iten	Elgeyo Marakwet County

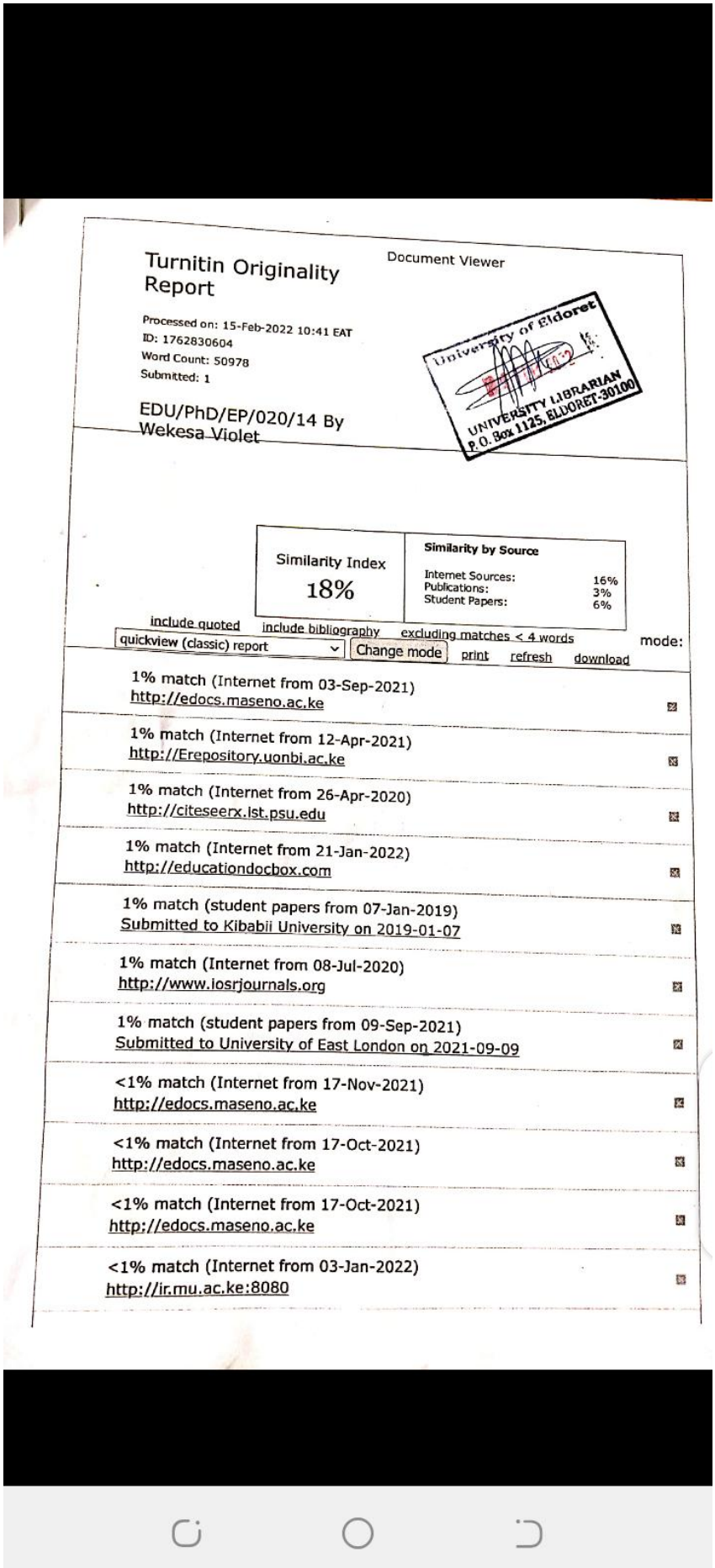
48	Tartar Girls	West Pokot
49	Baricho Boys	Kirinyaga
50	Baringo High School	Baringo
51	Bishop Gatimu Ngandu	Nyeri
52	Butere Girls High School	Kakamega
53	Butula Boys High School	Bungoma
54	Chavakali High School	Vihiga
55	Ikuu Boys	Tharaka Nithi County
56	Isiolo Girls	Isiolo
57	Kabare Girls	Kirinyaga County
58	Kaplong Girls	Bomet
59	Kilgoris Boys	Narok
60	Kisumu Girls	Kisumu
61	Kitui High School	Kitui
62	Kwale High School	Kwale
63	Lodwar High School	Turkana
64	Maralal High School	Samburu
65	Matuga Girls	Kwale
66	Mbita High School	Homabay
67	Moi Girls Marsabit	Marsabit
68	Kapsowar Girls	Uasin Gishu
69	Mugoiri Girls	Murang'a
70	NEP Girls	Garissa
71	Njonjo Girls	Laikipia
72	Ole Tipis Girls	Narok
73	Shimo La Tewa Boys	Mombasa
74	Siakago Girls	Embu
75	St. Joseph's Boys Kitale	Trans Nzoia
76	St. Mary's Girls High School Igoji	Meru
77	Bahari Girls	Kilifi
78	Chewoyet Boys	West Pokot
79	Garbatula Boys	Isiolo
80	Hola Boys	Tana River
81	Kabianga Boys	Kericho
82	Kathiani Girls	Machakos
83	Kisima Girls	Samburu
84	Lamu Girls	Lamu
85	Mandera Boys	Mandera
86	Mbooni Girls	Makueni
87	Moi Girls Mandera	Mandera
88	Moi Girls Nyabohanse	Migori
89	Moyale Boys	Marsabit
90	Mpeketoni Boys	Lamu
91	Nanyuki Boys	Laikipia
92	Ngao Girls	Tana River
93	Nyandarua High School	Nyandarua
94	Oolaiser Boys	Kajiado
95	Kolanya Girls High School	Busia
96	Sironga Girls	Nyamira
97	St. Joseph Chepterit Girls	Nandi

98	Tenwek Boys	Bomet
99	Turkana Girls	Turkana
100	Wajir Boys	Wajir
101	Wajir Girls	Wajir
102	Ngiya Girls	Siaya
103	Moi High School Kabarak	Nakuru
104	Segero Adventist High School	Uasin Gishu
105	St Alberts Ulanda Girls	Migori

APPENDIX XI: MAP OF STUDY AREA

(Source : Google maps)

APPENDIX XII : SIMILARITY REPORT



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