STRATEGIC PLAN IMPLEMENTATION AND ITS EFFECT ON INTERNAL EFFICIENCY IN PUBLIC SECONDARY SCHOOLS IN KISUMU AND UASIN GISHU COUNTIES, KENYA

BY

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DECLARATION

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DEDICATION

I am dedicating this thesis to individual persons regarded to have been and are still special to me in terms of having positive influence in my life: my beloved late aunt Margaret Ochido Mumbe; my dear parents Mr. Samwel Nyangia Ndinya and Mrs Helida Anyango Nyangia; my beloved wife and friend Millicent Atieno Onyango; my sister Mrs Joan Nyang'idi and my mentors Dr. Kawango Agot and the late Advocate John Ongele.

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ABBREVIATIONS AND ACRONYMS

AASA	American Association of Schools Administration
CDE	County Director of Education
D/CDE	Deputy County Director of Education / Sub County Director of Education
DEMA	Decentralised Education Management Activity
EFA	Education for All
FCUBE	Free Compulsory Universal Basic Education
FDSE	Free Day Secondary Education
FTI	Fast Track Initiative
IIEP	International Institute for Educational Planning
KEMI	Kenya Education Management Institute
KESSP	Kenya Education Sector Support Programme
KPI	Key Performance Indicators
MDGs	Millennium Development Goals
MoE	Ministry of Education
MoEST	Ministry of Education, Science and Technology
NACOSTI	National Commission for Science, Technology and Innovation
NESSP	National Education Sector Support Programme
OECD	Organization for Economic Cooperation and Development
PA	Parent Association
ROK	Republic of Kenya
SAP	Structural Adjustment Programme

SSA	Sub-Saharan Africa
SSE	Subsidized Secondary Education
TSC	Teachers Service Commission
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UPE	Universal Primary Education
US	United States

ABSTRACT

In an education system whose environment is dynamic, turbulent and unique, strategic plan implementation is instrumental in ensuring internal efficiency. Despite Kenyan Government heavy investment and several initiatives in secondary education, internal efficiency remains elusive in post primary government schools. The study purpose being establishing effect strategic plan implementation has on internal efficiency in government post primary schools within Kisumu and Uasin Gishu counties. The research objectives were: establishing effect of stakeholders' knowledge of vision and mission declarations on internal efficiency, determining the effect of achieved key performance indicators in curriculum and instruction on internal efficiency and to find out the effect of key performance indicators in physical infrastructure on internal efficiency in government owned post primary schools within the study locale. General Systems Theory by Ludwig Von Bertalanffy guided the investigation which utilized a convergent parallel mixed-methods design. This investigation targeted a population of 2226 consisting of 371 principals, 1484 teachers and 371 PA chairpersons. With the help of Slovin's formula, 57 public secondary schools were selected using stratified sampling technique hence 57 principals, 57 PA Chairpersons were purposively sampled; and 228 teachers, simple randomly sampled yielding a sample size of 342 (15.4% of target population) for quantitative strand. Out of the 57 sampled public secondary schools, 9 schools were further purposively sampled to yield 9 principals, 9 PA chairpersons and 36 teachers (54 respondents) for qualitative strand. Interview schedule, document analysis observation schedule and Questionnaires being research instruments employed. Quantitative strand utilized questionnaires, for principals; teachers and PA chairpersons, which were piloted to determine validity and reliability. Semi-structured interviews for principals, PA chairpersons and teachers; together with the document analysis and researcher's observation schedule being useful in collecting qualitative data. The two types of data were collected in different strands but in one phase to validate the findings by comparing findings from the two strands as expected of the research design employed in this study. The two strands of data collected were analyzed separately. The analysis of quantitative data was done through the assistance of SPSS using descriptive as well as inferential statistics. Thematic analysis was applied on qualitative data and reported in narrative form. The analyzed results of quantitative and qualitative data were then mixed during overall interpretation and discussed side by side for comparison according to objectives. It was established that all stakeholders had knowledge of the school vision and mission statements, however, principals were more aware than the rest. The overall awareness of all stakeholders was moderate and had more effect on grade promotion rate than on retention rate at $R^2 = .529$ hence moderate effect on internal efficiency. It was further established that achieved KPIs in curriculum and instruction was moderate and had more effect on grade promotion rate than on retention rate at $R^2 = .440$ hence moderate effect on internal efficiency. Finally, it was established that there was improved status of physical infrastructure in terms of completed and ongoing activities; and the level of achieved KPIs in physical infrastructure was great and had greater effect on grade promotion rate than on retention rate at $R^2 = .993$. Overally, multiple regression analysis also revealed that the independent variables had greater effect on grade promotion rate than on retention rate at $R^2 = .993$ hence greater effect on internal efficiency in public secondary schools in the study locale. It was concluded that strategic plan implementation has positive high effect on internal efficiency in public secondary schools. Hence need for consistent sensitization of stakeholders on school vision and mission statements; increased resources from both government and stakeholders for implementation. Schools should also use their plans as a resource mobilization tool.

CHAPTER ONE

INTRODUCTION AND CONTEXT OF THE STUDY

1.1 Introduction

This chapter dealt with the background to the study, statement of the problem, purpose of the study, objectives, research questions, significance, limitations and delimitations of the study, assumptions, theoretical and conceptual frameworks and operational definition of key terms.

1.2 Background to the Study

Education is a panacea for human development and it is critical in diverse economic growth. It is a fundamental human and enabling right as well as a public good (UNESCO, 2015). It remains the unlocking key to the individual's intellectual and creative prowess. By investing in expanding access to quality education, majority of societies have achieved high and sustained rates of growth or considerable poverty alleviation, enhanced individuals positive contribution to the development of the country. It is also useful in increasing further the public government's economic and social plan through arrangement of a talented labor force, creating an enlightened society and advancing dynamic citizenship (Khamati & Nyongesa, 2013, Republic of Kenya, 2010, 2013).

Globally, the realization of the importance of educational development has led to many countries investing in the provision of Free Secondary Education (UNESCO, 2000, 2015). This is on the grounds that secondary education is to furnish students with information, abilities and qualities to not just contend in getting quality courses and

universities yet additionally to be invested in the realm of work (Birgen, 2007, UNESCO, 2015). Nations like Britain, US, Egypt and Canada and Sweden, just to mention but a few, began during the 1950s to fund secondary education, a move that somewhat could be answerable for the progression of these countries (Khamati and Nyongesa, 2013). Studies done in Nigeria, Uganda and Kenya among other African countries contend that they are trying to embrace this reality of Free Secondary Education (FSE) with very few countries levying less fees for post primary students and those that have abolished fees have expanded access to secondary school education hence experiencing increased enrolments (UNESCO, 2015); however ensuring retention and grade promotion without wastage of resources was a matter of concern. There had been need for a form of approach which could enhance efficiency through judicious and efficient utilization of educational resources which are provided through enormous sacrifices by educational partners (Republic of Kenya, 2012).

In response to the foregoing, the governments globally including Kenya, have attempted to adopt many approaches of planning such as social demand, manpower, cost benefit analysis and strategic planning. The first three approaches of planning have been inadequate in addressing the demands of the dynamic environment in which education is being conducted. They are bedeviled by this limitation because they are static and crisis-driven and lack provisions for a framework, which strategic planning approach provides, to meet the needs in educational arena. Empirical investigations have affirmed one of the significant advances taken by associations for example institutions of learning to moderate difficulties such as inefficiency going up against them as they try to pursue

quality in their undertakings is strategic planning. In this regard, strategic planning has accordingly been taken on in learning organizations as a method for accomplishing school efficiency (Kiprop, Bomett & Michael, 2015). It was on this basis, Sessional Paper No 1 of 2005 was used by the Ministry of Education to command administrators of schools to foster vital designs aimed at better administration of schools in Kenya (MoEST, 2005). Likewise, it was on the very premise that the current study zeroed in on strategic planning and not different methodologies of planning.

Strategic planning had been introduced in the institutions of learning to address quality of education and efficiency in utilisation of meagre educational resources. This is in tandem with confirmation of Steyn and Wolhuter (2010) that strategic planning is not only an important structure for the successful implementation of school changes, but also enables schools to appropriately respond to their needs, such as improving their internal efficiency. As emphasized by IIEP (2010), this may be due to the fact that the basic organization facilitates shift from the perspective of urgent short-term planning methods and targets longer critical cycles that are critical to manageability. Hinton (2012) gave the beginning of the strategic plan. He clarified that it started with the army and soldiers used it as a weapon to defeat opponents during World War II.

Strategic planning, a futuristic process and a paradigm shift, requires attention in all institutions of learning. It results into having a document called strategic plan (Itegi, 2016) which if available and well implemented, Owolabi and Makinde (2012) posit that a going concern can minimally or never at all face any difficulty in handling environmental factors without. It is because globally environment in which education system is being

conducted is turbulent, complex, competitive and dynamic with dwindling resources (UNESCO, 2006; Prytula, 2011) and successful achievement of educational goals especially in terms of internal efficiency, therefore, requires this paradigm shift with full implementation of the plan. Chikwumah and Ezeugbor, (2015) have alluded to this by mentioning that educational planning has had a paradigm change with particular commitments by states to come up with regulations for education reforms. It was hoped that this would enable the governments realize enhanced internal efficiency in terms of students retention and grade promotion, which seemed to be elusive in education and particularly in Africa (UNESCO, 2016).

Internationally, governments had set up requirements that expect schools to lead quick thorough strategic planning pointed toward setting key techniques for reasonable improvement as well as assurance of asset needs (UNESCO, 2010) with the end goal of nature of and productivity in instruction. For example, in Kenya, there was a ministerial necessity that public learning establishment, not leaving out post primary schools, foster key arrangements being procedure for better outcome oriented administration as well as productivity they are involved in (MoEST, 2005, 2012), however, the implementation of such plans and subsequent effect on internal efficiency became the concern of this study. The Republic of Kenya (2016) attests to this by confirming National Basic Sector of learning is empowered to develop mechanisms of handling discrepancies of quality work among others in organized set up in learning and training. The document states that the authorization originated from Administrative Order No. 1/2016 on the "Government Organization of the Republic of Kenya" in May 2016. This authorization is necessary

because the government continues to invest heavily within the sector of education. At present, education consumes 6.4% of gross domestic product which marches global standards (Republic of Kenya, 2014), and 58% of this is used to finance secondary education (Republic of Kenya, 2014, 2015).

These are government's valuable resources which must be utilized under the guidance of strategic planning in order to ensure internal efficiency by reducing students dropout and grade repetition to maximize graduation rates in secondary education without disadvantaging any deserving student, especially those from low income households. With these resources, the literature confirms that strategic planning can minimize waste through ascertaining improvement of institutional resource to enhance accommodation of increased number of learners and continue to retain them (Abdulkhareem, Akinub & Oyenivan, 2014), more so at this time of implementation of 100% progress to secondary from primary education by the government.

In 2012, the Kenyan government through the Education Ministry together with Agency for International Development of US launched the Decentralized Education Management Activity (DEMA) to empower administrators at both school and district levels with knowledge and skill for preparing a well as implementing key arrangements (Dan., 2013; Itegi, 2016). The capacity building workshop by DEMA was conducted in all the counties, including Kisumu and Uasin Gishu, at each county's central place targeting the principal, BoM member and a teacher from each public secondary school. This coincided with the administrators of both government primary and secondary institutions in Kenya, taking (KEMI) Diploma in Education Management which had strategic planning as one

of the units and thereby graduating on 9th July, 2013. It was therefore expected that these administrators among other stakeholders of the government learning institutions including even those from Kisumu and Uasin Gishu Counties were in a position to undertake the process of strategic planning and implementation (Dan, 2013) for enhancement of internal efficiency. However, the practicality of this was yet to be established.

For the Republic of Kenya (2013) therefore, the process of restructuring the MoEST and necessity of responding to the requirements of the Kenyan Set of Laws of 2010 and blue print of Vision 2030 necessitated the development of the MoEST Strategic Plan for the period 2013-2018. Based on the argument of IIEP (2010) that undertaking of planning strategically should be at both the executive and lower levels and functions of organization, Ministry of Education, equally mandated government post primary institutions to prepare as well as execute key arrangements in tandem with the Ministry's, so as to address performance-related issues such as access; internal and external efficiencies, quality and equity.

When schools implement strategic plans, there are certain indicators which will be evident. The key stakeholders must be aware of the vision and mission statements. This enables them to work as a team towards the same direction in ensuring that strategic objectives of the institution are achieved. The position is implied by a study conducted on factors impeding the implementation of strategic plans in post primary schools in Baringo District by Chemwei, Leboo and Koech (2014). The study established that unclear vision and mission to implementers constrain implementation of strategic plan. Implementation

is what makes strategic planning unique. However, it requires synergy and ownership, a belief that is supported by Kohtamaki, Kraus, Makela and Ronkko (2012) which are further indicators of stakeholders' awareness of vision and mission statements. The study at hand, endeavoured in establishing whether with display of vision together with mission statements on the walls of school gates, key stakeholders were aware of them and what was the effect of this awareness on internal efficiency?

Another indicator of strategic plan implementation is the achieved key performance indicators which are actually completed activities under various key priority areas. In learning institutions there are five key priority areas, namely: staff and personnel, students, curriculum and instruction, physical infrastructure and finance. Each of these areas has challenges which must be fixed by strategic plan implementation through achievement of key performance indicators under each priority area in order to enhance internal efficiency. The current study focused on achieved key performance indicators in two priority areas: Curriculum and instruction; and physical infrastructure because many studies had shown that the main drivers of internal efficiency are curriculum instruction and physical infrastructure. Their dilapidated conditions lead to inefficiency (Adigwe 1997, Mumina, 2013). That does not mean that the other key priority areas are not important, that was just one of the delimitations of the current study.

Kevogo and Waiganjo (2015) concur with the foregoing and emphasise that strategic planning has proved useful in efficient utilization of meagre resources which are not only infrastructure and human resource but also finances, among others. Such resources when are in sorry state, definitely, lead to internal inefficiency. This is in accordance with Gode

(2009) perception that other than reception of strategic planning approach as a government requirement, decreasing assets combined with ever unique and profoundly competitive climate have made the approach a vital practice for development of learning institutional assets. The expectation of the government from 2013, therefore, is that public schools should improve in their performance generally in the five areas identified by IIEP (2010) with implementation of strategic plan. Despite the mandate and significant progress in terms of reforms and expenditure since 2000, there has been growing concern on educational performance, especially, internal efficiency which requires policy attention (MoEST, 2010).

Strategic plan implementation is expected to help schools improve their internal efficiency by addressing causes of such inefficiencies. This is because strategic planning came on the back of high inefficiencies and coincided with bad conditions of resources in schools (Itegi, 2016) which many studies associate with dropout and grade repetition rates (Adigwe, 1997; Mumina, 2013; Yusuf & Sofoluwe, 2014). Critical issues pointed out by Kisumu and Uasin Gishu Counties QASOs affecting the students which coincided with the introduction of strategic planning process were majorly school-based factors such as grade to grade advancement strategies by schools battling for better mean marks, absence of educating and learning assets inside learning institutions because of inadequate state and other stakeholders' subsidizing, absence of institutional necessary resources such as science research centres, classrooms as well lavatories among others. The concern was, what effect did strategic plan implementation have on internal

efficiency by improving these conditions in government owned post primary learning institutions within Kisumu and Uasin Gishu counties?

Indicators defining internal efficiency are repetition, retention, promotion and dropout degrees among others (IIEP, 2010). The current study was concerned with retention and grade promotion of students which entail interrogating students repetition and dropout since they had been seriously affected by the status of resources in public secondary schools in Kisumu and Uasin Gishu counties (MoEST, 2014) which strategic plan implementation was intended to improve. Another reason is that computation of indicators of internal efficiency requires large amount of data. Due to limitation of time and finance, the current study was not able to accomplish the required computation. Secondary schools in Kenya still exhibited some elements of inefficiency which was internal within the learning institution set up (MoEST, 2014) showing gap in relation to the actual as compared to the expected outputs which was a repeat of MoEST (2007) report. View of national retention and dropout rates is given as a trend from 2009 to 2017 as shown in Figure 1.1.

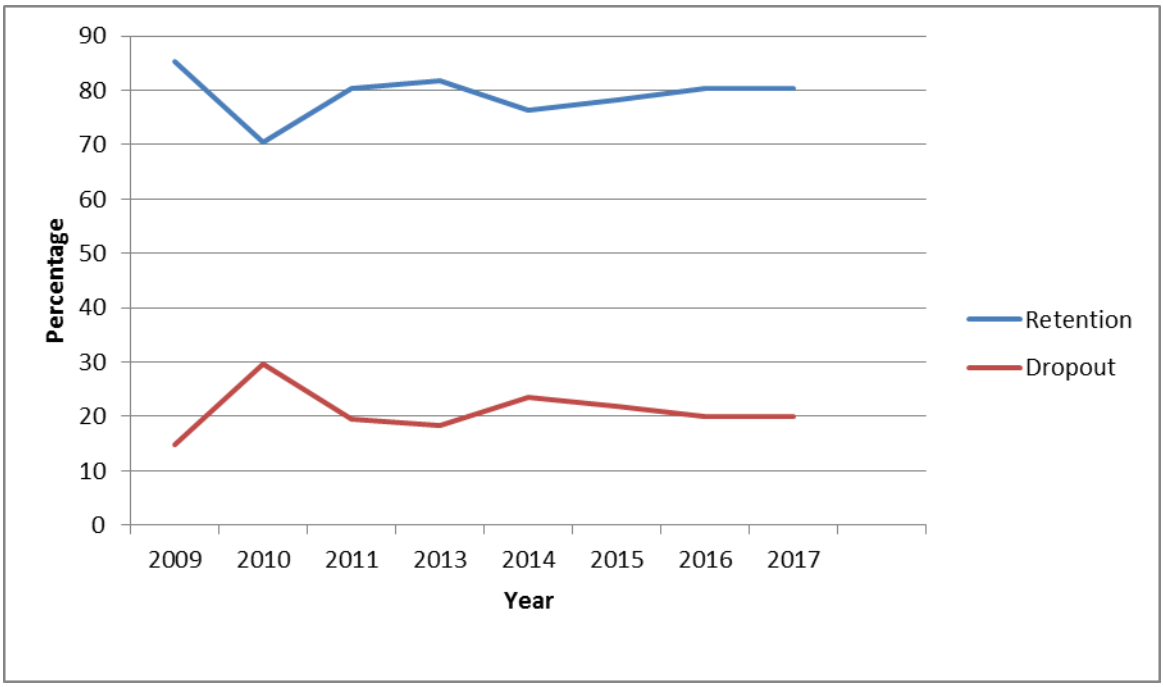

Figure 1.1: National retention and dropout rates for secondary schools for years 2009-2017

Source: Ministry of Education 2018

From Figure 1.1, retention rates in secondary from Form 1 to Form 4 in: 2009 was 85.2%; 2010 was 70.35%; 2011 was 80.4%; 2012 was 86.9%; 2013 was 81.7% and 2014 with a sharp drop to 76.4%. Then it moved to 78.2% in 2015 and then 80.3% for 2016 and 2017. The report showed a fluctuating trend without giving any reason (MoEST, 2014, Ministry of Education, 2018). The interpretation of this report was that the difference between the enrolment percentage rate (100%) and retention rates would give dropout rates.

Figure 1.1 gives a fluctuating trend, especially, of national average dropout and retention rates for the years ranging from 2010 to 2017 with dropout rate being on the increase

from 2012. This was inconsistent with the expectations concerning the prediction of key arrangement execution on internal efficiency because the introduction of strategic planning was geared to enhance efficiency. So what could be the problem? The data obtained from Kisumu County Education Office (2018) and Uasin Gishu County Director of Education (2018) revealed that the two counties were having more or less similar repetition rates across from Form1to Form 4 in 2017 with Forms 3 and 4 recording the highest rates of repeaters as compared to the lower Forms indicating inefficient utilization of resources. This is indicated in Table 1.1.

Table 1.1: County grade repetition rates in 2017

County	**Grade Repetition rates in %**			
	F1	**F2**	**F3**	**F4**
Kisumu	0.30	0.78	2.02	2.24
Uasin Gishu	0.53	0.83	1.82	2.4

Source: Ministry of Education, 2018

Repetition rates from table 1.1 indicate that in both counties, the repetition rates were still evident, despite being outlawed, ranging from the lowest rate of 0.30% to the highest 2.4% across the grades. These rates when compared with the rates of the rest of other counties, they were found to be the highest. The rates were not insignificant in terms of cost. According to West (2012), estimated cost to society of retaining in the same grade 2.3% of the total enrolment in the US is more than $ 12 billion in a year. In addition, the two counties had been reported as having most schools registering considerably high dropout rates hence low retention rates in spite of Free Secondary Education (Okungu,

Orwa & Mungatu, 2014; MoEST, 2012, 2014) and evidence that they were implementing strategic planning process.

Lack of efficiency in an organized set up of education is a discrepancy to the set up. Given that a learner rewinds a grade and takes five (5) in place of four (4) academic years or dropout means additional expenditures to state as well as the schools' stakeholders (Deribe, Endale, and AlShebir, 2015). A study by Abdulkareem et al., (2014) on Nigerian universities confirms that strategic plan implementation is meant to improve and achieve internal efficiency in the universities. At any rate, it was unknown whether it would equally improve and achieve quality work of government owned post primary learning institutions within Kisumu and Uasin Gishu Counties, Kenya.

This justifies the claim of Chukwumah et al., (2015) that key arrangement is an imperative instrument for accomplishment of any instructive programme yet the thrust was meaningful execution of key arrangements which would lead to turnaround to quality from quantity as well as ultimate accomplishment belonging to framework great change being beneficial major aims. It presented this current study with a viable area of interest to be explored –What exactly was the influence of key arrangement execution on quality work within government owned post primary institutions within Kisumu and Uasin Gishu Counties, Kenya?

1.3 Statement of the Problem

The government of Kenya in her tireless bid has endeavoured to address access, internal efficiency and external efficiency among other concerns through FDSE, encouraging

100% transition (most recently), investing in the expansion of National Schools, provision of bursary funds to needy students, initiating various reforms and adopting strategic planning approach both at Ministry and institutional levels to dovetail the implementation of all these initiatives. The rationale for the approach was to enhance internal efficiency among others through improvement of educational resources at school levels as stakeholders synergize guided by their awareness of vision and mission statements; and as key performance indicators are being achieved in key priority areas. Despite this expectation, a scrutiny of literature revealed that Kisumu and Uasin Gishu counties were still characterized by low internal efficiency.

A number of students access secondary education but did not graduate at the stipulated period. For instance, a number of learners who were admitted in Form One in both Kisumu and Uasin Gishu counties repeated grades while others dropped out yet there was glaring evidence that schools were implementing strategic plans. The ramification was that the significance of education and training in maintainable improvement which is accommodated in the Constitution of Kenya (2010) that each youngster has a privilege to free and necessary essential schooling and admittance to moderate tertiary schooling, preparing and abilities advancement would not be realized.

The problem of the study was that it was unclear to what extent internal efficiency regarding retention rate and grade promotion rate was reliably predicted by strategic plan implementation. Most previous studies also confirmed that there was a dearth of information about the prediction of strategic plan implementation on internal efficiency hence the current study being of necessity.

1.4 The Purpose of the Study

The investigation purpose was to establish strategic plan implementation prediction on Retention rate and Grade promotion rate (internal efficiency) in government post primary schools within Kisumu and Uasin Gishu counties, Kenya. This was because there was evidence that these schools were implementing strategic plans and yet they were still marked by internal inefficiency.

1.5 Objectives of the Study

The study sought to achieve the following objectives:

i. To establish the effect of awareness of school vision and mission statements by stakeholders on internal efficiency in public secondary schools in Kisumu and Uasin Gishu counties, Kenya.

ii. To determine the effect of achieved Key Performance Indicators in Curriculum and Instruction on internal efficiency in public secondary schools in Kisumu and Uasin Gishu counties, Kenya.

iii. To find out the effect of achieved key performance indicators in Physical Infrastructure on internal efficiency in public secondary schools in Kisumu and Uasin Gishu counties, Kenya.

1.6 Research Questions

This study was set out to answer the following research questions:

i) What is the effect of stakeholders' awareness of vision and mission statements on retention and grade promotion rates in public secondary schools in Kisumu and Uasin Gishu counties, Kenya?

ii) What is the effect of achieved key performance indicators in Curriculum and Instruction on grade promotion rates in public secondary schools in Kisumu and Uasin Gishu counties, Kenya?

iii) What is the effect of achieved key performance indicators in Curriculum and Instruction on retention rates in public secondary schools in Kisumu and Uasin Gishu counties, Kenya?

iv) What is the effect of achieved key performance indicators in physical infrastructure on grade promotion rates in public secondary schools in Kisumu and Uasin Gishu counties, Kenya?

v) What is the effect of achieved key performance indicators in physical infrastructure on retention rates in public secondary schools in Kisumu and Uasin Gishu counties, Kenya?

1.7 Significance of the Study

This study has the following significances:

i. The findings of this study may provide useful guidance to various stakeholders including, educationists, principals and BoM members, on the best ways possible to implement strategic plans to enhance internal efficiency of public schools.

ii. Knowledge on strategic plan implementation and its effect on internal efficiency in public secondary schools may assist MoE in its financing and capacity building policies formulation in relation to strategic plan implementation.

iii. The results are expected to provide major assistance to the principals and managers of the schools in ascertaining availability of comprehensive strategic

planning which addresses all the key priority areas for enhancement of internal efficiency.

iv. The findings may help the students improve in performance, have high promotion, retention and graduation rates.

v. With the implementation of 100% transition from primary to secondary in the country (Kenya), increase in the supply of secondary education leading to the direction of inputs to this level of education is a clear expectation. The current investigation endeavoured to clarify the strategic plan implementation component that stakeholders should invest more on to ensure internal efficiency.

vi. The study findings may add literature on strategic plan implementation and its relationship with internal efficiency. This may also avail data required by researcher who find this topic to be of interest for their future studies.

1.8 Limitations of the Study

The study had the following limitations:

The respondents having been identified from sampled government post primary schools in Kisumu and Uasin Gishu counties, the prediction obtained majorly depict ideal scenario within the study locale. Therefore, what were established cannot apply in all government secondary in the country, however, the mixed methodology added more value to the findings.

i. The financial constraint might be a limitation because the researcher was self-sponsored, limiting the study to be conducted in only two counties. The researcher prudently utilized the resources with strict time management.

1.9 Delimitations of the Study

The study had the following delimitations:

i. The undertaking of the study was done within government and private post primary schools within Kisumu and Uasin Gishu counties, Kenya.

ii. This study was conducted within post primary government schools and not individually owned ones. Private secondary schools were not included in the study because their environment and stakeholders could be different from that of the public secondary schools.

iii. The study was focused on key performance indicators in curriculum and instruction and physical infrastructure priority areas. This was because many studies had shown that they are the main drivers of internal efficiency.

iv. Internal efficiency in this study was focused on retention and grade promotion rates. These indicators help in determining whether the degree of promotion from the admission time in Form One to graduation is high or not. Hence level of internal efficiency.

1.10 Assumptions of the Study

The empirical investigation was premised upon assumption that secondary schools were implementing strategic plans in line with the Ministry of Education Policy to promote internal efficiency, among other performance issues.

1.11 Theoretical Framework

The research adopted General Systems Theory by Ludwig Von Bertalanffy (1968). The theory expresses that all systems have normal components or parts which are input, yield,

throughput or process, feedback, control, environment and objective; and to be practical a system should be firmly objective coordinated, represented by input and can adjust to the evolving conditions. This hypothesis is worried about the overall properties and laws of systems and how systems work (Bertalanffy, 1968).

Bertalanffy developed the theory in 1936 when the requirement for a theory to direct study in a number of areas was realized by him since there were glaring equals among them. His hunch was that if different areas of study centered their examination and hypothesis advancement endeavors, they would have the option to distinguish laws and standards which would be pertinent to numerous systems. This would permit researchers and scientists to sort out qualities of systems like completeness, separation, order, equality, progression among others. With a typical system, researchers could more readily pass on their discoveries with one another and create on one another's work. His conviction was that what was found would come to be material to life overall (Gillies, 1982).

As per Gillies (1982), Bertalanffy inferred that the capacity of any system is to process or turn energy, data, or materials into an output or result for use inside the system, or outside the system or both. Also, if a system needs to endure, it should save a portion of the result or output to keep up with the system. In relation to this, therefore, Lunenburg and Ornstein (2012) argue that a system is closed if it cannot interact with the external environment as opposed to an open system that continuously interacts with and draws inputs from its external environment.

The theory fitted the current study which was focused upon the prediction strategic plan execution has on internal efficiency within Kisumu and Uasin Gishu counties, Kenya. First and foremost, the General Systems Theory views education institutions as systems that are open to interact with their environment and which must be structured in a way that they can deal with external environment. Ideally, educational institutions acquire four kinds of inputs from the external environment: human, physical, financial and information resource (Lunenburg & Ornstein, 2012).

In strategic plan, these resources are identified as staff/ personnel, students, curriculum and instruction, physical infrastructure, and finance. According Lunenburg and Ornstein (2012), human resources are identified as school managers, BoM, principals, teachers, students and support staff while financial resources are the capital used by the education institutions to finance both ongoing and long-term operations. Physical resources are materials, supplies, equipment and facilities. Information resources include curricula, knowledge, data and other kinds of information used by the education institutions.

Second, the General Systems Theory considers the role of an education institution administrator as organizing these inputs to achieve education objectives, including the transformation of the students into educated and well trained graduates who thereafter benefit the external environment (Shaw, 2006). In the process of planning and implementation strategically, manager of the institution (the principal) takes the initiative of vision casting for the school then imbues all the stakeholders to own it. He, thereafter, guides the process of SWOT analysis of the institution along the five key priority areas- staff/ personnel, students, curriculum and instruction, physical infrastructure; and finance.

This is done to establish issues to be fixed within these key strategic areas during the implementation in order to enhance the objectives and vision of the school which include internal efficiency.

Third, the general systems theory views the feedback from environment to the education institutions as crucial to the success of transformation process which in the current study is teaching and learning process. For instance, unpleasant response may be of help in fixing anomalies in the transformation process or the input or both, which in turn will have influence on the education future outputs (Lunenburg, 2010). This is only possible if the school administration involves all the stakeholders in the strategic plan implementation process.

According to Lunenburg & Ornstein (2012), an education institution as an open system consists of four elements, namely: inputs, a transformation process, outputs and feedback from the environment as indicated on Figure 1.2.

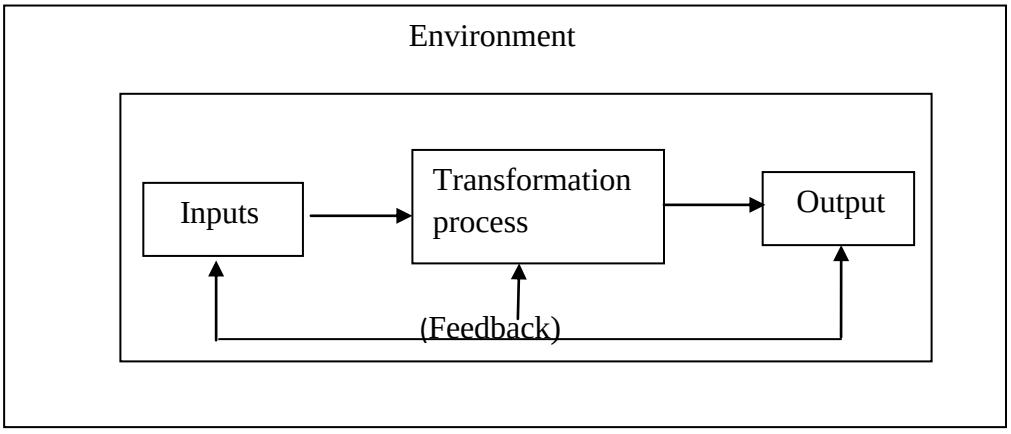

Figure 1.2: Internal model for education institution and its environment

Source: Adapted from Lunenburg (2010)

Lunenburg and Ornstein (2012) aver that inputs are drawn from the environment. Inputs according to (Shaw, 2006) including human, financial, physical and information resources are then transformed through the transformation process to generate outputs such as adequately trained graduates to contribute to the external environment. This can only be possible if the institutions control drop outs and the repetition of students to enhance internal efficiency. The external environment continuously avails feedback to the school system about success and inadequacies in the output, transformation process and inputs (Lunenburg, 2010).

In adopting the general systems theory in this current study, establishing the effect of strategic plan implementation on internal efficiency in public Secondary Schools in Kisumu and Uasin Gishu counties, requires schools to involve the stakeholders, teachers, students, BoM members, suppliers, NGOs and all the friends of the school to internalize the school vision and mission statements. Then, through the SWOT analysis identify the key concepts within each key priority areas, namely: curriculum and instruction and physical infrastructure, to be fixed during the implementation of the plan. During SWOT analysis the institutions will be able to get valuable feedback from both the internal and external environments necessary for implementing the strategic plans thereby having effect on internal efficiency in terms of retention and grade promotion rates.

1.12 Conceptual Framework

A conceptual framework is diagrammatic representation of the relation between Independent Variables and Dependent Variables. In this study, Strategic Plan implementation (i.e. awareness of vision and mission statements by stakeholders,

achieved Key Performance Indicators in curriculum and instruction; and physical infrastructure) led to improved internal efficiency (i.e. in terms of retention and grade promotion rates). For this to happen, the independent variables must interact as inputs through teaching and learning process with strict adherence to government and school policies in order to enhance internal efficiency indicators as outputs.

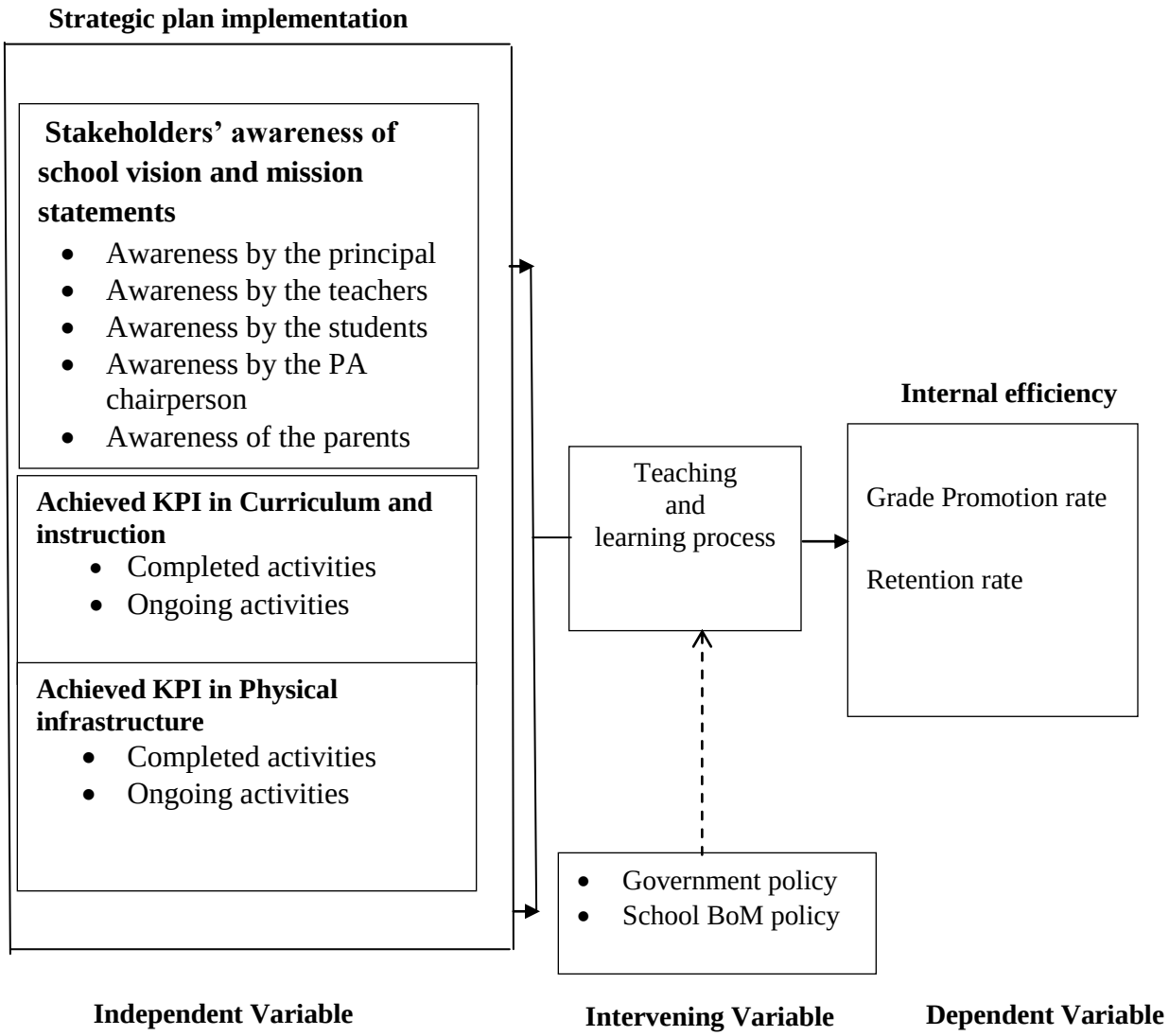

Figure 1.3: Conceptual representation of the effects of strategic plan implementation on internal efficiency in public secondary schools

Source: Modified by the researcher (2020)

Aforesaid is in tandem with the General Systems Theory which apparently addresses the five areas of concern in this study about strategic plan implementation. Based on this theory, the dwindling and dilapidated educational resources can be expanded / improved

through strategic plan implementation to provide education which is highly instrumental and even necessary to enhance the production of a population.

The conceptual framework in figure 1.3 shows how strategic plan implementation through: stakeholders' awareness of vision and mission statements; the achieved Key Performance Indicators within Key Priority Areas in the plan (curriculum and instruction; and physical infrastructure) helped improve teaching and learning process leading to enhanced internal efficiency in terms of retention and grade promotion rates. The intervening variables such as Government and school policies and any other variables which affected the dependent variable but were not included in the model for the study were controlled by the error term during the data analysis.

The conceptual model considers learning institutions as open systems in which a variety of inputs from both internal and external environments are combined over a period of number of years through strategic plan implementation in order to produce more educational outputs in terms of enhanced internal efficiency. The relevance of the systems theory in this study, anchors on the understanding that an effective strategic plan implementation process will make learning institutions more open to both external and internal environments for efficient resource utilization.

1.13 Operational Definitions of Key Terms

Cohort: Students who joined Form 1 the same year in the same school and progressed through the grades up to graduation at the same time.

Completion: Refers to going through the four-year cycle of secondary education and sitting for final examination.

Dropouts: Refer to students who leave secondary school education before completion of four year course.

Graduation Rate: Refers to the proportion of students from a cohort who exit at the end of the secondary education cycle after sitting for KSCE.

Internal Efficiency: Analysis of the extent to which students who enter Form 1 progress through the system, without repetition and dropping out.

Key performance Indicators: Completed or ongoing activities in priority areas.

Priority Area: The institutional component with concepts to be fixed during the implementation period.

Promotion Rate: Proportion of students from a cohort enrolled in a given **grade** at a given school year who study in the next grade in the following school year.

Repetition Rate: Refers to act of students being enrolled in the same grade in the current school year as in the previous school year.

Retention Rate: Refers to the proportion of students who remain and progress in school until they complete their secondary school life cycle.

Stakeholders: Refers to the teachers, support staff, students, parents, BoM members and any interested parties in the wellbeing of the school.

Strategic plan implementation: Refers to actual and practical operationalizing of the strategies formulated to achieve the institutional mission and strategic objectives in order to realize the vision.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this section, a review of literature related to the study was displayed. The literature was reviewed according to objectives on specific issues related to the study in terms of independent variable and dependent variable, that is: strategic plan implementation and internal efficiency of secondary schools respectively. The section was then concluded by giving summary of the knowledge gaps found in the literature reviewed.

2.2 Strategic Planning and Efficiency

Strategic planning being a modern management method is practised in organizations to improve their efficiency. Many investigations for confirming the prediction of strategic planning on organizations' efficiency regarding performance have been conducted. This is because organizations are open systems which require accountability in the way they are operated.

A research by Aldehayyat, Al-Khattab and Anchor (2011) was undertaken within hotels found in Jordanian two urban communities which were Aqaba and Petra Study done uncovered that Jordanian hotels involved in the strategic planning measure by utilizing various strategies. The utilization of devices and methods of planning done strategically and size of hotel were found to be more connected compared to the connection between the former and the age coupled with type of partnership. A positive connection was then inferred in relation to utilization of methods of planning strategically and the hotel size

The research additionally presumed that the hotels overseers possessed commonly uplifting perspectives regarding process of planning strategically. At the same time the administrators who put stock in the advantages of strategic planning were the individuals who involved more in its undertaking (Aldehayyat et al., 2011). The findings reflected what was happening in the business world but not in education. The current research responsibility was therefore establishing implementation aspects in strategic planning within government secondary schools.

Alaka, Tijani and Abass (2011) likewise directed an examination involving the advantage of planning strategically. This investigation was set for determination of effect planning strategically has on insurance agencies' productivity in Nigeria. The examination discovered positive effect. This is an issue of efficiency. Efficiency is an examination of raw materials and their connected yields through a process. Highly productive framework gets more yield at a given arrangement of asset inputs, or accomplishes tantamount degrees of yield for less data sources, taking everything into account. Concept of quality work originates from economics. It refers to the optimal relationship between inputs and outputs. The concern of the current study was to establish whether execution of key arrangements make government owned post primary learning institutions (secondary schools) internally efficient just as the approach does to business organisations.

Internal efficiency alludes to the interior activity of an association identifying with control of losses by prudent utilization of assets accessible to the association during a certain period. An internally efficient system/cycle of education produces successful leavers without squandering any understudy time or not having students leaving school

prematurely or repeating a grade. Padmangham (2001) concurs that quality work is about the progression of learners to the successful completion of the cycle promptly. This presents connection of resources with yield at whatever instructive level. There is need to establish the retention and grade promotion rates of students. Gupta (2001) concluded that, ultimately, internal efficiency is associated with resources prioritization and usage matters.. Free secondary schooling is expected to increase the transition rate due to the caution of the students from payment of fees for tuition in non-boarding government post primary schools from 2008 (Republic of Kenya, 2005). Similarly, the Education Sector Support Program Kenya (KESSP) recognize the possibility of access expansion to post primary schooling with minimal payment of fees (MoEST, 2007), but MoEST (2015) notes that high fees and additional taxes make post primary schooling too expensive. This has counter- productive effect of high dropout rate, which goes against the purpose of FDSE, so it is necessary to adopt a control method to improve internal efficiency by increasing retention rate and grade promotion rate.

The foregoing shows inefficiency. According to republic of South Africa (2013), an inefficient education system is one in which the achievement of more schooling outcomes is realized without extra deployment of inputs. The truth is that in the whole world, all educational systems operate inefficiently to some extent. The organizational performance therefore needs to be improved and this is probably through strategic plan implementation whose effects in enhancing efficiency were established by the current study.

Strategic management literature gives evidence about efficacy of planning with strategies to improve undertakings of organizations (Mcilquham-Schmidt, 2010). Study by Mcilquham-Schmidt (2010) set to critically review the prior investigations about how corporate performance and strategic planning relate established that there are three categories of conclusions with respect to strategy- performance relationship.

The study examined a number of studies which confirmed the findings of other earlier researchers that strategic planning and corporate performance have positive relationship with directional casualty from strategic planning to performance. On the other hand are the proponents of the argument that planners perform worse on some measures than non-planners, the implication being a negative relationship.

A third group according to the study holds that there is no quantifiable benefit, implying the relationship is inconclusive. The literature observed that in spite of the differing views; management literature favors a positive relationship. He as well established an affirmative answer to the hypothesized strategic planning and corporate performance relationship categorically stating a non-negative prediction on corporate successful engagement by planning strategically.

In view of the discoveries, the research presumed that the assurance of whether there is a connection between strategic planning and corporate performance will in this way rely upon the presentation measure chosen. The examination suggests that future scientists be more explicit in regards to the exact substance of the idea of key arranging they are utilizing, the measurements to be stressed, and the performance measure (Mcilquham-

Schmidt, 2010). This is a general piece of advice to researchers in both business organisations and educational fields and it is in tandem with Khan and Khalique (2014) conclusion that investigations about this approach appear too general. Therefore needs to be specific on components of strategic planning and dimension of performance.

The current study identified strategic plan implementation dimension of strategic planning and internal efficiency as a dimension of performance in education; and sought to fill the gap of inconclusiveness by establishing the prediction on internal efficiency of post primary schools by strategic planning.

2.3 Awareness of Vision and Mission Statements and Internal Efficiency

Strategic plan has been confirmed to be a vital tool which an institution can use to achieve targeted desires in a minimum duration as guided by the data obtained from within and without school environments. It remains a vital instrument for enhanced efficiency in undertakin activities of education (Chukwumah & Ezeugbor, 2015). Khan et al., (2014) argue that Strategic Planning specifies the organisation's vision, mission, core values and short goals, thereafter prioritizes resources for their achievement. The vision and mission are among the school fundamental statements. These statements explicitly define the institution's destiny. Therefore, every stakeholder should be aware of them. This will enable them to have the same focus in their action hence utilization of the resources; it was not clear whether the key stakeholders were aware of these statements.

According to Sang, Kindiki, Sang, Rotich and Kipruto (2015), clarity of school vision and mission statements; communication of the same to stakeholders; and ownership of

the whole process by both the implementers and managers of the institutions, are strategic direction. The literature concludes that these factors lead to effective implementation of strategic plans. The reason is that strategic direction motivates stakeholders making them display their awareness of the statements in the process of strategic plan implementation. However, the literature fails to highlight whether the awareness of the stakeholders has effect on grade promotion and retention rates hence internal efficiency. The current study established the effect of awareness of the stakeholders of school vision and mission statements on grade promotion in public secondary schools.

Another related research by Chemei, Leboo and Koech (2014) on the elements that obstruct the execution of the essential plans in auxiliary schools in Baringo area, Kenya, pointed toward building up the impact of schools tradition related to organization on fruitful execution of the essential plans. The investigation discovered that hierarchical social factors, for example, muddled school dreams to implementers, indistinct mission to implementers, and absence of proprietorship by both executors and the board constrain schools' strategy implementation success. The investigation, however, did not find out the impact of familiarity with clear mission and vision statements on grade promotion as well as retention rates which the current examination did.

Finally, Itegi (2016), pointed out that successful learning institutions analyze the school missions and dreams and status. They then set new goals, decide on activities to realize them. Thereafter assess the extent of achievement. These ends the cycle in a serious environment. In this case, this type of school has the upper hand in relation to its equals. It ends up with a very high count of learners demanding to be enrolled. Ultimately, the

more focused and higher achievers get admission. These learners, finally obtain top notch scores as they come the completion of their four year secondary education. Empirically, however, there was no clarity that all the students who were admitted graduated in time with no repetition of academic year or leaving school prematurely. The current survey attempted to determine the impact of partners' familiarity with the school dream and purpose declarations on retention as well as grade promotion rates (internal efficiency) of government owned post primary learning institutions in Kisumu and Uasin Gishu counties.

2.4 Achieved Key Performance Indicators in Curriculum and Instruction and Internal Efficiency

Internal efficiency in this study is considered to involve students' promotion and retention as opposed to repetition and dropout. Students' promotion is the progression of students to the next grade during the start of the period for the grade (academic year). Students' promotion enhances flow of students within the education cycle and it is an issue of school- based factors. A research by Otieno (2015) set to research factors within school influencing advancement degree within government owned post pre-secondary learning institutions within Suba Sub-County, Kenya, uncovered that understudy/instructor proportion had more effect on learners' grade progression. This is pair with Adepoju and Oluchukwu (2011) announcing that a number of government states within Nigeria are through with endeavors in ensuring an approach of not having in excess of thirty learners for every stream within government owned post primary learning institutions aiming at having learners improve academically. This means that the teacher/

student ratio is maximized for effective curriculum delivery. The other factors which the literature identify as school-based factors which discourage good performance hence low progression are unsupervised work, lack of follow up and quality reference books being unavailable among other factors. These factors require a paradigm shift to be resolved through achievement of Key Performance Indicators.

Achievement of Key Performance Indicators requires well thought out strategies. A strategy focuses on the future. Chemei et al., (014) assert that strategy is a focused work to create central choices and activities that mold with guidance the institution's culture, purpose and mode of operation putting what is on view. This being purpose oriented plan. According to Kaufman (2000), it is a means of achieving mission and the results outlined in goals. It is a means to an end, a way to get results. Strategies are the way roles are played. In this regard, strategies of implementation of strategic plan on key concepts refer to the way roles are played to ensure these concepts are turned into results in form of Key Performance Indicators. This is in tandem with Gupta (2015) that in order to reach the envisioned state, an organization translates strategy into action through strategic objectives whose degree of achievement is evidenced by KPI. What was not known were the achieved KPIs under Curriculum and Instruction which the current study established.

A study by Macgowen (2007) explored the impact of school teaching and learning resources on learners' performance, time for learning, behavior, graduation degree as well as instructor turnout degree at sampled post primary school in Texas. When the school resources condition for the sampled schools was determined by the Total Learning Environment Assessment (TLEA) Information given by the principals or their

representation in high school campuses in Texas with high enrolment and economically disadvantaged enrolments less than 40%, the study found out that students achievement, attendance as well as completion rate measures had no statistically valuable connection with school facility conditions. This is contrary to Souck and Nji (2017) finding that school facilities affect internal efficiency. The gaps found here is inconsistency, that the information was got from only one source and the items are mixed up and not specific in relation to whether they are under curriculum and instruction or physical infrastructure. The current study diversified sources of information as well as methods of collecting them and investigated the effect of achieved key performance indicators specifically under curriculum and instruction to resolve the conflict.

The finding of Macgwen (2007) is exact opposite of the findings of the study by Charles (2009) undertaken on quality of work assessments aimed at enhancing entry as well degree of finishing within post primary government owned institutions in District of South Bungoma. The study established schools did not have adequate provision of teaching and learning resources which was a great hindrance in attainment of qualitative objective of education. These two empirical findings were divergent and could only be resolved through mixed method research. The current study found the achieved Key Performance Indicators in curriculum and instruction and what the effect was on promotion rate in public secondary schools in Kisumu and Uasin Gishu counties.

Strategic planning as an administration instrument had acclamation universally being a promising tool for enhancement of achievement for not only parastatals but also state sectors (IIEP, 2010). It determines an organization’s success or failure. Chukwumah et

al., (2015) and IIEP (2010) concur that this makes strategic planning vital to any organizational work performance. Other literature likewise agree that organization done strategically gives preferred execution of importance over impromptu, sharp versatile methodology (IIEP, 2010; Republic of South Africa, 2013). It presents an integrated model for other forms of planning. This requires matching organizational actions with the surrounding factors as well as the capacity of institutions' input in order to realize the purpose of the organization (Khan et al., 2014). The gap was how the schools implemented their strategies which the current study established.

The literature affirms that key arrangement became useful within advanced nations resulting to enhanced institutional performance. IIEP (2010), similarly sets that strategic plan execution within learning institutions of advanced nations has led to enhanced performance hence internal efficiency. The literature stresses that in USA, planning approach involves a four- step proceeding to come up with an institution wide programme. These are carrying out a procedure, formulating institutional action plan thereafter assessing what has been achieved. Such process enables the schools to identify their key priority areas with specific components/ concepts to be fixed to realize the strategic goals. This is in tandem with Khan et al., (2014) confirming that planning is a process of preparing ways to use resources more economically and efficiently in order to achieve the purpose of the company, which in this case, the purpose of the school.

In developing countries, school development plan entails assessing their present status of the institutional advancement arrangement. It also involves availing data concerning the status. This enables schools to identify their strategic issues. According to Kaufman and

Herman (2018), a strategic issue is one that must be resolved or fixed if an institution has to achieve its mission. An issue is strategic if it stands between the members of the school and achieving the school mission. The mission defines the kinds of things the school (institution) will do – the role to be played by the stakeholders as defined by the service they provide and for whom (Kaufman et al., 2018). In a school setup, the following are the strategic issues or priority areas: staff/ personnel; students; curriculum and instruction; physical infrastructure and finance.

According to the literature, during school scanning through SWOT analysis, the key concept/ component under each strategic issue is identified. The literature emphasizes that it is tempting for any institution to focus first on strategies and activities that are believed will get better results before deciding which results should be changed and why. The results to be changed are what are referred to as key concepts or components under strategic issue which must be fixed in order to achieve the desired goal given by Key Performance Indicators. A number of studies have identified what could be grouped as key concepts under each strategic issue as the problems responsible for low internal efficiency.

In Nigeria, for instance, secondary schools are characterized by problems, responsible for low internal efficiency such as facilities in sorry state, constrained human resource, lacking motivation teaching staff, unavailability of key resources, insufficient funding, improper mission interpretation, inappropriate curricula, students' unrest among others (Chukwumah et al., 2015). Low internal efficiency is in form of wastage displayed by the repetition and drop out of students. The problems mentioned touch on various priority

areas but the current study sought to establish the effect achieved key performance indicators addressing problems specifically in curriculum and instruction on retention rate. This is additionally clarified by a research by Sang, Koros and Bosire (2013) directed on dropout levels of public secondary schools in Kericho District corresponding to the chosen qualities.

The main objective of the research was to decide the dropout level in public secondary schools in Kericho locale by the school qualities for the years 2004-2007. The research set up that school attributes added to contrasts in dropout rates in schools and that dropout rates diminished with expanding levels of tutoring. It additionally settled that the overall mean dropout rate in classes was higher in day schools contrasted with all-inclusive schools besides in structure two. The mean dropout rate was higher in structure two classes for both single sex and mixed schools however mixed schools commonly recorded a higher mean dropout rate. The study recorded a number of learning institutions in the study locale lacked mechanism of handling pre-mature leaving school by students in their second year of secondary education. Unfortunately this level had the highest dropout rate.

Reeves (2007) in Wanjala and Rarieya (2014) underlines that, the reason for planning strategically is making an institution have an edge over the others. This would make schools more attractive to stay in than dropout to the external environment. Contrarily, some researchers maintain a stand that some institutional plans are not comprehensive since they focus on material resources for the school such as buses and buildings, ignoring teaching and learning (Reeves 2008; Rumelt, 2011). Such schools lay great

emphasis on the results of paper and pencil tests, thereby ignoring the goal of developing an all-round student (Wanjala & Rarieya, 2014). In addition, some strategic plans display ineffective programmes to establish, monitor and evaluate growth in teacher performance and professional development, when actually this area is crucial in improving classroom practice and teaching methodology, which finally improves student achievement (Baloglu, Karadag & Karaman 2008; Wanjala & Rarieya, 2014). The current study therefore sought to establish achieved key performance indicators aimed at developing an all-round student in curriculum and instruction and their effect on retention rates.

2.5 Achieved Key Performance Indicators in Physical Infrastructure and Internal Efficiency

Studies by a number of authors concur that condition of school physical infrastructure affects the repetition and dropout rate in public secondary schools (Sang et al., 2013; Chukwumah et al., 2015; Souck et al., 2017). For instance, the study by Sang, et al., (2013) made a number of conclusions, the second one being that repetition and dropout are higher in schools with inadequate or dilapidated infrastructure and recommends state of the art infrastructure to lower the dropout rates. State of the art is only possible with the execution of strategic plan. Therefore, this current study aimed at assessing the prediction of achieved key performance indicators in physical infrastructure on grade promotion rate in public secondary schools.

As indicated by Itegi (2016), planning should zero in on curriculum delivery process, students' services like direction and advising, adequate facilities such as research centers, power, water and sterile offices. These services create favourable school ethos for

acquisition of knowledge and skills. They also provide support to the teacher. This is in tandem with Souck and Nji (2017) conclusion that the good state of school facilities will motivate and make teachers and learners committed to undertake their respective roles, eventually optimizing educational internal efficiency. These findings cut across array of priority areas and not specifically focusing on physical infrastructure. This present investigation therefore aimed at assessing prediction of achieved key performance indicators under physical infrastructure on grade promotion rate.

From the review it is clear that for there to be improved students promotion, key performance indicators must be achieved in physical infrastructure showing that the plans are comprehensive. The current study sought to establish the achieved key performance indicators in relation to the discussed key concepts in physical infrastructure which characterize most of the schools and their effect on grade promotion within government owned post primary learning institutions of Kisumu and Uasin Gishu counties. This would enhance internal efficiency in the two counties.

Nte (2007) contend that planning strategically involves proper matching of an organization's actions with demands of its surrounding. The literature emphasizes that strategic planning centers around the organization's vision, purpose, short-term goals, strong and weak areas, advantages and disadvantages presented by the external environment. Ideally, the approach targets guaranteeing inner proficiency of an organization. Gupta (2001) concludes that, inner proficiency is finally related to matters prioritization and usage of facilities. This implies that strategic plan implementation and

internal efficiency are related when it comes to the success of an institution in achievement of the goals.

A research by Nyagah (2015) on difficulties involved in coming up with key arrangements within Kenyan post primary schools, especially, in Mombasa County as well as the surrounding. The investigation targeted analysis of determinants of the said planning approach in the study locale. A number of factors were considered such as administration, empowerment, resource allotment as well as framework of education plan of action to be major issues. The study concluded that the factors mentioned majorly determine coming up with such plans within learning institutions. On that basis, capacity building for administrators and partners of learning institutions, sufficient funding for infrastructure development were among the recommendations made. To this end, however, worth noting is the dwindling of resources hence it is prudent to focus more on the most influential Key Priority Area. The current study focused on physical infrastructure.

A study by Abdulkhareem, Akinub and Oyenivan (2014) investigated connection plan strategically done has on quality work within the universities of Nigeria. The finding indicated positive relationship. The study used graduation and dropout rates of students as indicators of internal efficiency. What was not known was whether similar result would be obtained within public secondary schools environment and with retention rates as indicators of internal efficiency.

The purpose of the investigation was to determine the prediction of execution of strategic plan on how activities are carried out in public Universities of Universities of Kenya. The case of University of Nairobi. An objective aimed at determining the prediction of prioritized financing has on the way activities are undertaken in the study locale. It was ascertained that there was judicious usage of both physical facilities and prioritized finances. The conclusion of investigation was a relationship which was significantly positive, however, it does not talk about the achieved key performance indicators in physical infrastructure and their effect on retention as an aspect of internal efficiency. At the same time, the study focused on University. The current study sought to establish the achieved key performance indicators in physical infrastructure and their effect on retention rate in public secondary schools.

In relation to physical infrastructure, a study by Souck and Nji (2017) was set to establish prediction institutional physical resources has on quality work in sampled Bilingual Post-Primary schools within Centre of Yaunde. The study concluded that state of art physical infrastructure will lead to motivation and commitment of both the instructors and students. This will intern enhance internal efficiency. However, the study did not go ahead to mention which indicator of internal efficiency. The investigation at hand sought the filling of this void through empirical evidence of prediction made by achieved key performance indicators in physical infrastructure on retention rates.

Repetition is illegal in Kenya, however, a finding by MoEST, (2014) reveals that in 2014 in public secondary schools alone, there were a total of 34,377 i.e. 22,214 boys and 12,163 girls who repeated classes from F1 to F4 nationally while a total of 688 (456 boys

and 232 girls) and 575 (356 boys and 219 girls) repeated classes from F1 to F4 in both Kisumu and Uasin Gishu counties. The current study therefore gathered data on enrolment and repetition rates from four consecutive cohorts from 2013 when the principals of secondary schools graduated with KEMI diploma in education. In this training, they were all taken through the process of strategic planning and they were expected to apply the knowledge of preparing and implementing strategic plans. This would ensure improved school resources hence reduced repetition and dropout of students leading to enhanced internal efficiency.

2.6 Summary of the Gaps

The literature reviewed revealed the following gaps: One, linkage of the planning approach under study and efficiency in learning institutions has not been established. Myriad investigations conducted previously had their attention on strategic planning and performance in business context. These studies have reported controversies in the relationship. A number of scholars and authors contend that the inconsistencies have been due to the fact that studies on strategic planning are too general. Hence it is of necessity to be specific on areas of the approach and dimension of performance. There was also a dearth of information about effects of strategic plan implementation on internal efficiency. Two, the literature reviewed revealed that school vision and mission statements lead to effective implementation of strategic plan but the effect of awareness of these statements on grade promotion and retention rates in post primary learning institutions within the study locale was unknown.

Three, the achieved Key Performance Indicators in curriculum and instruction were not known as they were unique according to school needs. Their effect on grade promotion and retention rates within post primary learning institutions in the study locale were also yet to be established. Four, the achieved key performance indicators under physical infrastructure and their effect on grade promotion and retention rates in post primary institutions within study locale was an issue of concern and had to be investigated.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

The chapter entails the methodology utilized for the investigation. It focused on the research design, the study variables, study locale, the population targeted, sampling techniques and sample size, research tools, piloting, determination of quantitative and qualitative validity and reliability; and techniques for information gathering and examination.

3.2 Research Design

The research used a convergent parallel hybrid method design, which is one of the six hybrid method variants of the research design (Cresswell, 2014). According to Cresswell (2014), hybrid method investigation is a research method that combines qualitative and quantitative forms, and convergent parallel design is a subtype of hybrid method. Ivankova and Stick (2007) clarified that convergent parallel design uses concurrent time to conduct quantitative and qualitative threads in mixed method investigations at the same stage of the process, prioritize methods equally and maintain threads independently during analysis. It mixes the results (triangulation) for supportive or non- supportive findings (Creswell, 2014) by merging the two data bases in side-by-side comparison during overall interpretation as depicted in figure 3.1.

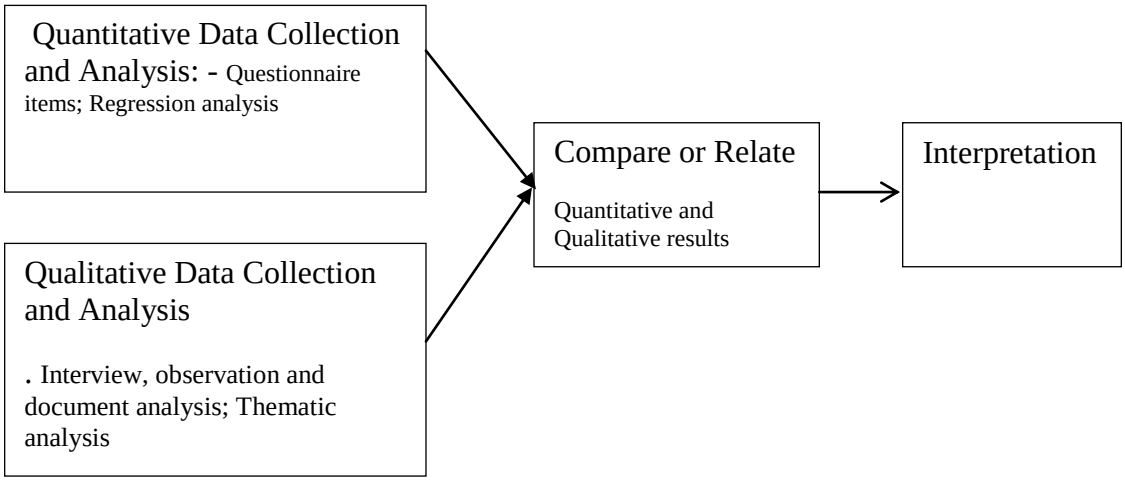

Figure 3.1: The convergent parallel design model

Source: (Creswell, 2014)

Figure 3.1 illustrates that convergent parallel mixed methods design generates both quantitative and qualitative data to avail deeper insight about the issue under investigation than when only one type is used (Cresswell, 2014). Quantitative data, such as responses related to effects of strategic plan implementation to generate specific counts to assess the efficacy were collected and analyzed in one strand while qualitative data through use of one- on - one interviews in form of actual words from respondents, and observation checklist information were gathered and analyzed in the second strand but in the same phase or concurrently (Cresswell, 2014). The findings were then merged to be compared or related to establish the extent to which they converge or diverge for clarity of interpretation and explanation (Best & Khan, 2010).

According to Cresswell (2012), the design is recommended for educational policies and researches which need to compare different perception drawn from quantitative and

qualitative data. This design fitted the present investigation due to inconsistent findings of previous investigations on the influence of the planning approach under study and organizational successful activities which had been too general and not specific on the aspect of performance; and which used only one method. Perhaps this could be due to the descriptive survey research design the studies used which could not triangulate results for validity as one method alone is not sufficient to solve such discrepancies (Cresswell, 2014). To capture the status and details of complex concepts such as strategic plan implementation and its effect on retention and grade promotion rates within post primary learning institutions in the study locale, requires mixed methods. In fact, the quantifiable information gave a general practice of the research problem, while the qualitative data and their analysis validated those statistical tests by considering the participants' information based on their views and experience regarding the effect of strategic plan implementation on grade promotion and retention rates in post primary learning institutions in the study locale.

3.3 Variables

There are two major types of variables: the independent and dependent variables (Kombo & Trop, 2013). In this study, the independent variable was strategic plan implementation indicated by awareness of vision and mission statements; the achieved Key Performance Indicators in curriculum and instruction; achieved Key Performance Indicators in physical infrastructure. On the other hand, dependent variable was internal efficiency whose indicators/ measures in this study were grade promotion and retention rates.

3.4 The Locale of the Study

The investigation was undertaken within public secondary institutions in Kisumu and Uasin Gishu counties, Kenya. Kisumu and Uasin Gishu counties were chosen because they were still marked by inconsistent worrying rates of the indicators of internal efficiency, yet all the institutions of education and training had been mandated by MoEST (2005) to prepare and implement strategic plans to enhance results-based management and quality work in activities they undertake. And key concerns regarding this, are getting into, remaining, equality and quality of work in the education framework (Republic of Kenya, 2006).

Kisumu County borders Vihiga County to the North, Nandi County to the North East, Siaya County to the West, Homa-Bay County to the Southwest and Kericho County to the East (Republic of Kenya, 2013a). Uasin Gishu County is in the mid-west of Rift Valley of Kenya, covering an area of 3345.2 sq. Km. The County is bordered by Kericho County to the South, Nandi County to the South West, Bungoma County to the West and Trans Nzoia County to the North. It is also bordered to the east by Elgeyo Marakwet and Baringo to South East (Republic of Kenya, 2013b). The county is cosmopolitan. It largely involves in farming activities among others. These are features which helped to facilitate the implementation of strategic plan in terms of resources.

The other reason for selecting the counties is that there was also a dearth of literature on studies based on the influence strategic plan execution has on internal efficiency within both counties. Most of the studies which had been done majorly focused on impediments

implantation of Strategic Plans within government learning institutions but cases of other counties (Koech et al., 2014; Kiprop & Kanyiri, 2012).

3.5 Target Population

The target population included principals, teachers, PA chairpersons from 221 public secondary schools in Kisumu and 150 in Uasin Gishu counties as sampling units (MoEST, 2014). The schools were categorized by type per sub-county as shown in Table 3.1.

Table 3.1: The number of schools as per category in Kisumu and Nandi counties

County/Sub county	School Category									Total
	Boys			Girls			Mixed		Total	
	Day	D&B	Board	Day	D&B	Board	Day	D&B	Board	
KISUMU										
Kisumu West	2		2		3	3	25			35
Kisumu East							25			25
Kisumu Central							6			6
Seme		1	1	2	1	1	28			34
Nyando	1		3			6	30			40
Muhoroni			3	1	1	4	27			36
Nyakach			2			5	38			45
Sub Total	**3**	**1**	**11**	**3**	**5**	**19**	**179**			**221**
UASIN GISHU										
Soy			2			2	28	2		34
Turbo			1			2	15	4		22
Moiben			1			2	13	7	3	26
Ainabkoi		1	4			3	8	4		20
Kapsaret							13	1	2	16
Kesses						2	19	10	1	32
Sub total	**0**	**1**	**8**	**0**	**0**	**11**	**96**	**28**	**6**	**150**
GRAND TOTAL	**3**	**2**	**19**	**3**	**5**	**30**	**275**	**28**	**6**	**371**

Source: MoEST 2014 and Ministry of Education 2018

The study targeted the principals who are the school managers and were expected to be experienced and knowledgeable on strategic plan implementation. The class teachers were also targeted since they were considered to have knowledge on issues that could affect students in terms of retention and grade promotion. Finally, the study targeted PA chairperson who represented the parents' interest in the BoM and was expected to ensure that strategic plan was implemented in a way that ensured internal efficiency. This was justified by Borg & Gall (1989) that target population refers to all the members of real set of people, events or objects which researcher wishes to generalize the results of the research study.

The target population consisted of all the 371 principals (221 from Kisumu and 150 from Uasin Gishu counties); and 1484 class teachers (884 and 600 from Kisumu and Uasin Gishu counties respectively). All the 371 PA chairpersons (221 and 150 from Kisumu and Uasin Gishu counties respectively) also helped in getting insight of what they experienced in the process of school strategic plan implementation. Principals, teachers together with PA chairperson represent a major category of respondents who are important in mixed-method studies, namely; consumers or users of information (Luck & Reuben, 2007; Cresswell, 2009). The population, therefore, consisted of principals, PA chairpersons and teachers with as illustrated in Table 3.2.

Table 3.2: Target population per county

Category\ County:	Kisumu	Uasin Gishu	Total
Principals	221	150	371
Pa chairpersons	221	150	371
Teachers	884	600	1484
Grand Total	**1326**	**900**	**2226**

3.6 Sampling Design

From members of the targeted respondents, proportionate and purposive sampling was used to identify respondents with schools as units. The respondents to provide quantitative data were more than respondents for qualitative data since the aim of information gathering for qualitative data is to collect data from selected few yet to assemble broad data from the sample, while in quantitative exploration, a bigger sample is required to direct significant measurable tests (Creswell, 2014). For this reason and the fact that there was need to make a comparison between the two databases, the selection of respondents for quality information was subset of the bigger selection for numerical information. This helped to minimize potential validity threats when merging the two strands of data in side-by- side comparison (Creswell, 2014). Using Slovin's formula given by:

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

(Where n=sample population, e=0.05 and N=Target population), the larger quantitative sample size for principals, teachers and PA chairpersons was calculated first. This gave 339 respondents from these categories (Yamane, 1967), however by the help of Kothari's

proportional allocation formula given by: ni= n.pi. (Where ni= the sample size for the stratum, n= the sample size for the target population, (.) = multiplication and pi= the proportion of the stratum) (Kothari, 2004), to determine the number of principals so as to know the number of schools as sampling units, the number of respondents increased to 342. The proportional allocation formula gave the number of principals to be 56.5 rounded off to be 57 hence the number of schools as sampling units was 57. This meant that from 57 schools as sampling units, we had 57 principals, 57 PA chairpersons and 228 (57x4) teachers totaling to 342 respondents.

Stratified random sampling was used to select the schools as sampling units. First, learning institutions were categorized into three groups on the basis of gender per Sub-county and county. This was because the category of schools such as Boys Day & Boarding and Girls Day & Boarding were very few and were only found in Kisumu County; and for consistency of data collection across the two counties, the researcher used only the three discussed strata. Thereafter, simple random sampling helped to obtain schools for investigation from each stratum. Kothari's proportional allocation formula was again used to aid getting the exact number per stratum per sub-county and county. The formula given by:

$n_i = n.p_{i.}$ (Where n_i= the sample size for the stratum, n= the sample size for the target population, (.)= multiplication and p_i= the proportion of the stratum) was then used to get representation of categories (Kothari, 2004).

This technique gave all the schools similar opportunity to be sampled (Kombo & Tromp, 2013; Orodho, 2017). Each school's name was written once in a small piece of paper and

then folded; the required sample was then randomly picked. The targeted respondents from the sample schools, who were the principals and PA chairpersons, were included, while teachers in charge of Forms 1 to 4 were randomly sampled. Therefore, the study sample size was 342 respondents consisting of 57 principals, 57 PA chairpersons and 228 teachers. The sampling of schools and sample size of respondents were as depicted in the tables 3.3 and 3.4 respectively.

Table 3.3: Target and sample schools categorized according to type, county and sub county

County/ Sub County	SCHOOL TYPE									TOTAL		
	BOYS			GIRLS			MIXED					
	N	n	%	N	n	%	N	N	%	N	n	%
KISUMU												
Kisumu West	4	1	25	6	1	16.7	25	3	12	35	5	14.3
Kisumu East							25	4	16	25	4	16
Kisumu Central							6	1	16.7	6	1	16.7
Seme	4	1	25	2	1	50	28	3	10.7	34	5	14.7
Nyando	4	1	25	6	1	16.7	30	4	13.3	40	6	15
Muhoroni	3	1	33	5	1	20	27	4	15	36	6	16.7
Nyakach	2			5	1	20	38	6	15.8	45	7	15.6
Sub- Total	17	4	23.5	24	5	20.8	179	25	11.7	221	34	13.6
UASIN GISHU												
Soy	2	1	20	2	1	14.3	12	3	13.7	34	5	11.1
Turbo	1		20	2	1	12.5	18	2	13.7	22	3	14
Moiben	1	1	25	2	1	12.5	22	3	13.8	26	4	14.6
Ainabkoi	5	1	33	3		20	12	2	6.3	20	3	12.5
Kapseret							16	3	6.7	16	3	15
Kesses				2	1	50	29	4	12.5	32	5	21.4
Sub-Total	9	3	33.3	11	4	16.7	96	17	12.2	150	23	15.3
GRAND TOTAL	**26**	**7**	**26.9**	**35**	**9**	**25.7**	**275**	**42**	**15.27**	**371**	**57**	**15.8**

Table 3.4: Target population, sample size and sampling procedure

Category of Respondents	Kisumu County			Uasin Gishu			Total			Sampling Procedure
	Population (N)	Sample (n)	%	Population (N)	Sample (n)	%	Population (N)	Sample **(n)**	%	
Principals	221	**34**	15.4	150	**23**	15.3	371	**57**	15.4	
PA Chairpersons	221	**34**	15.4	150	**23**	15.3	371	**57**	15.4	
Teachers	884	**136**	15.4	600	**92**	15.3	1484	**228**	15.4	Random
Total	**1326**	**204**	15.4	**900**	**138**	15.3	**2226**	**342**	15.4	

The sample for quantitative data comprised 342 respondents from the sampled 57 schools as the sampling units. This was 15.4% of the target population. Since the respondents of quality strand were part of the bigger quantity strand selection, the respondents for qualitative data were also to be obtained from 15.4% of the 57 schools as the sampling units. This was 8.778 rounded off to 9 schools. Therefore, 9 schools were selected through purposive as well as stratified techniques. Intentional selection had the basis of the fact that the school had been implementing strategic plan for longer than the others and stratification was based on whether it was boys, girls or mixed school and each strata giving equal number of schools. From the 9 schools, a sample size of 54 respondents was obtained consisting of 9 principals, 9 PA chairpersons and 36 teachers.

3.7 Research Instruments

Four types of instruments were used in the current investigation. One of them being questionnaires. The others were interview schedules, document analysis and observation guide. The tools utilized the same concepts as supported by Creswell (2014).

3.7.1 Questionnaires

Questionnaires were chosen due to several reasons. One, the adoption of convergent parallel mixed methods design needs collection of a large body of numerical information which can only be obtained through questionnaires (Orodho, 2017). Two, the study dealt with many respondents scattered across Kisumu and Uasin Gishu counties.

Use of questionnaires generated information using many participants at the same time (Kombo & Tromp, 2013). The other reason being the sample participants had education and were literate (Orodho, 2017). This literature adds that questionnaires constitute unique tools that can carry as many items as possible enabling the researcher to collect data in a wide range of aspects on study variables. Utilization of questionnaires offers impressive benefits in the organization. It likewise presents an even improvement conceivably to huge quantities of individuals all the while and furnishes the examination with a simple amassing of information.

Gay (1992) avers that, polls give respondents opportunity to state their perspectives or viewpoint and furthermore to give ideas. It is likewise unknown. Secrecy assists with delivering more real responses than is conceivable in an interview. The instrument was utilized to gather information from the principals, instructors as well as PA chairpersons

who participated in the quantitative strand of the research. Items in the questionnaire were structured (close ended) which measured the objective responses. The three categories of the questionnaire were as follows:

a) Principals Questionnaire

Principals' questionnaire had 5 sections. Section A gathered personal data. Section B solicited data on the familiarity with school mental image as well as purpose statements by stakeholders within government post primary institutions in the study locale. Section C gathered data on the achieved Key Performance Indicators in curriculum and instruction in within government post primary institutions in the study locale. Section D solicited data on the achieved key performance indicators under physical infrastructure in within government post primary institutions in the study locale. Section E gathered information on the effect of strategic plan implementation on internal efficiency together with data on enrolment, repetition, and KSCE performance from 2012 to 2018 within government post primary institutions in the study locale.

b) Teachers Questionnaire

The teachers' questionnaire had 5 sections. Section A gathered personal information. Section B solicited data on the familiarity with school mental image as well as purpose declarations by stakeholders within government post primary institutions in the study locale. Section C gathered data on the achieved Key Performance Indicators in curriculum and instruction within government post primary institutions in the study locale. Section D solicited data on the achieved key performance indicators under physical infrastructure within government post primary institutions in the study locale.

Section E gathered information on the effect of strategic plan implementation on internal efficiency within government post primary institutions in the study locale.

c) Parents Association Chairpersons Questionnaire

The Parents Association chairpersons' questionnaire had 5 sections. Section A gathered personal details. Section B solicited data on the familiarity with school mental image as well as purpose declarations by stakeholders within government post primary institutions in the study locale. Section C gathered data on the achieved Key Performance Indicators in curriculum and instruction within government post primary institutions in the study locale. Section D solicited data on the achieved key performance indicators under physical infrastructure within government post primary institutions in the study locale. Section E gathered information on the effect of strategic plan implementation on internal efficiency in public secondary schools in Kisumu and Uasin Gishu counties.

3.7.2 Interview Schedule

Kombo and Tromp (2013) maintain that semi- structured interviews have a high reliability and give in-depth information about particular cases of interest. The researcher used semi- structured interview because of their ability to give complete and detailed understanding of the issue.

Cresswell (2014), on his part also advises that in a convergent parallel mixed design the respondents should participate in both strands of data collection; and that the items in the strands should be similar. Therefore, 15.4% of the sampled principals, teachers and PA

chairpersons were equally subjected to an interview schedule with similar items as the ones which were in the questionnaires but open-ended for in-depth of the inquiry.

3.7.3 Observation Checklist

This is a tool which was used by the investigator to write and record data as he made observation in relation to strategic plan implementation and its effect on internal efficiency in the sampled government post primary schools in Kisumu and Uasin Gishu counties. Areas of concern observed were evidences of awareness of vision and mission statements by the principals, teachers, students and parents; achievement of Key Performance Indicators under curriculum and instruction; and physical infrastructure and their visible effects on grade promotion and retention rates hence internal efficiency.

3.7.4 Document Analysis

This instrument was used to analyze the records from the schools sampled. The records that were analyzed included attendance registers, enrolment records, graduation records, strategic plan and action plans. Mwiria and Wamahia (1995) present document examination to be the best strategy for surveying validity of data since it can't make, waiver or retain data. It was utilized to enhance, approve and find out the response in the questionnaires.

3.8 Piloting Study

Questionnaire items were administered to a sample of two schools in a neighbouring county to the study locale (Kisumu and Uasin Gishu counties). The two schools yielded sample of 12 respondents consisting of 2 principals, 2 PA chairpersons and 8 teachers.

The sample was similar to the actual sample to be used in the study as advised by Orodho (2017). The reason for piloting being identification of whatever ambiguities, the time frame for the management tools, and whether these tools are suspected of illegally obtaining the information they hope to collect from the investigation. This provides a reason to modify and improve the main project so as to obtain ideal findings. The steps followed during piloting and the actual investigation are the same. Complete the pilot and repeat after two weeks.

The feedback from pretest enabled the researcher to refine the instruments in order to minimize the possible inaccuracies which could come up at the time of real information gathering period (Orodho, 2017).

3.8.1 Validity and Reliability for Quantitative Instruments

(i) Validity for Quantitative Instruments

The researcher looked for help from the supervisors as specialists in research who helped in passing judgment on the ampleness and evaluated the validity of the instrument. This was because selected respondents were used and the meaningfulness, accuracy and utilization of the inferences checked. According to Creswell (2012), validity considers the tool's content to be appropriate, consistent and comprehensive. Therefore, the study utilized content validity as supported by Fraenkel and Wallen (2010). The literature insists content and format of the tool are suitably checked by that the content-related evidence of validity. The study, therefore, identified themes of variables found to be appropriate to the ideas of strategic plan implementation and internal efficiency, then shared with supervisors. The researcher, thereafter, used the supervisors and experts in

education's comments and suggestions to validate the principals, teachers and PA Chairpersons questionnaires.

(ii) Reliability for Quantitative Instrument

The questionnaires for principals, teachers and PA chairpersons on strategic plan execution and quality work were subjected to reliability test. Responses in a study need reliability check (Amin, 2005). Such a check is able to confirm the level of consistency of the research findings in a period as well as correctness in being representative of targeted respondents of the investigation (Tavakol & Dennick, 2011). This resonates with Orodho's (2012) meaning of that reliability of an instrument as the level of consistency in delivering comparable outcomes after a specific estimating strategy is utilized get-togethers number of preliminaries.

To establish the unwavering reliability of the instruments, proportions of inward consistency of test re-test were utilized. This is informed by Drost (2011) recommendation that being internally consistent is the best relevant type of reliability in handling numerical information, particularly with linear composite of variables. The quantitative instrument (questionnaire with closed ended questions) was administered to two randomly selected schools which were not part of the study sample. After fourteen days, similar surveys were administered again to similar respondents. The gathered information were entered into the computer and reliability of internal consistency processed utilizing the SPSS package. The tools were regarded dependable due to the value of coefficient got. It was 0.80 and this was higher than the acknowledged least

coefficient of 0.75 as suggested by Orodho (2009). The calculation was done through Pearson's Coefficient Correlation equation.

3.8.2 Validity and Reliability for Qualitative Data Instruments

(i) Validity for Qualitative Data Instruments

The researcher ensured validity of qualitative data instruments (interview schedule and observation checklist) the same way quantitative validity is determined. Creswell (2014) proposes the steps which were followed by the researcher: First, the investigator looked for expert guidance from the supervisors concerning the validity of the of the instruments items. Then based on pilot study results, the investigator tested correctness of results through utilization of the following procedure: triangulating different data sources of information, using a thick, rich description to convey findings and using a peer debriefing to enhance the accuracy of the account.

(ii) Reliability for Qualitative Data

Qualitative reliability, according to Cresswell (2014) indicates the investigator's method has consistency throughout the studies as well as various investigations. This was determined through the following procedures: (i) reviewing documents guided by appropriate steps which could be comprehended by readers; (ii) checking the interview guide for errors and mistakes to ensure credibility; (iii) involving another person to cross-check the codes for what is called intercoder agreement (or cross-checking; such an agreement was based on whether two or more coders agree on codes used for the same passages in the text; and (iv) constant consultation with experts including supervisors and experts in education to agree on the format and construct of the interview guide.

3.9 Data Collection Procedures

A research permission was obtained from the National Council for Science, Technology and Innovation (NACOSTI) after getting proposal acceptance letter from Graduate School, Kenyatta University. After which the County Commissioners and Directors of Education Kisumu and Uasin Gishu counties were consulted prior to commencement of investigation. Quantitative and qualitative data were collected using the same variables. In other words, the independent variables (strategic plan implementation variables) and dependent variables (internal efficiency variables) were measured both quantitatively and qualitatively by use of questionnaires with closed ended questions, and qualitatively during open-ended interview, by use of observation checklist and document analysis. The two data bases were collected concurrently in the same phase.

Concerning the respondents for information gathering procedure collection process, the sample size for the qualitative data gathering was a subset of the numerical information gathering (54 respondents- 15.4% of the respondents participating in quantitative strand). This is supported by Cresswell (2013) explaining that the information gathering aim for quality strand is to identify and get data from a smaller selection but to obtain detailed data from the selection.

On the other hand, in numerical data study, a bigger sample was required so as to carry out analysis of meaning. The sample, however, included the sample of qualitative participants. According to Cresswell (2014), this is because the researcher finally made comparison between the two strands of data bases and the more they were found similar, the better the comparison.

Based on the foregoing presentation, the principals, sampled teachers and PA chairpersons from sampled schools were visited per school and then issued with questionnaires to fill for quantitative strand data as the researcher went round making observations using observation checklist and document analysis to gather information for qualitative data. Thereafter, the principal, the PA chairperson and sampled teachers from the schools purposively sampled for interview were engaged in one-on-one open-ended interview by the researcher to gather information for qualitative strand data.

3.10 Data Analysis and Presentation

The investigation had two types of information: numerical and quality information. The two having been presented, interpreted and discussed according to the short aims of the study. Tables were used to present numerical information related to each objective. Interpretation of the same data was by multiple regression analysis. , both of which were presented, interpreted and discussed according to objectives of the study. For each objective, quantitative data were presented in tables and interpreted using multiple regression analysis. On the other hand, quality information were narratively presented. Thereafter, interpretation done thematically. Finally, the convergence between quantitative and qualitative data was determined and interpreted in the light of literature reviewed.

3.10.1 Quantitative Data Analysis

Using convergent parallel mixed method design, in the first strand, quantitative information were statistically tested with assistance of descriptive and inferential statistics. The former frequency and percentages while the latter regression statistical test.

These were used to statistically test closed-ended questionnaire information as suggested by Boone & Boone (2012) in handling the three study objectives. Information were specifically obtained from the close-ended questions in the questionnaires for teachers, PA chairpersons and principals. The obtained information were exposed to regression analysis as inferential statistics (Boone & Boone, 2012) particularly the simple linear regression and standard multiple regression analysis (Field, 2009).

The simple linear regression was applied to establish the rate of increase or decrease of the dependent variable (internal efficiency in terms of retention and grade promotion rates in the school) and the three composite independent variables (awareness of vision and mission statements, achieved Key Performance Indicators in curriculum and instruction and achieved key performance indicators in physical infrastructure) as proposed by Orodho et al., (2016). The statistical coefficient that was obtained by use of the simple Linear Regression was R- squared, the constant, the Beta value and the P-value. R-squared was the proportion of variance in the dependent variable (internal efficiency) as predicted by the independent variables (the three composite variables). The constant is simply the predicted value of the dependent variable (internal efficiency), if the independent variable is zero. The Beta value is the change in the dependent variable corresponding to one unit change in the independent variable, and the P- value, is the probability that the observed value of β is significant or not.

Field (2009) posits that a simple linear regression equation helps to compute the simple regression coefficients. This is given by:

$Y= \alpha +\beta x +\xi$

Where Y= the dependent variable (internal efficiency)

α = the predicted value of internal efficiency if the independent variable is zero

β=rate of increase or decrease of Y for each of change in the independent variable

x= the independent variable (strategic plan implementation)

ε = other factors that influence the dependent variable that are unobservable or are not part of the study. These may include intervening variables.

The Stepwise Multiple Regressions was also utilized for establishment of overall effects on manipulated variable caused by composite non-manipulated variable. All these three composite predictor variables were examined in relation to ability to predict (Field, 2009).

The Stepwise Multiple Regression was used to determine the R-square (R^2), which is the coefficient of determination of the amount of variability explained in dependent variable (internal efficiency) by the independent variable (strategic plan implementation). The Stepwise Multiple Regression equally found out regression weight (Beta). This is the contributed quantity of a variant of the independent variable, either awareness, achieved KPI in curriculum and instruction, or achieved KPI in physical infrastructure while other variables were held constant as suggested by Field (2009).

According to Keller (2014), a stepwise regression formula can be used to compute the multiple regression coefficients. This is given by

$$\breve{y} = \beta o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta n\, Xn + \varepsilon$$

Where

$\breve{Y}$ =the effect of the non-manipulated variable (strategic plan implementation) on the manipulated variable (internal efficiency).

βo = the predicted value of dependent variable (internal efficiency) if the composite variable (awareness, achieved KPI on curriculum and instruction, achieved KPI on physical infrastructure) are zero.

X_1, X_2 and X_3= the predictor variables (awareness, achieved KPI on curriculum and instruction, achieved KPI on physical infrastructure).

ε= the error term that symbolizes other variables that may affect the dependent variable (the school-based policy and the Government policy on strategic plan implementation carried in the intervening variable section) but that are excluded from this design because they are taken as non-interferers of the independent variables.

B_1, β_2, β_3, = the contribution of the independent variables on the dependent variable.

Using the strategic plan implementation and internal efficiency, the regression model was written as:

$\breve{Y}$ (effect of strategic plan implementation on internal efficiency) = $\beta_0 + \beta_1$ (awareness) + β_2 (achieved KPI on curriculum and instruction) + β_3 (achieved KPI on physical infrastructure) + ε

The model presented β_1, β_2 or β_3 as the variation in the dependent variable attributed to each of these predictors while holding other predictors constant. Thus: β_1 is amount of

variation explained by first non-manipulated variable (awareness) to manipulate variable (internal efficiency) controlling for β_2 (achieved KPI on curriculum and instruction), and β_3 (achieved KPI on physical infrastructure). In the same way β_2 is the contribution of the second independent variable (achieved KPI on curriculum and instruction) to the dependent variable (internal efficiency) controlling for β_1 (awareness), and β_3 (achieved KPI on physical infrastructure). Finally, β_3 is the contribution of the third independent variable (achieved KPI on physical infrastructure) to the dependent variable (internal efficiency) controlling for β_1 (awareness) and β_2 (achieved KPI on curriculum and instruction).

From the statistical test beta weight (β), determination of the kind of variant of independent variable strategic plan implementation (awareness, achieved KPI in curriculum and instruction, and achieved KPI on physical infrastructure) has a larger contribution to the dependent variable (internal efficiency) could be done. The beta weight also showed variation in the independent variable given a unit variation in percentages of variant of the dependent variable.

The importance of every beta coefficient was found at $\alpha = .05$ level of statistical significance (Cresswell, 2012). The computation of the required inferential statistics coefficient was done by employing SPSS.

3.10.2 Qualitative Data Analysis

Using convergent mixed parallel methods, qualitative data analysis was done separately but at the same time with quantitative analysis. The analysis was done thematically as

guided by grounded theory (Heydavian, 2016). Each interview was audio taped and transcribed verbatim (Orodho et al., 2016b). The analysis was done at two levels; within each respondent and across the respondents. This was done by constructing respondent narrative composed of description and themes; and cross-respondent thematic analysis. Triangulation of different sources of information, cross- checking, inter-code consensus, rich and thick description of the cases and reviewing and resolving disconfirmation ensured credibility of the finding (Ofori & Dampson, 2011).

3.10.3 Convergence of Quantitative and Qualitative Findings

Both sets of results (quantitative and qualitative) were compared to assess the extent to which the results converged and diverged (Best et al., 2010; Cresswell, 2014). Regarding this, each research objective had its numerical and quality data results compared and ultimately discussed and interpreted in line with the literature reviewed.

3.11 Logistical and Ethical Considerations

Data collection for the investigation complied with the logistical, ethical, human relations and legal considerations to allow a smooth procedure from the pre-field through in-field to post-field undertakings up to the reporting of the research findings. The study involved certain costs which required an established budget by the researcher specifying the amounts to be spent on every single activity of the study. The researcher then drew a detailed study implementation plan to allow a smooth process of the activities.

The researcher applied for introductory letter from the Graduate School of Kenyatta University. This was used to apply for a research authority from NACOSTI. Upon receipt of the authority chit, the investigator pre- tested and revised the instruments. The

researcher thereafter obtained permission from County Commissioners and Directors of Education of Kisumu and Uasin Gishu counties to visit schools. Enough copies of the pre-tested and revised instruments were produced, packed and labelled according to schools and sub-counties. There was reconnaissance visit for familiarization with the terrain and means of transport for appropriate arrangement to be made to avoid delay of data collection. Thereafter, administration of questionnaires and implementation of interview followed.

After the fieldwork, the researcher collected the instruments from the field at an agreed time with the respondents. The instruments were then edited to eliminate any glaring errors or incomplete items. The completed instruments were then numbered appropriately in readiness for coding and analysis. Data were then collated and encoded into the computer and statistical treatment utilizing SPSS for quantitative data. The quality information were given thematic analysis.

Consent was obtained from the respondents and rules guiding informed consent appropriately applied. This was to ensure informant's response is given without coercion. That being the basis, appropriateness as well as gains yielded by the investigation were relayed to them ahead of time. Maximum confidentiality and anonymity was kept to guarantee the non- harm to the participants. The researcher observed intellectual property by appropriately acknowledging the sources of information. The data collection was also actually done from the sampled schools within study locale. The researcher adhered to the study period as stipulated in the permit and also ensured that the research findings were submitted to Graduate School of Kenyatta University and National Commission for Science Technology and Innovation.

CHAPTER FOUR

PRESENTATION OF FINDINGS, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter presents the results of the study, interpretation and discussion according to the objectives. The purpose of the investigation being establishing strategic plan implementation's effect on internal efficiency in the public post primary schools within Kisumu and Uasin Gishu counties, Kenya. The chapter begins by presenting participants' general and demographic data. This gives way to a presentation of the results of the investigation, interpretation and discussion based on the following objectives:

i. To establish the effect of awareness of school vision and mission statements by stakeholders on internal efficiency in public secondary schools in Kisumu and Uasin Gishu counties, Kenya.
ii. To determine the effect of achieved Key Performance Indicators in Curriculum and Instruction on internal efficiency in public secondary schools in Kisumu and Uasin Gishu counties, Kenya.
iii. To find out the effect of achieved key performance indicators in Physical Infrastructure on internal efficiency in public secondary schools in Kisumu and Uasin Gishu counties, Kenya.

4.2 General and Demographic Information

The part deals with data of two types: general and demographic data. General data consists of details about real return rates of questionnaires given to the sampled respondents. Demographic information consists of data on gender, age, education level

and experience of respondents and information about their induction or training on the strategic planning process.

4.2.1 General Information

The investigation had three kinds of participants: principals, PA chairpersons as well as teachers. The study was conducted in two strands but one phase in which all the three categories of respondents participated concurrently. A total of 342 respondents took part in quantitative strand while a purposively sampled 54 respondents (9 principals, 9 PA chairpersons and 36 teachers) from the 342 were subjected to semi-structured interview. Therefore, the researcher administered 342 questionnaires to 57 principals, 57 PA chairpersons and 228 teachers while interview guide was administered to 9 principals, 9 PA chairpersons and 36 teachers. The rate of return of questionnaires was 100% from all the categories of the respondents. Concerning the administration of interview guide to the 54 respondents (9 principals, 9 PA chairpersons and 36 teachers), it was also 100% return rate.

The rate of return (100%) was very effective, as it superseded at least 70% of return threshold recommended by Mugenda and Mugenda (2003). This high return rate was because the researcher made convenient appointment with both the questionnaire respondents and the interviewees.

4.2.2 Demographic Information

Demographic information refers to information in relation to study respondents and of necessity in determining how representative they were of the general respondents for

inference purpose. To get the quantitative data, study was conducted in 57 public secondary schools as sampling units for 57 principals, 228 teachers and 57 PA chairpersons who were the respondents. The investigation required personal details of participants such as sex, education level and experience at work generally as well as in the current station for principals, teachers and PA chairpersons. Such information was significant for the investigation due to its assistance in determining level of inclusivity of stakeholders which is a requisite for successful strategic plan implementation.

(a) Gender of Respondents

Gender in relation to the current investigation is the basic genetic as well as physiological differences among the respondents, that is, the maleness or femaleness of the respondents. In this study, gender was considered due to its prediction of behavioural as well as cognitive variances of participants making their responses to be unique and trustworthy. Figure 4.1 presents information on gender of respondents according to the three categories: Principals, teachers and PA chairpersons.

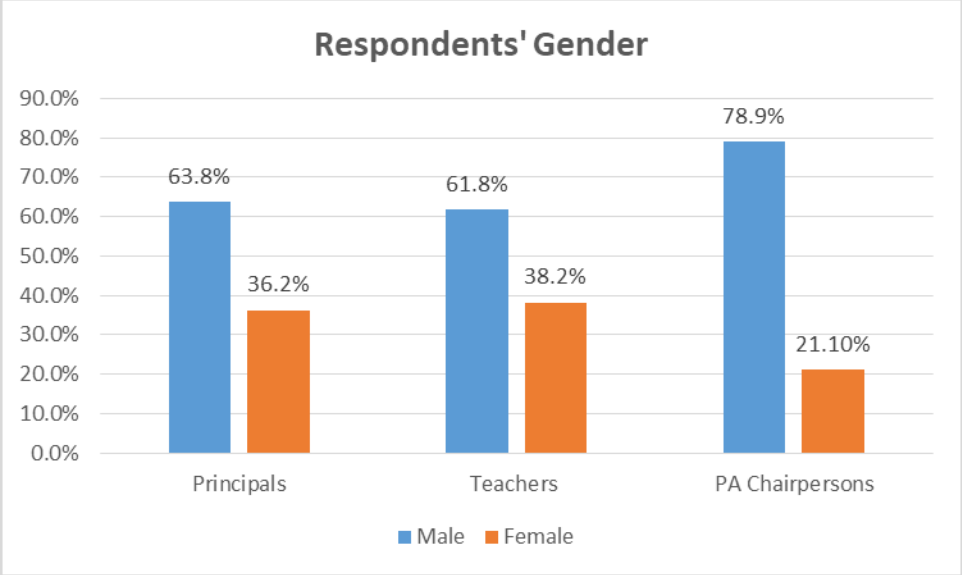

Figure 4.1: Gender of the respondents

Source: Principals, teachers and PA chairpersons questionnaires

From Figure 4.1 the percentage of the male principals was higher than that of female principals at 63.8% and 36.2% respectively. The finding shows an improvement of gender equality in terms of secondary schools administration which is contrary to the report by the Southern and Eastern African Consortium for Monitoring Education Quality (2010) that less than 15% of secondary schools in Kenya are administered by female principals. Therefore, the finding meant that information obtained from the principals was representative enough to be generalized. Similarly, among teachers and PA chairpersons, males were the majority constituting 61.8 % and 78.9 % respectively while females were 38.2% and 21.1% respectively. This finding meant both genders of instructors had almost the same ratio as that of the male and female principals eliminating any possibility of data source being bias.

Age of Respondents

The investigation equally required information about how old principals, teachers and PA chairpersons who took part in the study were. Age in relation to the current investigation is the number of years for which the respondents have lived since the time of birth. According to Sanderson and Scherbov (2008), how old one is rises exponentially with maturity level. It was of significance considering this variable to enhance the degree of trustworthiness of feedback from respondents. Figure 4.2 summarises the findings on respondents' age by category.

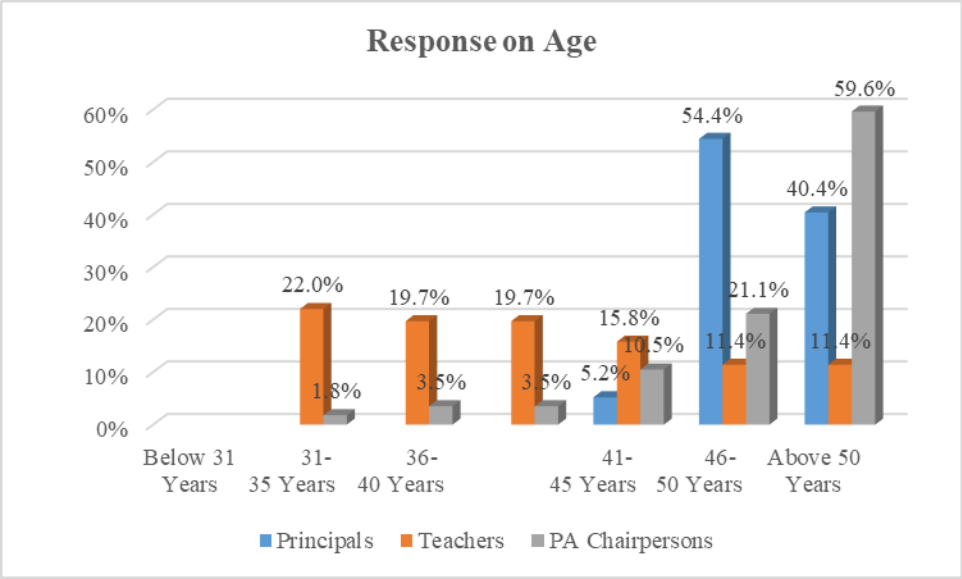

Figure 4.2: Age of respondents

Source: Principals, teachers and PA chairpersons questionnaires

Figure 4.2 indicates that 94.8 % of the heads are from age 46 years to above 50 years, leaving only 5.2 % of them having their ages falling within 41-45 years range. Teachers, on the other hand are comparatively younger with 77.2 % of them being of the age of 45 years and below, with only 22.8 % of them falling within the range of from 46 years to

above 50 years. Finally, the majority of PA chairpersons, 59.6 %, are above 50 years of age.

This finding is important because, if the majority of the principals are old then strategic plan implementation will be given strategic direction in an honest, communicative and participatory manner which comes with maturity in age. Contrarily, if more teachers are young then it means the actual implementation of strategic plan will be done by people who are robust and enthusiastic to execute whatever they get from strategic direction and there is hope for continuity of strategic plan implementation. This situation is given goodwill by majority of the PA Chairpersons who are equally as mature in age as the principals. The finding resonates well with the claim of Day, Holdfield, Tolley and Beresford (2000) that it is clear young instructors have preference for principals with honesty, good communication skills, participatory, collegial informal, supportive and demanding and reasonable in their expectation with a clear vision for the school- the principals who work with rather than through people.

c) Respondents Education Level

The principals, teachers and PA Chairpersons were asked to give their education level which, in this investigation, refers to the period taken by a principal, teacher or PA Chairperson in a formal education system. It was significant to consider this variable because it determines the way people understand and perceive different social issues. The feedback are indicated in Figure 4.3.

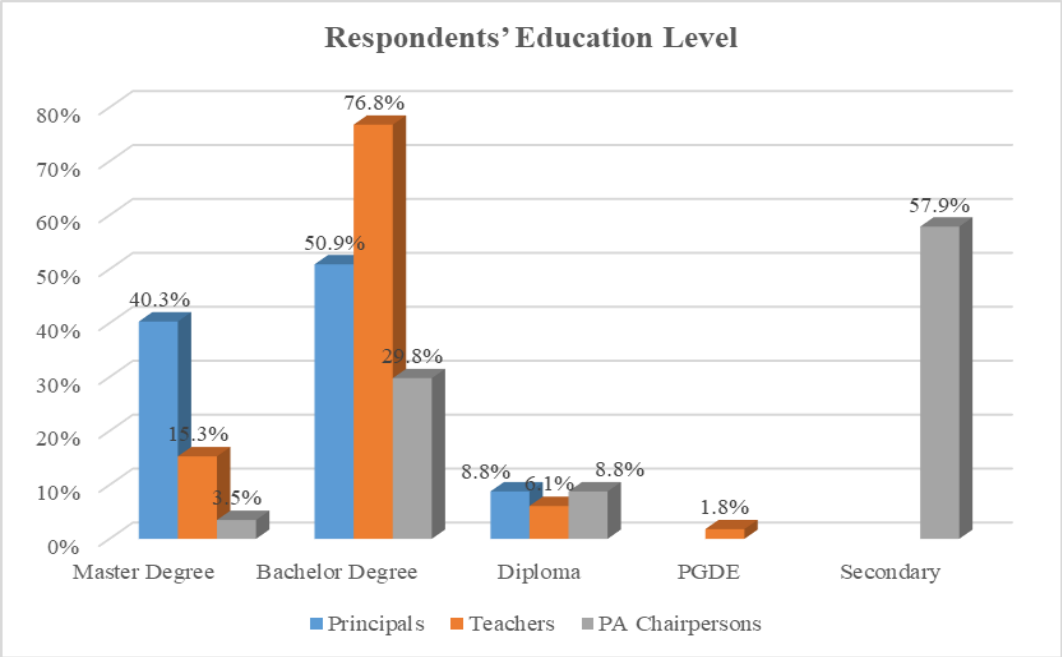

Figure 4.3: Education level of the principals, teachers and PA chairpersons

Source: Principals, teachers and PA chairpersons questionnaires

Figure 4.3 shows that 50.9 % of the principals had Bachelor Degree, 40.3 % of them had Master Degree and 8.8 % had Diploma in Education. Most instructors, 92.1 %, had at least a Bachelor Degree while the remaining 7.9 % were Diploma holders. It was established that 57.9% of PA chairpersons, had secondary level of education, 33.1 % had at least Bachelor Degree and the rest 8.8 % were Diploma holders.

From the foregoing, it is evident that the majority of the principals had a bachelor degree showing that they are well informed and knowledgeable in terms of what goes on in education and school management; and especially what is required in terms of strategic plan implementation in their schools. This is in tandem with the finding of Kevogo and Waiganjo (2015), in an investigation of determinants influencing execution of strategic plans within government owned post-primary learning institutions, that most of the

respondents had a bachelor degree implying that they had a better understanding of educational requirements affecting the learning institutions they are working in. They were as well in a position to domesticate ideal patterns within educational administration. Most of the instructors had been found to be bachelor degree holders signifying enhanced understanding of what is required to support every process of educational management programmes in their institutions and the benefits which accrue from such support. Further, all the PA Chairpersons had at least secondary level of education signifying that they were able to interpret what entails strategic planning and implementation procedure in their learning institutions and hence help in soliciting support from their fellow parents for the strategic plan implementation process.

d) Principals work experience

Principals' work experience in this study refers to the number of years they have served as school administrators. This information was deemed significant because the length of experience gives some insight required for successful strategic plan implementation. As such, the principals were requested to give their work experience generally as managers. Their responses were as indicated in Table 4.1.

Table 4.1: Principals response on their general work experience

Years	Principal =57	
	N	%
5 Years and below	11	19.3
6- 10 Years	22	38.6
11-15 Years	9	15.8
16- 20 Years	9	15.8
21- 25 Years	4	7.0
26 and above	2	3.5
Total	**57**	**100**

N=57 Source: Principals questionnaire

From Table 4.1, 77.2% of the principals had long years of experience ranging between 6 and 25 years in management generally while 19.3% of the principals indicated that they had 5 years and below of general experience as managers of schools. Finally, 3.5% of them had exceptionally the longest period of experience generally, ranging above 26 years. This finding reveals that majority of the principals as vision carriers of their schools had a wealth of experience in school management which was not only a strength in strategic planning and implementation but also gave them authority to give strategic direction to those who helped in implementing the strategic plan. This kind of information also placed the principals at an advantageous position of giving accurate information about strategic plan implementation and its effect on internal efficiency.

e) Teachers' General Work Experience

Teachers' general work experience means duration of service as teachers since they started teaching. This information was considered important since those who had worked

for many years could attest whether strategic plan implantation has effect on internal efficiency or not based on their experience of service during before and when schools started strategic planning and implantation process. Therefore, teachers were requested to provide information about their general teaching experience. Their responses were as shown in Table 4.2.

Table 4.2: Teachers' response on their work experience generally

Years	**Teachers**	
	N	**%**
5 Years and below	57	25
6- 10 Years	59	25.9
11-15 Years	41	18
16- 20 Years	22	9.6
21- 25 Years	23	10.1
26 and above	26	11.4
Total	**228**	**100**

N=228 Source: Teachers questionnaire

From Table 4.2, 63.6 % of the instructors said they had general working experience in terms of years ranging from 6 to 25 years while a quarter of them had general working experience of 5 years and below. Finally, 11.4 % of the teachers had the longest period of 26 and above years of general working experience. This kind of wide range of years in terms of general working experience placed teachers in a position of understanding what goes on in schools as far as strategic plan implementation and its effect on internal

efficiency is concerned. This is because they are able to compare and contrast what used to happen before and during the implementation of the plans. They, therefore, gave insightful information for this study.

f) PA Chairpersons' General Experience

PA Chairpersons' general work experience refers to the duration of service within school management in their life time. This information was considered necessary for this study because such experiences provide gainful insights which are some of the strengths identified, during school SWOT analysis, for the successful implantation of strategic plan. PA chairpersons were, as such, requested to give their general working experience in school management. Their responses are as indicated in Table 4.3.

Table 4.3: PA chairpersons' work experience generally

Years	**PA Chairperson**	
	N	**%**
5 Years and below	34	59.6
6- 10 Years	19	33.3
11-15 Years	3	5.3
16- 20 Years	1	1.8
21- 25 Years	0	0
26 and above	0	0
Total	**57**	**100**

N=57 Source: PA chairpersons questionnaire

From Table 4.3, 59.6% of PA chairpersons had a general work experience of 5 years and below while 33.3% of them had a general work experience of a range of between 6 and

10 years. Lastly, 7.1% of them had a general work experience of between 11 and 20 years. This was found to be very normal showing that the life of membership of parents representatives was being renewed periodically after four years which helped to inject new blood of leadership into the school management. This finding reveals most the PA Chairpersons had reasonable general experience in school management and therefore they were expected to give insightful contribution to the execution of their schools strategic plans and also valuable information to this study.

g) Principals' Work experience in current station

Work experience in current station refers to the period the principal had taken working in the institution by the time of the data collection. The data was significant because it was used to determine the role the principals had played in giving strategic direction for successful strategic plan implementation. The principals were therefore requested to give the duration they had worked in the institution by the time of the data collection. Their responses were as illustrated in Figure 4.4.

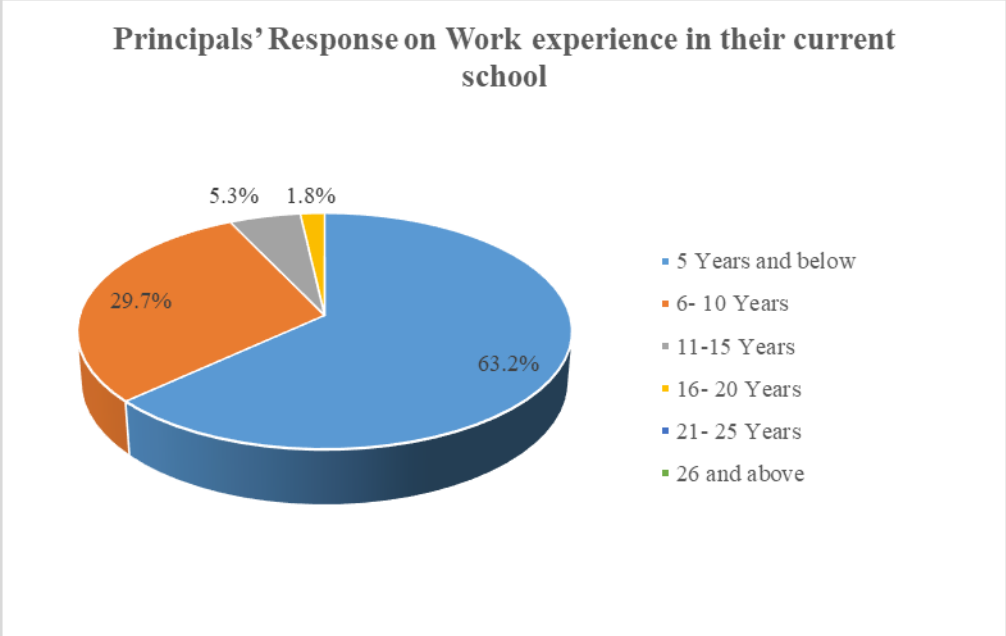

Figure 4.4: Principals response on work experience in their current school

Source: Principals questionnaire

From Figure 4.4, 63.2 % of the principals had been in their current station for 5 years and below while the remaining 37.8% of them had at least 6 years of length of stay in their schools. The finding implied that the principals had served long enough in their institutions to enable them not only have appropriate understanding of the school needs but also have better part of the implementation of strategic plan in the schools done through their strategic direction and therefore they were better placed in giving reliable data for this investigation. The finding complements the finding by Kevogo et al., (2015) that the principals had better understanding of school needs for school planning and implementation due to their length of stay within the current station.

h) Teachers Work Experience in the Current Station

Teachers work experience in current station means the number of years the sampled teachers had taken as serving teachers in their schools by the time data was being collected. This information was considered important because the length of service would determine the teachers' level of understanding the school needs making them participate in strategic plan implementation with enthusiasm. The teachers were therefore requested to give length of service within current schools. Their responses were as illustrated in Figure 4.5.

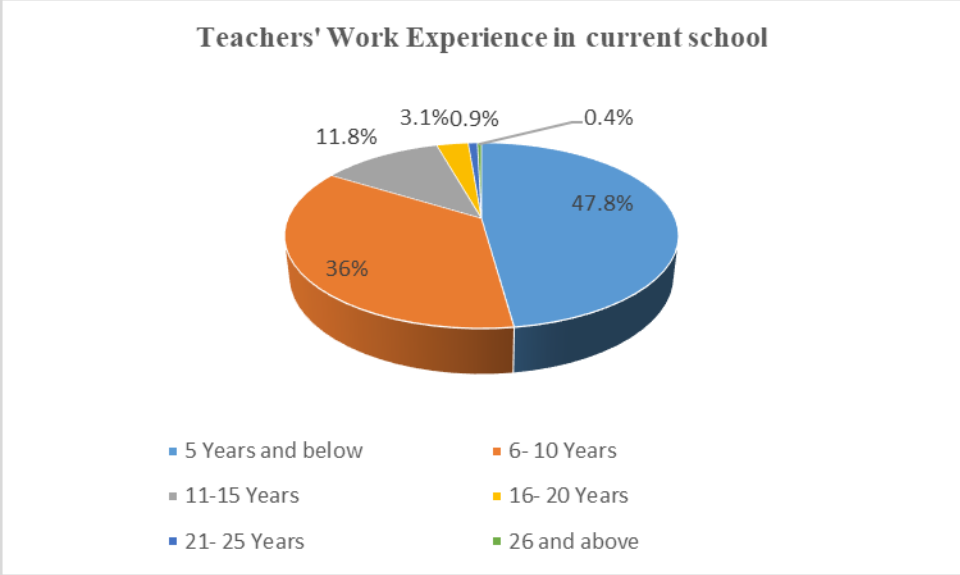

Figure 4.5: Teachers response on work experience in their current school

Source: Teachers questionnaire

Result in Figure 4.5, reveals that 52.2 % of teachers had worked in the same school for six years and above while 47.8 % of the teachers had worked for 5 years and below. The finding meant that the teachers had stayed long enough to enable them comprehensively take part in school strategic plan and implementation process with profound

understanding of the school needs and therefore they were in a position to give insightful information for this study.

i) PA Chairpersons Work Experience in the Current Station

PA Chairpersons work experience in current station refers to the length of period in years they had served as Parents' Association Chairpersons in their schools by the time of data collection. This information was significant to the current study since the researcher had a feeling that the duration of work experience in a school had influence on the PA Chairpersons' power to participate in the undertaking of implementation of strategic plan based on gained insights from experience in their schools. The Chairpersons were thus requested to give their length of service within the institutions at the time of data collection. Their responses were as illustrated in Figure 4.6.

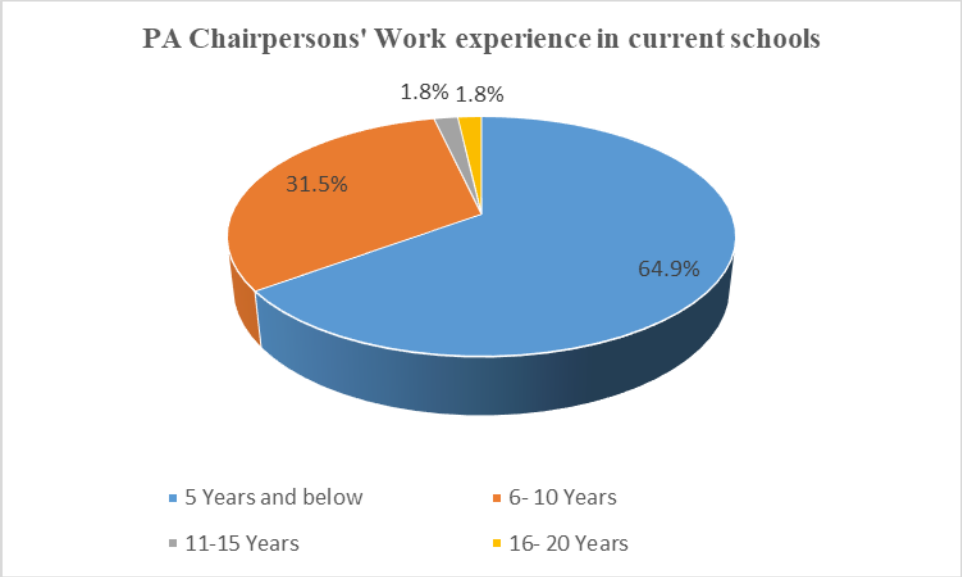

Figure 4.6: PA Chairpersons response on work experience in their current school

Source: PA chairpersons questionnaire

As for the PA chairperson, 64.9 % had been chairpersons for 5 years and below while the rest had worked for 6 years and above. The finding reveals that all the PA Chairpersons had served in their schools for a period long enough to enable them comprehend the execution of plans for their institutions. This is supported by the fact that life span of most of strategic plans of various schools goes for a period of between 3 and 5 years (Kevogo et al., 2015).

j) Training/ Induction on Strategic Planning

Training/Induction on strategic planning means the process of building the capacity of education managers and stakeholders to think and plan strategically (UNESCO, 2006). Training takes a longer period while induction lasts for just a few days. This information was deemed significant to this study because it would help in determining the respondents' level of understanding strategic planning and implementation. The principals, were as such requested to give confirmation about their training while teachers and PA chairpersons were requested to give confirmation about their induction on strategic planning process. They responded as summarised in Figure 4.7.

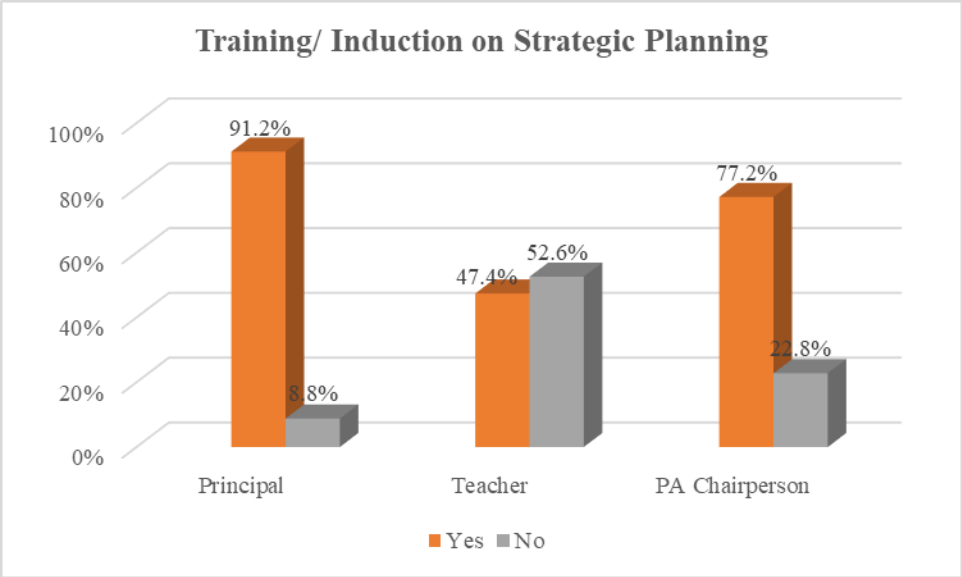

Figure 4.7: The respondents response on training/induction on strategic planning

Source: Principals, teachers and PA chairpersons questionnaires

Figure 4.7 shows that majority (91.2 %) of the principals had been trained on strategic planning process while only 8.8 % of them had not been trained. As for teachers, majority (52.2%) had not been inducted on strategic planning while 47.4 % had been inducted on the process. On the other hand, majority of PA chairpersons comprising 77.2 % had been inducted on the process while 22.8 % had not been inducted.

The finding reveals that the principals were the category with most of the participants who did have training on strategic planning and implementation process, followed by the category of the PA chairpersons. It further confirms that there was strategic direction in the schools managed by these principals and PA chairpersons, however, there was a major concern about what was happening in 5 of the sampled schools headed by 8.8% of the principals who indicated that they had not been trained and yet they were supposed to

be the vision carriers. On the part of teachers, it was also a matter of concern that majority of them indicated that they had not been inducted in strategic plan. Such a scenario could be a threat to the implementation of strategic plan in the schools where these teachers were working.

The finding concurs with what DEMA reported that a total of 4,523 less one partners in education with inclusivity of the heads of schools with their deputies, teachers, BoM members and PA members had got capacity building on the planning approach as well as performance-oriented management by 2011 (Kevogo et al., 2015). This was essentially done to equip the concerned stakeholders with the capacity to not only plan strategically but also cascade the same knowledge and skill to other stakeholders who had not been trained. Probably, the latter activity was not effectively conducted and that could be the reason majority of the teachers had not received any induction or training.

j) Principals Training Period on Strategic Planning

Principals training period on strategic planning refers to the length of time in terms of weeks, months or years for which the principals were capacity built on strategic planning and implementation process. This data was of significance to the investigation since it was likely to give information was deeper insight on the level of competence of the school managers to conduct and guide strategic planning and implementation process for their learning institutions. The heads were for that reason requested to give the period for which they were trained on strategic planning process. Their responses are as summarised in Figure 4.8.

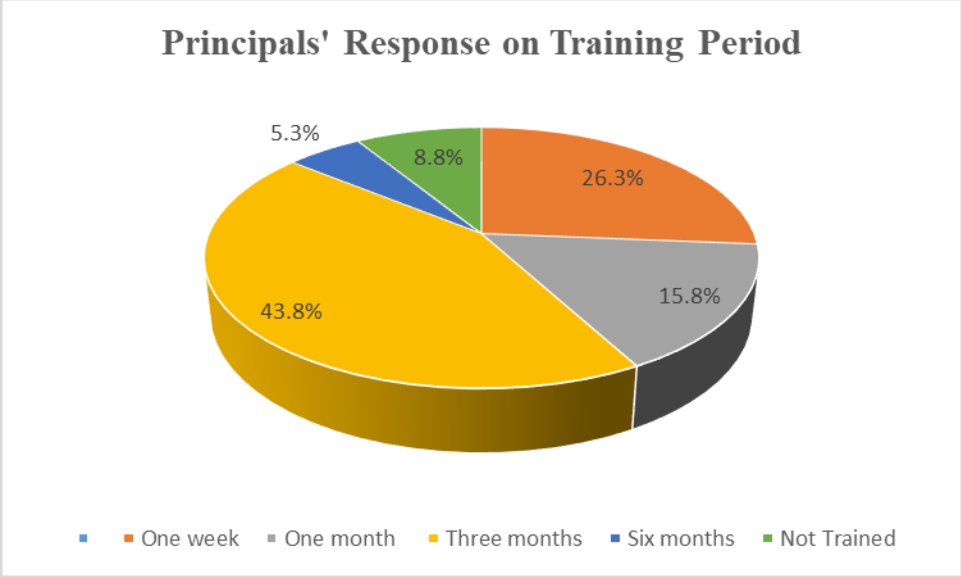

Figure 4.8: Principals response on their training period on strategic planning

Source: Principals questionnaire

Figure 4.8, reveals that 43.8 % of the principals were trained for three months, 26.3 % were trained for one week, 15.8 % for one month, while 5.3 % were trained for six months. It is significant to note that 5 principals (8.8%) had not received training. This is important because if the vision carrier is not trained on Strategic Planning Process, the other stakeholders might not get the strategic direction. This finding reveals the need for cascading training of the newly appointed principals immediately they get their appointments or else the desire of DEMA of 2011 and UNESCO (2006) that education managers and other stakeholders be equipped with the capacity to think and plan strategically would be undermined.

k) **Teachers' and PA Chairpersons' Induction Period on Strategic Planning**

Teachers and PA Chairpersons induction period on strategic planning refers to the length of time in terms of weeks or months during which teachers and PA Chairpersons were

equipped with the capacity to think and plan strategically in their schools. The teachers and PA chairpersons were as such requested to indicate the period for which they were inducted. Figure 4.9 shows the period for which the respondents were inducted.

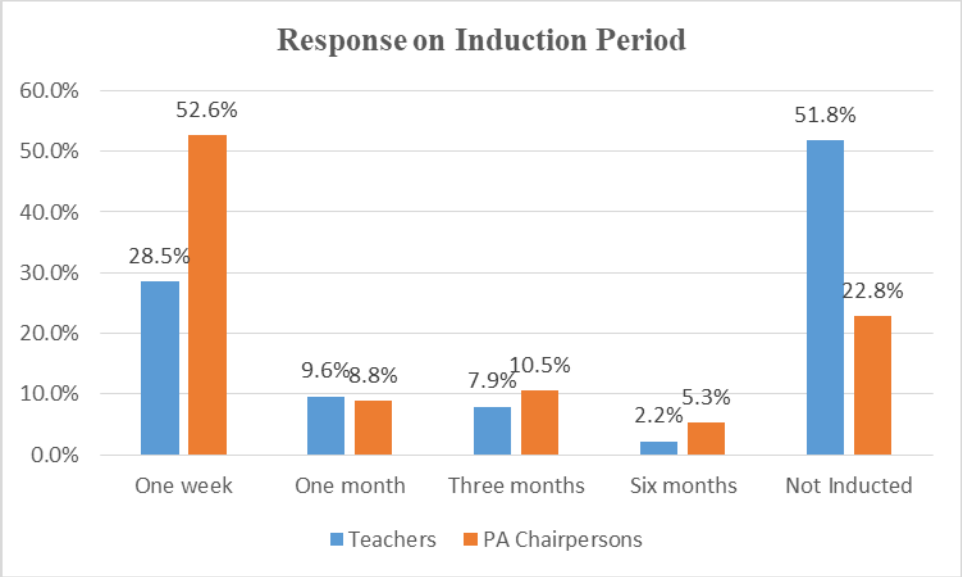

Figure 4.9: Teachers and PA chairpersons responses on their induction period on strategic planning

Source: Teachers questionnaire and PA chairpersons questionnaire

From Figure 4.9, the findings show that more than half, above 51.8 %, of the teachers were not inducted, 28.5% of them were inducted for a period of one week, 9.6% of them one month while 10.1% of them were inducted for at least three months. On the side of PA Chairpersons, 52.6% of them were inducted for one week, 22.8% were not inducted, and 10.5% were inducted for three months, 8.8% for one month and 5.3% for six months.

l) Training Bodies for Principals on Strategic Planning

Training bodies in the context of this study refers to the agencies, institutions or organisations which helped to train the principals on strategic planning process. This information was deemed important as it would help in ascertaining the level of quality of training that the principals got for strategic planning process. The heads were then requested to give the bodies which trained them on strategic planning. Figure 4.10 illustrates the bodies which trained the principals on strategic planning process.

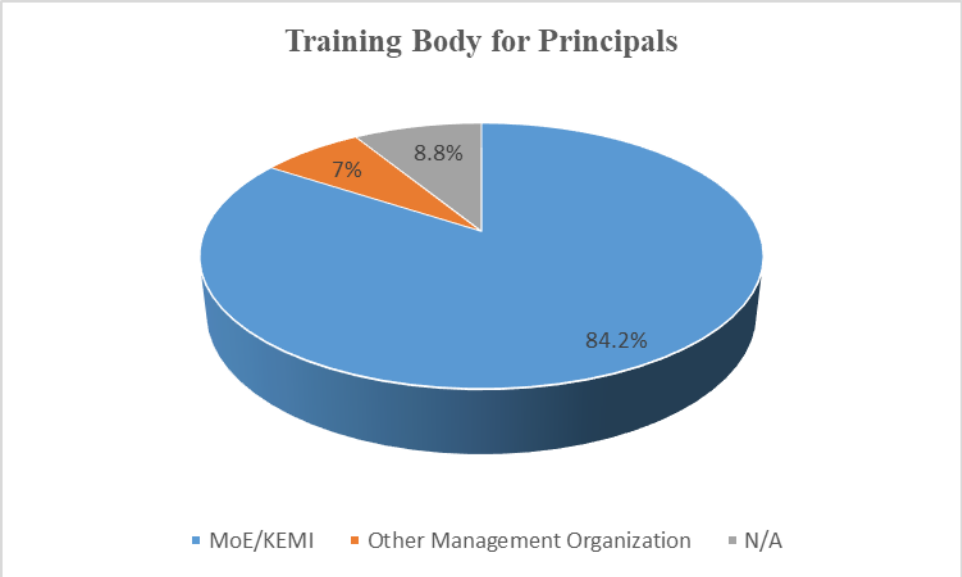

Figure 4.10: Principals response on training body for principals

Source: Principals questionnaire

From Figure 4.10, majority of principals, 84.2 %, were trained by MOE/ KEMI, 7 % were trained by other management organisations while 8.8 % of the respondents were not trained by anybody. These were the principals who indicated that they had gone through no training on the approach of planning according to Figures 4.7 and 4.8; and perhaps could have been given promotion to headship after the mass training had been done in

2011 (Kevogo, 2015). The finding confirmed that majority of the principals as Chief Executive Officers (CEOs) of the institutions were knowledgeable and had the skill of taking their schools through the process of comprehensive strategic planning and implementation which would make the schools use resources more judiciously and efficiently. This resonates well with the confirmation of Khan, et al (2014) that strategic planning is a process of preparing ways to use resources more economically and efficiently so as to achieve the purpose of the institution.

m) Induction Bodies for Teachers and PA Chairpersons on Strategic Planning

Induction bodies for teachers and PA chairpersons on strategic planning in the context of this study means the agencies, organisations, institutions or personalities which/ who gave the teachers and PA chairpersons the orientation on strategic planning and implementation process. The teachers and the PA chairpersons were therefore requested to indicate the bodies which inducted them on strategic planning. They responded as summarised in Figure 4.11.

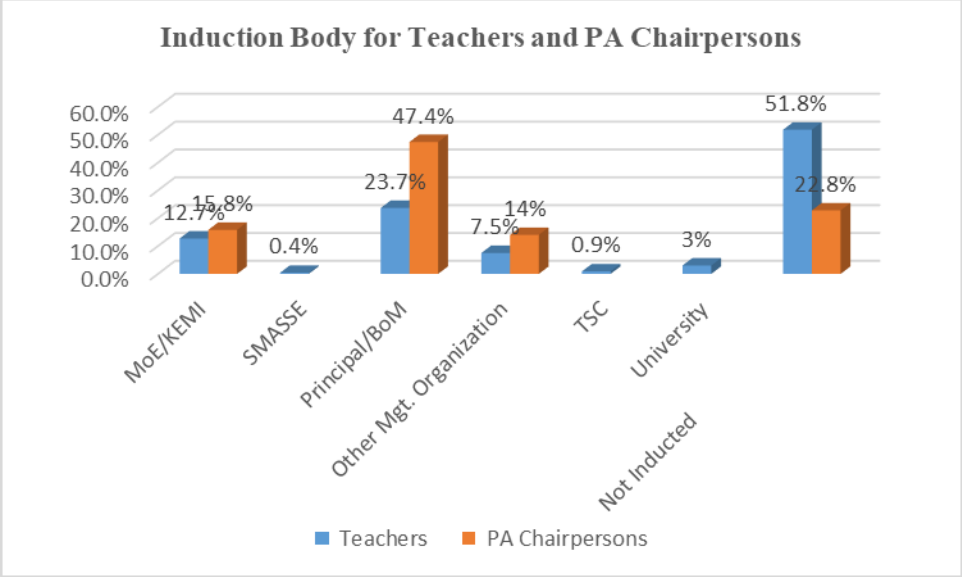

Figure 4.11: Teachers and PA chairpersons responses on induction body for teachers and PA chairpersons

Source: Teachers questionnaire and PA chairpersons questionnaire

From Figure 4.11, more than half (51.8%) of teachers were not inducted by any organization, institution or personality. These were the same respondents who had not experienced any induction on strategic planning. This could perhaps be due to overwhelming management work that the principals have which could not allow them to induct all the teachers. It is important to note that among those who were inducted, majority, 23.7% were inducted by principals/ BoMs. This was followed by 12.8% inducted by MoE/KEMI, 7.5% by other management organisations, 3.1% by university, 0.9% by TSC and 0.4% by SMASSE. On the other hand, 47.4% of PA Chairpersons, were inducted by principal/ BoM while 15. 8% were inducted by MoE/KEMI. It is noteworthy that 13 (22.8%) of the PA chairpersons had not received induction. This is important for if the parents' representative who should help in school management is not inducted on Strategic Planning then the parents may not get strategic direction and this

can seriously affect the implementation process which is all- inclusive (Kevogo et al., 2015).

It is of significance to note that majority of the respondents who were interviewed concurred that they had received training/ induction from different training/induction bodies. Therefore, they had a better understanding of strategic planning and its importance. For instance, one of the teachers stated that:

> I heard about strategic planning during KEMI training in Kisumu polytechnic. I came to realize that strategic planning is actually very important for an institution because it helps an institution to know exactly where the institution is and where it wants to go and it also helps the institution to put down strategies that can help it achieve its goals to reach where it wants to reach (T1).

From the foregoing presented data, there is clarity that most principals, instructors as well as PA chairpersons not only had higher educational level, a wider working experience, both general and specific in the study schools but were also trained/inducted on strategic planning process for a reasonable period of time. According to these results, it is presumed that given the level of education, working experience- both general and specific, the training/ induction of the majority of the respondents and the bodies which conducted either the training or induction, the respondents were well placed in giving insightful data about strategic plan implementation and its effect on internal efficiency in public secondary schools in the study locale.

n) Commencement of Strategic Plan implementation

Commencement of strategic plan implementation in the context of this study means the time when the school started the implementation of strategic plan with reference to the time when data were being collected. This information was significant to this study

because it was what was going to make the study continue or stop as the study was all about strategic plan implementation and its effect on internal efficiency. So the period for which implementation had been done would inform the result on effect. The principals, teachers and PA chairpersons were thus requested to indicate the time strategic plan implementation started in their schools. Figure 4.12 provides the respondents' opinion.

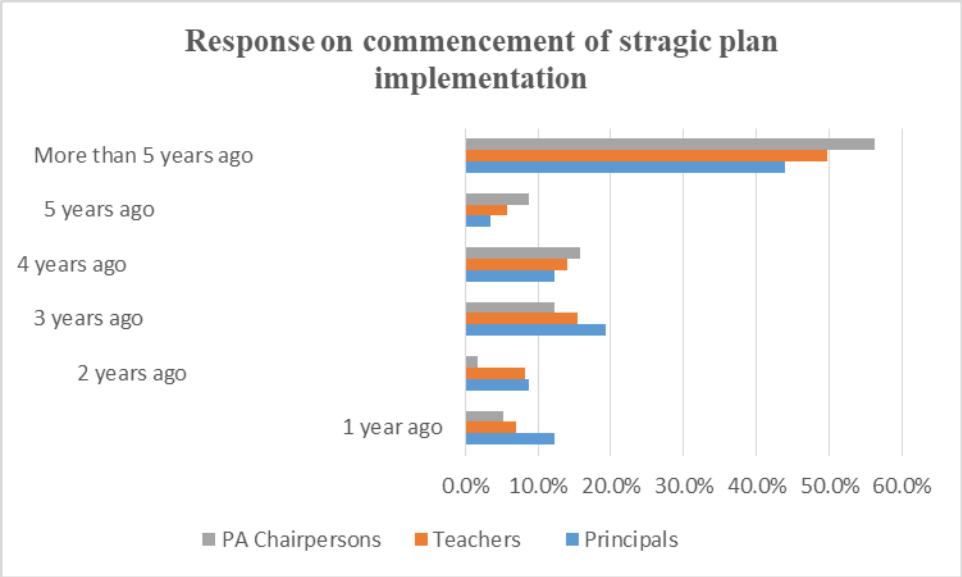

Figure 4.12: Commencement of strategic plan implementation

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From Figure 4.12, majority of respondents (56.1% of PA Chairpersons, 49.6% of teachers and 43.8% of principals) concurred that commencement of strategic plan implementation started 5 years and before the time of study in schools within the study locale while 19.3% of principals, 15.4% of teachers and 12.3% of PA chairpersons confirmed that it was started three years before the study time. Further, 15.4%, 14% and 12.3% of principals, teachers and PA Chairpersons stated 4 years before the time of

study, 12.3% of principals, 7% of teachers and 5.3% of PA Chairpersons felt that it was started the previous year before the year of study, 8.8% of principals, 8.3% of teachers and 1.8% of PA Chairpersons concurred that it was started two years before the year of study and finally, 8.8% of PA Chairpersons, 5.7% of teachers and 3.5% of principals confirmed that it was started five years before the year of the study.

From the finding, it is evident that strategic plan implementation had been going on in the public secondary schools in the study locale for more than 4 years. This is corroborated by the finding from the interviews conducted among the principals, teachers and PA Chairpersons. For instance, one principal emphasized that:

> I have been a principal for ten years in this school. Strategic plan is a good idea. For the first six years I operated minus one and my work was very difficult but the day we prepared one and now we are implementing one, my work is very easy (P9).

According to these results, it is evident that there was execution of plans within the study locale whose effect this study intended to establish. This complements the finding by Kevogo et al., (2015) that government owned post- primary institutions implement strategic plans as influenced by a number of factors. Implementing strategic plan to ensure efficiency in an environment which is turbulent and dynamic requires sufficient skills especially for management. The principals, teachers and Board of Management need skills so as to withstand the pressure of the school management and teaching tasks. The skills can be obtained by undergoing a formal training, and a majority of the principals and teachers had at least Bachelors degrees. The PA chairpersons were equally not left behind in this strength. The MoE/ KEMI had also taken them through training in strategic planning process. So the principals and PA Chairpersons as the executives and

teachers as the implementers in the sampled schools had acquired requisite knowledge and skills for strategic plan and implementation process. This is supported by Robin (2003) that the skills required for effective management can be categorized into three groups: technical, human and conceptual skills. Technical skills, for instance, are the ones which enable the manager to utilize the resources and scientific knowledge and to apply techniques so as to achieve the objective of the institution (Robin, 2003). It is therefore fitting to make a claim that most of the principals, teachers and PA chairpersons have acquired prerequisites for strategic planning and implementation and that implementation process going on in their schools is being undertaken with adequate competence to yield desired result.

4.3 Awareness of Vision and Mission Statements and Internal Efficiency

The first objective of the study was to establish the effect of awareness of school vision and mission statements by the stakeholders on internal efficiency in public secondary schools in Kisumu and Uasin Gishu Counties, Kenya. In this objective, the study focused on familiarity with the mental image as well as purpose of the of existence statements by the principals, teachers, PA chairpersons, students and parents, the effect of this awareness on retention and grade promotion rates.

4.3.1 Stakeholders Awareness of Vision and Mission Statements

Stakeholders' awareness of vision and mission statements in the context of this study refers to having knowledge of the vision and mission statements by the members of the school community for instance, principal, teachers, PA Chairperson, parents and students. This information is significant because it implies clarity of these fundamental statements

and their proper communication to the stakeholders (Sang et al., 2015). The principals, teachers and PA chairpersons were therefore requested to indicate whether the stakeholders were aware of the vision and mission statements.

(i) Principals View on Stakeholders' awareness of Vision and Mission Statements

Principals' view on stakeholders' awareness of vision and mission statements is important because it was to confirm to this study that the principals as the vision carriers knew the implementers who were aware of the statements for the success of strategic plan implantation (Chemei et al., 2014). The principals were as such requested to indicate whether the stakeholders were aware of the vision and mission statements. Their responses are summarised in Table 4.4.

Table 4.4: Principals response on stakeholders' awareness of vision and mission

Response	Principal		Teachers		PA Chairperson		Students		Parents	
	N	%	N	%	N	%	N	%	N	%
Aware	57	100	57	100	55	96.5	54	94.7	32	56.1
Not aware	0	0	0	0	2	3.5	3	5.3	25	43.9
Total	**57**	**100**	**57**	**100**	**57**	**100**	**57**	**100**	**57**	**100**

N=57 Source: Principals questionnaire

From Table 4.4, all the principals confirmed that principals and teachers were aware of the vision and mission statements while 96.5 % and 94.7% indicated PA chairpersons and

students respectively were familiar with mental image as well as purpose of existence statements. Further, 56.1% of the principals concurred that parents were had knowledge of the statements. The finding reveals that the principals as vision carriers and executives of the schools led, supported, monitored as well as walked the talk in the planning process by being aware of the vision and mission statements. This resonates with result of Kevogo et al., (2015) that top managers must show commitment. By indicating that such dedication and commitment were followed by the teachers, PA chairpersons, students and then parents reveals that the principals were conscious and keen about successful implementation of strategic plans and hence they gave strategic direction to these implementers to have the same focus. This is supported by Khan et al., (2014) that all stakeholders should have the same focus.

(ii) Teachers View on Stakeholders' awareness of Vision and Mission

Teachers' view on the stakeholders' awareness of vision and mission statements is important because it is going to validate the view of the principals on the same. This is because teachers interact more with all the stakeholders of the school. The teachers were therefore requested to indicate whether the stakeholders were aware or not of the vision and mission statements. Their responses are as shown in Table 4.5.

Table 4.5: Teachers response on stakeholders' awareness of vision and mission

	Principal		Teachers		PA Chairperson		Students		Parents	
Response	N	%	N	%	N	%	N	%	N	%
Aware	228	100	224	98.2	225	98.7	214	93.9	155	68
Not aware			4	1.8	3	1.3	14	6.1	73	32
Total	**228**	**100**	**228**	**100**	**228**	**100**	**228**	**100**	**228**	**100**

N=228 **Source**: Teachers questionnaire

From Table 4.5, all the teachers agreed that principals had knowledge of the statements. Almost the same number of teachers, 98.7% and 98.2%, indicated the awareness of the statements by PA chairpersons and teachers respectively. The awareness by students was confirmed by 93.9% of the teachers while more than two thirds of the teachers (68%) confirmed that parents were aware of the statements.

The finding shows the teachers concurred with the principals that as vision carriers the principals were all aware of vision and mission statements. It implies that the teachers were confident of the strategic direction given to them by the principals. The finding also implies that most of the teachers, PA chairpersons, students and majority of parents were also committed to the strategic direction given to them for successful implementation of school strategic plan. This concurs with Sang et al., (2015) that clarity of school vision and mission statements; communication of the same to the stakeholders; and ownership of the whole process by both the implementers and managers of the institutions, are strategic direction.

(iii) PA Chairpersons View on Stakeholders Awareness of Vision and Mission

PA chairpersons' view on stakeholders' awareness of vision and mission statements is significant to this study because it would ensure incorporation of different voices of stakeholders into the study. This is because strategic planning and implementation in learning institutions involves many important stakeholders and PA chairpersons are such stakeholders in that they both represent parents and are part of the executives of school Boards. The PA chairpersons were therefore requested to indicate whether the stakeholders were aware of the vision and mission statements. Their responses are as shown in Table 4.6.

Table 4.6: PA chairpersons response on stakeholders awareness of vision and mission

	Principal		Teachers		PA Chairperson		Students		Parents	
Response	N	%	N	%	N	%	N	%	N	%
Aware	57	100	57	100	55	96.5	54	94.7	44	77.2
Not aware	0	0	0	0	2	3.5	3	5.3	13	22.8
Total	**57**	**100**	**57**	**100**	**57**	**100**	**57**	**100**	**57**	**100**

N=57 **Source:** PA chairpersons' questionnaire

From Table 4.6, all the chairpersons agreed that principals and teachers had knowledge of the statements. Majority of the PA chairpersons confirmed the awareness of the statements by PA chairpersons and students at 96.4% and 94.7% respectively. Further, more than three quarters of the PA chairpersons (77.2) indicated that parents were aware

of the statements. The finding implies all inclusivity of strategic plan implementation in the sampled schools in the study locale. This is because the PA chairpersons could not give similar response to the ones given by the principals and teachers as can be seen in Tables 4.5 and 4.6 if they were not involved in the process.

Qualitative finding corroborates the quantitative finding on awareness of vision and mission statements by establishing that the process of formulating fundamental statements had aspect of inclusivity and hence creation of awareness among the stakeholders. This was confirmed by one of the principals who stated that:

> The vision statement was developed because of the prevailing environmental circumstances. Now, the core function of a school is academics so we had to narrow our vision and mission towards academics and that is why the mission of the school is excellence. Initially as I had told you, I was the first principal of this school so I had a challenge in putting a structure, I looked at the prevailing environmental circumstances that the school was in. I looked at around, the schools neighboring us and I wanted to make the school unique and it is that, that formed the background of formulating, and after formulating this it was again discussed with our stakeholders if they could officially approve it as our driving forces (P8).

These findings concur and this helps to confirm that stakeholders had knowledge of the statements and it fills the gap left by Khan, et al (2014).

(iv) Stakeholders Level of awareness of Vision and Mission Statements

All the stakeholders' level of awareness of vision and mission statements refers to the overall assessment of all the stakeholders' awareness of vision and mission statements. This information is considered important because it was to help in running the regression analysis to establish the effect of stakeholders' awareness of vision and mission statements on internal efficiency. The principals, teachers and PA chairpersons were as

such requested to give their overall opinion on the level of the stakeholders' awareness of vision and mission based on their earlier views in Tables 4.5, 4.6 and 4.7. The responses were as shown in Table 4.7.

Table 4.7: Respondents responses on level of awareness of all the stakeholders

Awareness	**Principal**		**Teachers**		**PA Chairperson**	
	N_1	**%**	**N_2**	**%**	**N_3**	**%**
No awareness at all	0	0			1	1.8
Less awareness	7	12.3	52	22.8	8	14
Moderate awareness	36	63.2	134	58.8	35	61.4
Great awareness	12	21.0	42	18.4	13	22.8
Very great awareness	2	3.5			0	0
Total	**57**	**100**	**228**	**100**	**57**	**100**

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

N_1 = 57
N_2 = 228
N_3 = 57

From Table 4.7, majority of the respondents (63.2% of the principals, 58.8% of teachers and 61.4% of PA chairpersons) concurred that vision and mission awareness of the stakeholders was moderate. The principals and PA chairpersons almost concurred as 21.8 % and 22.8% respectively felt that the awareness was great while only 18.4% of teachers indicated the same level of awareness. Less awareness was indicated by 22.8% of teachers, 14 % of PA chairpersons and 12.3% of principals. Finally, no awareness at all and very great awareness were preferred in the same way in that 3.5% of the PA

chairpersons, 0.4% of the teachers and 0% of the principals indicated no awareness at all while 3.5% of the principals, 0.4% of the teachers and 0% of the PA chairpersons indicated very great awareness. This finding implies that further sensitization of partners on knowledge statements was still necessary since moderate level of awareness could mean moderate implementation of strategic plan.

(v) Retention and Grade Promotion Rates

Retention rate refers to the proportion of students who enrolled in a given grade, remained and progressed in school until they completed their secondary school life in Form Four. On the other hand, Grade Promotion Rate refers to the proportion of students from a cohort enrolled in a given grade at a given school year who progressed to the next grade in the following year. These are two important indicators of internal efficiency. Information about them would help to assess the effect of strategic plan implantation on internal efficiency which this study was all about.

The principals, teachers and PA chairpersons were asked to give their opinion concerning the status of retention and grade promotion rates in their schools for the last five years from the time of data collection.

(a) Grade Promotion Rates

Grade Promotion Rates in this study refers to the average rate of the progression of students from one grade to another in the last five years by the time of data collection. This information is important since it was going to help determine the effect of strategic plan implementation on grade promotion rate and hence internal efficiency. The principals, teachers and PA chairpersons were therefore requested to indicate their

opinion concerning the status of grade promotion rates in their schools from 2014. They responded as summarised in Figure 4.13.

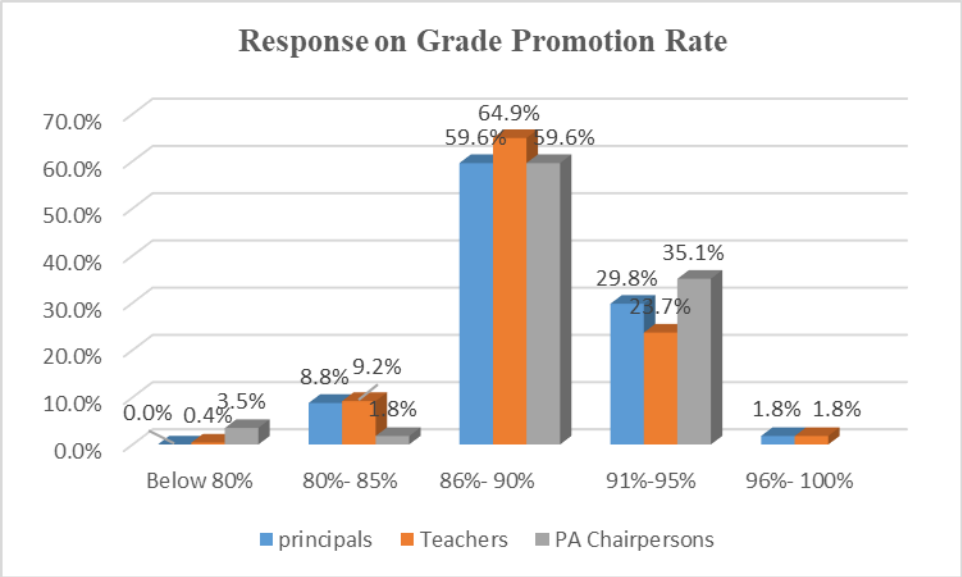

Figure 4.13: The status of grade promotion rates

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From Figure 4.13, most participants (64.9% of teachers and 59.6% of both principals and PA chairpersons) indicated that grade promotion rate was ranging between 86% and 90% while 35.1% of PA chairpersons, 29.8% of principals and 23.7% of teachers indicated grade promotion rate was between the range of 91% and 95% in government owned post primary learning institutions within Kisumu and Uasin Gishu Counties, Kenya. There was yet a category of respondents (9.2% of teachers, 7.0% of principals and 1.8% of PA chairpersons) who indicated that grade promotion rate was between 85% and 90% while another group of respondents (3.5% of principals and 1.8% of teachers) indicated that grade promotion rates was within the range between 96% and 100%. Further, 3.5% of PA

chairpersons and 0.4% of teachers indicated that the rate was below 80% in the study locale.

This finding reveals majority of the respondents concurred that grade promotion rate was between 86% and 100% which is in agreement with the finding of MoEST (2014). This could only be possible by fixing some factors during the five years. The finding concurs with Itegi (2016) that successful schools examine their missions and visions, assess their current state, set new goals, determine action plans to achieve their set goals and measure progress towards goals. For that reason, the effect of stakeholders' awareness of vision and mission statements on internal efficiency (grade promotion rate and retention rate) was further investigated using regression analysis.

(b) Retention Rates

Retention Rates in this study refers to the average rate of the remaining of students in school throughout their secondary school life cycle in the last five years by the time of data collection. This information is important since it was going to help determine the effect of strategic plan implementation on retention rate and hence internal efficiency. The principals, teachers and PA chairpersons were therefore requested to indicate their opinion concerning the status of retention rates in their schools from 2014. Their responses are summarised in Figure 4.14.

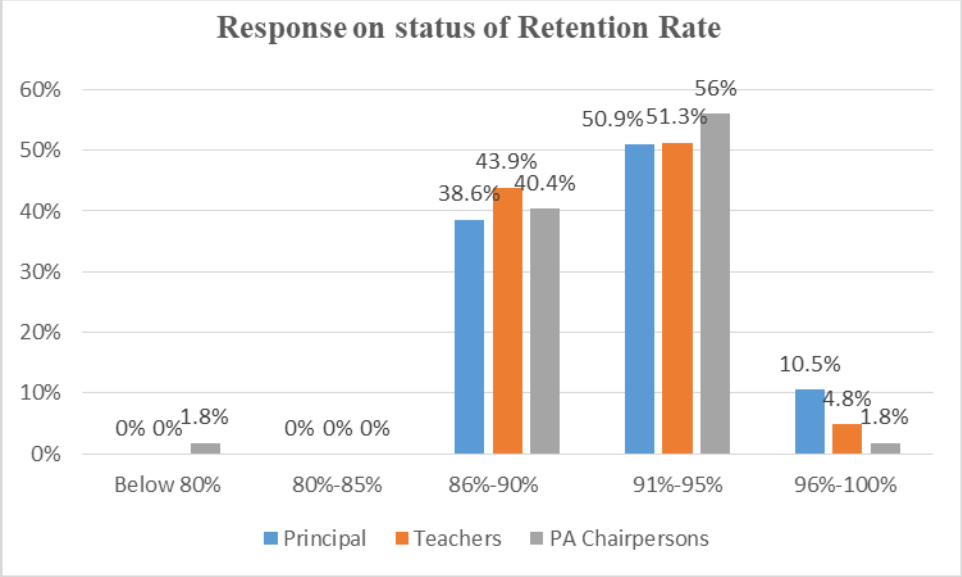

Figure 4.14: The status of retention rate

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From Figure 4.14, majority of the respondents (61.4% of principals, 56.1% of teachers and 57.8% of PA chairpersons) indicated that retention rate was between 91% and 95%. On the other hand, 43.9% of teachers, 40.4% of PA chairpersons and 38.6% of principals agreed that the retention rate was between 86% and 90%. Further, 10.5%, 4.8% and 1.8% of principals, teacher and PA chairpersons indicated 96%-100% of retention rate while only 1.8% of PA chairpersons indicated that retention rate was below 80% in public secondary schools in the study locale.

There is convergence between quantitative and qualitative findings that retention rate in the public secondary schools was higher as compared to the national retention rate of 76.4% in 2014 (MoEST,2014). This finding implies that most schools had attained great increased retention rate of students by fixing a number of factors which could lead to

dropout. This concurs with Hunt (2008) in Recardo, Akyeampong, Westbrook and Hunt (2010) that Drop out is always a process. It is not a result of one single cause but multiple proximate causes. On this basis the current investigation went further to evaluate how strategic plan implementation helped in fixing these factors to improve internal efficiency.

(vi) Effect of Vision and Mission Statements Awareness on Internal Efficiency

Vision and mission statement awareness was considered in this study to mean having the knowledge of vision and mission statements. This variable was significant because it could have an influence on internal efficiency (grade promotion rates and retention rates) in public secondary schools in the study locale. In this regard, a simple linear regression analysis was conducted involving the first predictor of independent variable (awareness of vision and mission statements) and dependent variables (grade promotion rates and retention rates). The analysis was done in SPSS. The results are presented in Table 4.8.

Table 4.8: Statistical measurements of the effect of stakeholders 'awareness of vision and mission statements on internal efficiency

	Dependent variable: Internal Efficiency		
	Regression Statistics	Model 1 Grade Promotion Rates	Model 2 Retention Rates
Predictor: Awareness Of vision and mission Statements by Stakeholders	R	.727	.369
	R- squared (R^2)	.529	.136
	Adjusted R-squared (R^2 adj)	.527	.134
	Beta (β)	.682	.360
	Standard error of Est (ε)	.43625	.61362
	Constant	1.151	2.484
	Durbin – Watson	1.807	1.711

Model 1 in Table 4.8 illustrates data of a simple correlation between the predictor/independent variable component (Awareness of vision and Mission statements by stakeholders) and the first measure of the dependent variable (Grade Promotion Rate) of students in public secondary schools in Kisumu and Uashin Gishu counties, Kenya. The Pearson's R = .727 shows that there is a strong positive linear relationship between awareness of vision and mission statements by stakeholders and students' Grade Promotion Rate in public secondary schools in Kisumu and Uashin Gishu counties, Kenya. The R-squared (R^2) computed yielded a value of .529, suggesting that stakeholders' awareness of vision and mission statements explained 52.9 percent of the variations in students' grade promotion rate in public secondary school in the study locale. The adjusted R-squared (R^2) also illustrates that awareness of the vision and mission statements explained 52.7 percent of the variations in students Grade Promotion rate and it is lower than R^2 predicted. This is an expected finding because the R^2 adjusted is usually lower than R^2.

The Beta weight (.682) value predicts that one unit change in the increase in the level of stakeholders' awareness of vision and mission statements is expected to cause .682 increase in Grade Promotion rate in public secondary schools in Kisumu and Uashin Gishu counties, Kenya.

The constant value suggests that the predicted value of grade promotion rate in public secondary schools is 1.151 if the value of the awareness of vision and mission statements is zero. The standard error of estimate (ع) was found to be .43625, suggesting that there were other factors of magnitude .43625 that influence the students' grade promotion rate but not observed or taken into account. These could be among other factors such as

intervening variables. The Durbin Watson statistics is a number that tests for auto correlation in the residuals from statistical regression analysis. The Durbin Watson statistics is always between zero (0) and (4). A value approaching 2, as obtained in the model 1 means that there is no auto correlation in the sample values. Values approaching 4 illustrate auto correlation and values approaching 0 indicate positive auto correlation.

Model 2 presented in Table 4.9 contains data on the effect of awareness of vision and mission statements (predictor) on the retention of students in public secondary schools in Kisumu and Uashin Gishu counties, Kenya. The Pearson's R= .369 indicates that there was a positive relationship between the awareness of school vision and mission statements and retention rate in public secondary schools in Kisumu and Uashin counties, Kenya. The R – squared (R^2) computed yielded a value of .136 suggesting that awareness of the school vision and mission statements explained 13.6% of the variation in retention in public secondary schools in the study locale with 86.4% being explained by other factors not included in the model. The adjusted (R^2) = .134 confirmed that awareness of school vision and mission statements explained over 13 % of the variation in retention rate.

The Beta weight (β=.360) predicts that one unit change in the stakeholders' awareness of school vision and mission statements is expected to cause .360 increase in the retention in public secondary school in the study locale. The constant value suggests that the predicted value of retention rate is 2.484 if the value of stakeholders' awareness of vision and mission statements is zero. The standard error of the estimate (ع) was found to be .61362, suggesting that there were other factors not observed in the model but which had

some influence on the retention of students. The Durbin Watson value of 1.711 in model 2 indicated that there was no auto – correlation in sample data.

The finding reveals that there is a positive correlation between stakeholders' awareness of vision and mission statements and grade promotion rate as well as retention rate. However, the correlation between the awareness and grade promotion rate was higher at .727 than between awareness and retention rate at .369. This implies that the influence of stakeholders' awareness of vision and mission statements was greater on grade promotion rate than on retention rate as confirmed by the simple linear regression coefficients (R^2 =.527 and .136 respectively). This means that stakeholders' awareness of vision and mission statements can influence 52.7% and 13.6% of grade promotion rate and retention rate respectively.

The principals, teachers and PA chairpersons who were interviewed reported that the awareness of the statements had influenced greatly, both grade promotion rate and retention rate. This was because the stakeholders' awareness of vision and mission statements made each of them play their roles with commitment leading to better performance of students academically hence grade promotion rate which ultimately made students remain in school. For instance, one of the principals averred that:

> It has effect on academic performance hence it affects grade promotion rate up to about 98% and above. I would say yes that awareness helps positively the students in their promotion from one grade to the other. In our school, we have high retention, it can be 90%. We only have cases where students leave our school like in the past in form two, and the majority of them are girls since some of the parents may opt that some of their girls join boarding school. Those are the only cases we have had. I would say that, that statements highly influence (P9).

The same view was advanced by a teacher that:

> It is serving a number of it. What we see like the kind of education we offer is that a number of students are benefiting, they are qualifying. You have also seen most of the students that come from our school are very discipline and sometime we interact with them in the villages, towns so actually it's doing something. The statements of mission and vision yes, contribute to grade promotion because we have heard cases where students come with very low entry behavior like a case of a boy who joined with about 270 marks, did not repeat any grade but ended up scoring B+. The statements are very important. Influencing both grade promotion and retention rates (T19).

Further, the PA chairpersons also added their voice on this issue. One of them brought in the aspect of direct and indirect influence of the statements as she categorically stated that:

> The students, teachers and stakeholders are aware of school mission and vision. This awareness has effect because after the students have known the mission some are being retained and they know what they are supposed to do. The parents are also aware and help them know that it is necessary for them to pay school fees so that the school can run for the benefit of their students (PA9).

The convergence between quantitative and qualitative findings was that the results established influence of stakeholders' awareness of vision and mission statements on grade promotion rate and retention rate of students, hence internal efficiency. The influence is greater on grade promotion rate than on retention rate, though. This finding resonates well with Sang et al., (2015) that clarity of school vision and mission statements; communication of the same to stakeholders and ownership of the whole process by both implementers and managers of the institutions are strategic direction and that these factors lead to effective implementation of strategic plans. The findings of the current study have gone further to fill the gap left by (Sang et al., 2015, Chemei et al., 2014 and Itegi, 2016) by establishing that the awareness of school vision and mission

statements by stakeholders has influence on grade promotion rate and retention rate in public secondary schools.

4.4 Achieved key Performance Indicators in Curriculum and Instruction and Internal Efficiency

The second objective of the study was to determine the effect of achieved key performance indicators in curriculum and instruction on internal efficiency in public secondary schools in Kisumu and Uasin Gishu counties, Kenya. The addressed issues were as follows: The three prioritized subjects whose performances were being improved, the level of achievement of strategies of improving the performance in the chosen subject areas, the highest level of improvement of performance in the chosen subject areas in the last five years, the schools' participation in co-curricular activities, the highest level of participation in co- curricular activities reached and the effect of the achieved key performance indicators in curriculum and instruction on retention and grade promotion rates. The data were gathered using quantitative and qualitative methods concurrently.

(i) Three Prioritized Subjects for Improved Performance

Three prioritized subjects were considered in this study to mean the most poorly performed subjects targeted for performance improvement in the school. The study regarded this variable because it is the starting point when considering improvement of curriculum and instruction and therefore one of the key factors that could affect grade promotion rates and retention rates (Ricardo et al., 2010). The principals, teachers and PA chairpersons were thus requested to indicate three subjects that the school had been working on to improve their performance during the strategic plan implementation period. They gave their responses per subject.

(a) Subject 1 prioritized for improved performance

Subject 1 prioritized for improved performance in this study refers to the subject which the school considered to be the worst performing subject at all levels and required to be given first priority for improvement. This variable could positively affect the students' performance leading to improved grade promotion and retention rates hence internal efficiency. Therefore, to determine the effect of achieved key performance indicators in curriculum and instruction on internal efficiency in the sampled public secondary schools, the principals, teachers and PA chairpersons were requested to indicate the subject given priority number 1 for improved performance by their schools. Their responses are presented in Figure 4.15 in form of percentages.

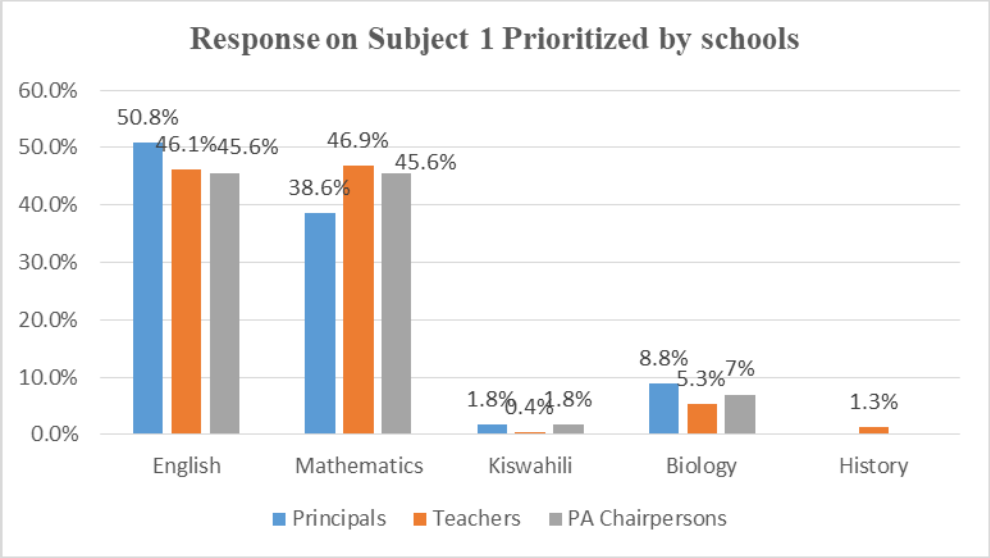

Figure 4.15: Responses of principals, teachers and PA chairpersons on subject 1 prioritized by schools

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From Figure 4.15, majority (50.9%) of the principals indicated English as subject 1 prioritized by the schools while only 46.1% of the teachers indicated the same subject. English and Mathematics were each indicated by equal number (45.6%) of PA chairpersons as subjects 1 prioritized by the schools. On the other hand, 46.9% and 38.6% of teachers and principals respectively indicated Mathematics as subject 1 prioritized by schools. Another subject which was preferred by the respondents was Biology which was indicated by 8.8%, 7.0% and 5.3% of principals, PA chairpersons and teachers respectively while Kiswahili was indicated by 1.8% of principals and PA chairpersons each and 0.4% of teachers. Lastly, History was indicated by only 1.3% of teachers.

The finding implies that majority of the schools had most problem with the performance in both English and Mathematics. This could be because these are compulsory subjects whose performance affects students' career choice and yet sometimes they have a negative attitude towards the subject.

(b) Subject 2 prioritized for improved performance

Subject 2 prioritized for improved performance in this study refers to the subject which the school considered to be worse performing subject at all levels and required to be given second priority for improvement. This variable could positively affect the students' performance leading to improved grade promotion and retention rates hence internal efficiency. Therefore, to determine the effect of achieved key performance indicators in curriculum and instruction on internal efficiency in the sampled public secondary schools, the principals, teachers and PA chairpersons were requested to indicate the

subject given priority number 2 for improved performance by their schools. Their responses are presented in Table 4.9.

Table 4.9: Responses of principals, teachers and PA chairpersons on subject 2 prioritized by schools

Subject	Principal		Teachers		PA Chairperson	
	N_1	%	N_2	%	N_3	%
English	1	1.8	3	1.3		
Maths	25	43.8	91	39.9	24	42.1
Kiswahili	1	1.8	23	10.1	7	12.2
Biology	16	28.0	71	31.1	15	26.3
Chemistry	9	15.8	32	14.0	9	15.8
History	4	7.0	3	1.3	1	1.8
CRE	1	1.8			1	1.8
Physics			1	0.4		
Geography			3	1.3		
Agriculture			1	0.4		
Total	**57**	**100**	**228**	**100**	**57**	**100**

Source: Principals questionnaire, Teachers questionnaire and PA chairpersons questionnaire

N_1 = 57
N_2 = 228
N_3 = 57

From the Table 4.9, majority of the respondents (43.9% of principals, 42.1% of the PA chairpersons and 39.9%) indicated Maths as subject 2 prioritized by the schools. Another preferred subject was Biology which was indicated by 31.1%, 28.1% and 26.3% of teachers, principals and PA chairpersons respectively. Another subject worth reporting is Chemistry which was indicated by same number (15.8%) of both principals and PA chairpersons as subject 2 prioritized by the schools. Kiswahili was also indicated by 12.3%, 10.1% and 1.8% of PA chairpersons, teachers and principals respectively while

History, CRE, Physics, Geography and Agriculture were indicated by very minimal percentage of principals, teachers and PA chairpersons.

The finding reveals that majority of the schools preferred Mathematics and Biology as second prioritized subjects for improvement. This presents Mathematics as a popular subject for improvement because majority of the schools had considered it for priority number 1 and again it was considered for priority number 2 by majority of the schools.

(c) Subject 3 prioritized for improved performance

Subject 3 prioritized for improved performance in this study refers to the subject which the school considered to be bad performing at all levels and required to be given third priority for improvement. This variable could positively affect the students' performance leading to improved grade promotion and retention rates hence internal efficiency. Therefore, to determine the effect of achieved key performance indicators in Curriculum and Instruction on internal efficiency in sampled public secondary schools, the principals, teachers and PA chairpersons were requested to indicate the subject given priority number 3 for improved performance by their schools. Their responses are presented in Table 4.10.

Table 4.10: Responses of principals, teachers and PA chairpersons on Subject 3 chosen to be improved by schools

Subject	Principals		Teachers		PA Chairpersons	
	N_1	%	N_2	%	N_3	%
English	2	3.5	3	1.3		
Maths	1	1.8				
Kiswahili	8	14.0	26	11.4	9	15.8
Biology	4	7.0	23	10.1	7	12.3
Chemistry	24	42.1	115	50.4	28	49.1
Physics	6	10.5	33	14.5	9	15.8
History	1	1.8	2	0.9	1	1.8
Geography	4	7.0	6	2.6	1	1.8
CRE	2	3.5	7	3.1		
Agriculture	1	1.8	7	3.1	1	1.8
Business Studies	3	5.3	5	2.2		
Computer Studies	1	1.8	1	0.4	1	1.8
Total	**342**	**100**	**342**	**100**	**342**	**100**

Source: Principals questionnaire, Teachers questionnaire and PA chairpersons questionnaire

N_1 = 57
N_2 = 228
N_3 = 57

From Table 4.10, majority of respondents (50.4% of teachers, 49.1% of PA chairpersons and 42.1% of principals) indicated that schools selected Chemistry as their subject 3 to be improved. This was followed by Physics at a very wide range of being selected by only 15.8%, 14.5% and 10.5% of PA chairpersons, teachers and principals respectively while 15.8% of PA chairpersons, 14% of principals and 11.4% of teachers selected Kiswahili and the least number (less than 2% of the categories of respondents) selected Computer Studies.

The finding reveals that the most preferred subject by schools as Subject 3 was Chemistry. The results from Figure 4.15 and tables 4.10 and 4.11, therefore reveal that most schools selected either English or Mathematics as Subject 1, either Maths or Biology as Subject 2 and Chemistry as Subject 3. The findings are in tandem with STEM requirement.

The qualitative findings also reveal that most sampled schools in the study locale prioritized Mathematics, Chemistry and Biology in that order. This is confirmed by a number of respondents who were interviewed and gave very insightful information on this issue. One of the teachers highlighted that:

> We have Mathematics, Chemistry then Biology. Chemistry is compulsory. We have been working on Mathematics, Chemistry and Biology because students have not been doing well in them for the past years (T2).

From the PA chairpersons, one of them had this to say concerning the selected subjects:

> In the recent past, the performance of Chemistry has not been good, Biology and Mathematics (PA6).

The principals added their voices to corroborate what the other respondents had given and one of them had this to say:

> We have been concerned about sciences, because the government policy is on the same. As a school we decided to put more effort on Chemistry, Mathematics and Biology but working with Chemistry most (P8).

From the foregoing, the dominant tone in terms of subject selections is mostly about Mathematics and sciences, more particularly Chemistry, Biology and Physics. Other schools are also concerned about Languages. It is also evident that subjects' selection is influenced either by past poor performance or by Government policy.

The results from both quantitative and qualitative findings concur that Mathematics and Science subjects, especially Chemistry and Biology need improvement of performance. This targeting has perhaps been influenced by either past poor performance or Government policy in relation to Science Technology Engineering Mathematics (STEM). According to Rajput (2019), STEM is having critical position at the centre of Kenya's ability to attain Vision 2030. However, Kenya, like any other African countries, faces immense challenge in the field of STEM at all levels of education including secondary, in terms of performance, enrolment and gender disparity. This concurs with the findings about the performance, in the last five years, of the targeted subjects for improvement which was reported by the majority of the respondents to be fluctuating but with improvement as can be seen in the next section of this report.

(ii) Highest Subject Performance Improvement from 2014 to 2018

Highest subject performance improvement from 2014 to 2018 was considered in this study to mean highest performance improvement for subjects which were prioritized in Figure 4.15 and tables 4.10 and 4.11. The period between 2014 and 2018 was chosen because it falls within the period when most of the sampled schools started the implementation of their strategic plans according to Figure 4.12. This information is significant because it was influenced by the level of achievement of Key Performance Indicators in Curriculum and Instruction hence effect on grade promotion and retention rates. The principals, teachers and PA chairpersons were requested to indicate the performance of the selected subjects to help the researcher in working out the highest performance improvement level from 2014 to 2018. The results based on the responses were as presented in figures 4.16, 4.17 and 4.18.

(a) Highest Subject 1 Performance Improvement from 2014 to 2018

Highest subject 1 performance improvement from 2014 to 2018 refers to highest performance in the subjects which sampled schools had given priority number 1 for improvement during the indicated period. Majority had prioritized English and Mathematics while others had indicated Kiswahili and other subjects as found in Figure 4.15. This information is important because improvement in these subjects would be an indication that the students were positively benefiting and that would improve grade promotion and retention rates hence, internal efficiency which was an independent variable for the study. The principals, teachers and PA chairpersons were therefore requested to indicate the performance of the selected subject 1 to help the researcher in working out the highest performance improvement level from 2014 to 2018. The results based on the responses are as presented in Figure 4.16.

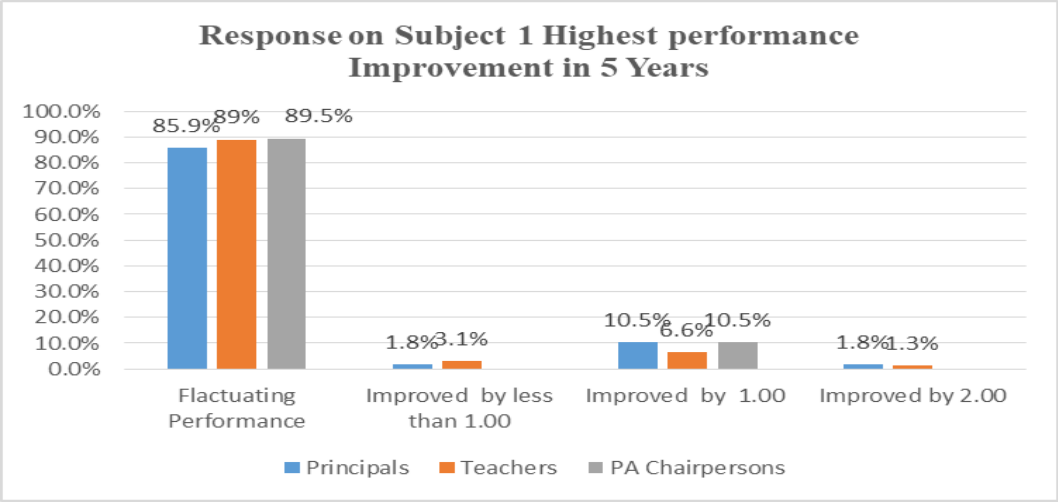

Figure 4.16: Principals, teachers and PA chairpersons response on subject 1 highest performance improvement

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From Figure 4.16, majority of the respondents (89.5% of the PA chairpersons, 89% of teachers and 85.9% of principals) indicated that the performance between 2014 and 2018 of prioritized subject 1 had been fluctuating while 10.5% of both principals and PA chairpersons and 6.6% of teachers noted improvement by mean of 1.00. Finally, improvements by mean of less than 1.00 and more than 2.00 were indicated by 1.8% of principals for both; and 3.1% and 1.3% of teachers respectively. The finding reveals that majority of the schools had their performance in subjects prioritized number 1 for improvement fluctuating but with improvement. This implies that strategies for improvement required a bit of time to be implemented.

(b) Highest Subject 2 Performance Improvement from 2014 to 2018

Highest subject 2 performance improvement from 2014 to 2018 refers to highest performance in the subjects which sampled schools had given priority number 2 for improvement during the indicated period. Majority had prioritized Mathematics and Chemistry while others had indicated Biology and other subjects as found in Table 4.10. This information is important because improvement in these subjects would be an indication that the students were positively benefiting and that would improve grade promotion and retention rates hence internal efficiency which was an independent variable for the study. The principals, teachers and PA chairpersons were as such requested to indicate the performance of the selected subject 2 to help the researcher in working out the highest performance improvement level from 2014 to 2018. The results based on the responses were as presented in Figure 4.17.

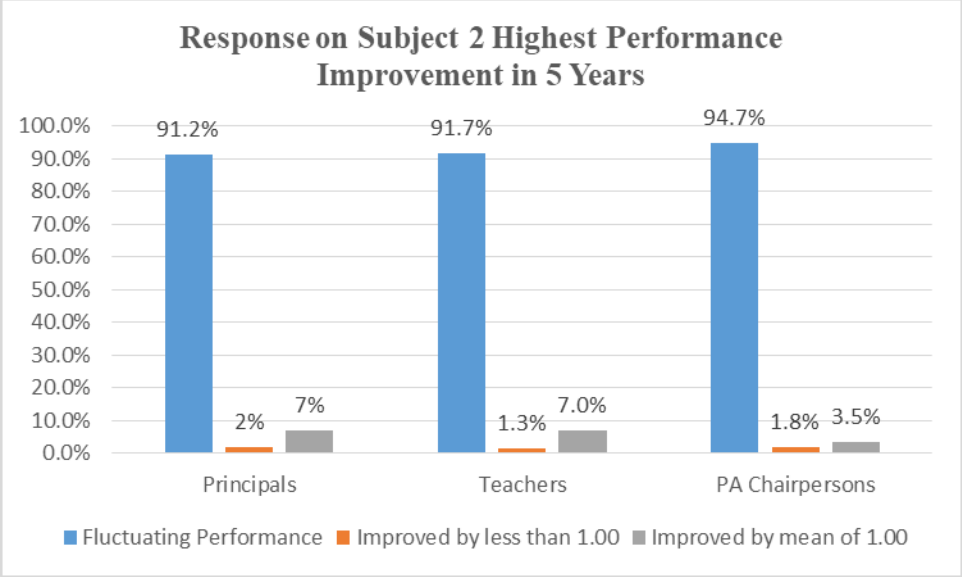

Figure 4.17: Principals, teachers and PA chairpersons response on subject 2 highest performance improvement in 5 years

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From Figure 4.17, most of the respondents (94.7% of PA chairpersons, 91.7% of teachers and 91.2% of principals maintained that subject 2 selected by schools for improvement between 2014 and 2018 had fluctuating performance while 7% of both principals and teachers and 3.5% of PA chairpersons concurred that subject 2 had improved by mean of 1.00. Further, less than 2% of all the category of respondents indicated improvement by less than mean of 1.00.

The finding confirms that majority of the sampled schools had the performance of subjects prioritized number 2 fluctuating but with improvement. This implies concerted efforts in these schools to improve academically.

(c) Highest Subject 3 Performance Improvement from 2014 to 2018

Highest subject 3 performance improvement from 2014 to 2018 refers to highest performance in the subjects which sampled schools had given priority number 3 for improvement during the indicated period. Majority had prioritized Chemistry and Biology while others had indicated Physics and other subjects as found in Table 4.11. This information is important because improvement in these subjects would be an indication that the students were positively benefiting and that would improve grade promotion and retention rates hence internal efficiency which was an independent variable for the study. The principals, teachers and PA chairpersons were therefore requested to indicate the performance of the selected subject 3 to help the researcher in working out the highest performance improvement level from 2014 to 2018. The results based on the responses are as presented in Figure 4.18.

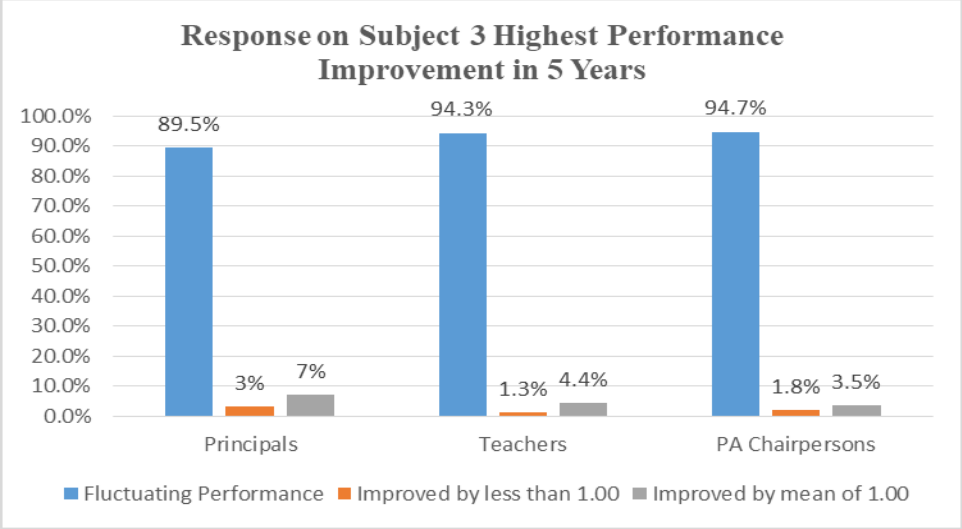

Figure 4.18: Principals, teachers and PA chairpersons response on subject 3 highest performance improvement in 5 years

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From Figure 4.18, most of the respondents (94.7% of PA chairpersons, 94.3% of teachers and 89.5% of principals) concurred that subject 3 selected by schools for improvement had fluctuating performance while 7% of the principals, 4.4% of teachers and 3.5% of PA chairpersons indicated an improvement by mean of 1.00. Lastly, 3.5% of principals, 1.8 % of PA chairpersons and 1.3 % of teachers noted improvement by mean of 1.00. This finding also reveals that majority of the sampled schools had performance in the third targeted subjects fluctuating but with improvement.

These findings were complemented by qualitative findings from interview respondents, document analysis and observation sheet. It was established that the three prioritized subjects had fluctuating improvement but there was concerted effort from every player to have the performance of these subjects improved. One of the principals had this to say:

> Definitely, we have achieved a lot. Just to remind you that in 2016, our school was the best school in chemistry in the whole of Sub-county with a mean of 5.5 that was the highest in the sub county and cannot be taken for granted. However, we have challenges in mathematics, but we are improving. Highest positive deviation we've had in mathematics I think it was 1.2 in 2015 but again dropped by 0.2 in 2016 (P6).

The sentiment was given support by the teachers as one of them averred that:

> A big improvement has been made on mathematics, work is still on progress but in mathematics greatest improvement not by much but rising improvement in mathematics and also in Biology (T23).

From both quantitative and qualitative results it is clear that all the three subjects selected had fluctuating performance. The results presented, demonstrate that subject performance still required a lot of efforts and new strategies in the study locale. This begs the question of: what were the achieved key performance indicators in curriculum and instruction which were intended to improve the performance in these subjects?

(iii) Achieved Key Performance Indicators in Curriculum and Instruction

To ensure improvement in the three prioritized subjects and academic performance generally, sampled schools had strategies whose implementations had to be monitored through achievement of Key Performance Indicators. The study considered this information because the achieved Key performance Indicators are what confirm the implementation of strategic plan and the achieved KPIs in Curriculum and Instruction have direct influence on grade promotion and retention rates hence internal efficiency. The principals, teachers and PA chairpersons were asked to indicate whether the given activities under curriculum and instruction were completed or ongoing as an illustration of level of achievement of key performance indicators. They responded as follows:

(a) Availing Text Books Activity

Text books are the key learning materials which are used by both teachers and students in teaching and learning process. Status of availing text books is significant to this study because according to Otieno (2014), availability of good text books is one of the significant factors which influence students' progression hence internal efficiency which is the dependent variable of this study. The principals, teachers and PA chairpersons were asked to indicate whether availing text books was a completed or an ongoing activity. Their responses are as presented in Figure 4.19.

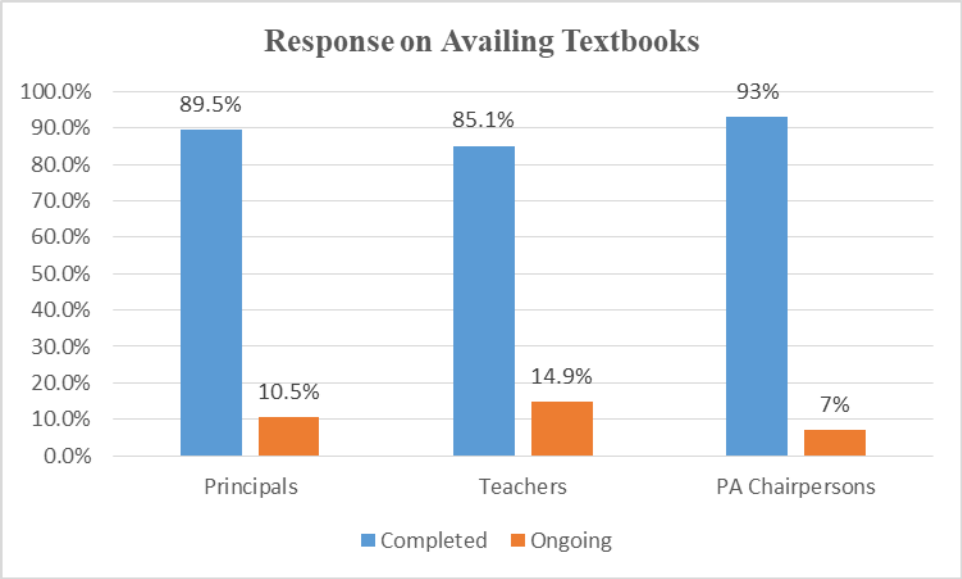

Figure 4.19: Principals, teachers and PA chairpersons response on availing text books

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From Figure 4.19, most of the respondents (93% of PA chairpersons, 89.5% of principals and 85.1% of teachers) concurred that availing text books was a completed activity while 14.9% of teachers, 10.5% of principals and 7% of PA chairpersons was still an ongoing activity.

This finding implies that there were adequate text books for the three prioritized subjects in the majority of the sampled schools. This means that both the students and teachers did not strain in their learning and teaching activities respectively. This finding perhaps offers explanation for fluctuating but improved performance and hence noted increased grade promotion and retention rates.

(b) Availing Revision Books Activity

Revision Books are the key supplementary learning materials which are used by both teachers and students in reviewing the concepts which have been learnt and taught during normal class learning lesson. Status of availing revision books is significant to this study because availability of adequate revision books enables the students to overlearn the taught and learnt concepts. This ultimately influences students' progression hence internal efficiency which is the dependent variable of this study. The principals, teachers and PA chairpersons were asked to indicate whether availing revision books was a completed or an ongoing activity. Their responses are as presented in Figure 4.20.

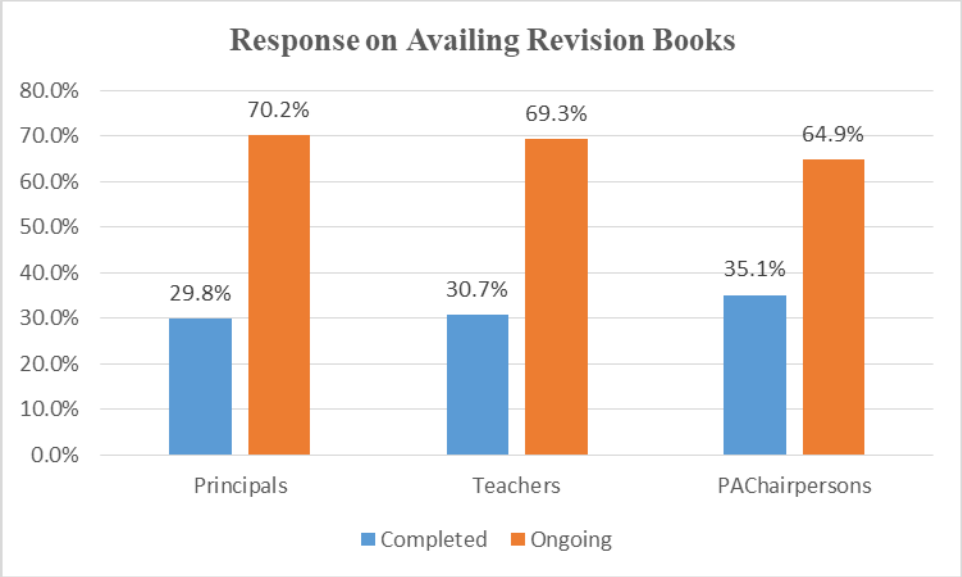

Figure 4.20: Principals, teachers and PA chairpersons response on availing revision books

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From Figure 4.20, majority of the respondents (70.2% of principals, 69.3% of teachers and 64.9% of PA chairpersons) concurred that availing revision books was still an ongoing activity while 35.1% of PA chairpersons, 30.7% of teachers and 29.8% of principals confirmed that availing revision books was a completed activity.

The finding reveals that majority of the sampled schools was still going on with the availing of revision books. This implied that teachers strained to provide the students extra work to overlearn the taught and learnt concepts. This could have negative influence on progression of the students as had been established by Charles (2009) that inadequacy of such resources is a hindrance in attainment of quality objective of education.

(c) Improving Pedagogy Activity

Improving pedagogy in this study refers to the process of improving the teachers teaching methods and techniques through deliberate School-Based In-Service, Education and Training (INSETs). This information is important to this study because growth in teacher performance and professional development are crucial in improving classroom practice and teaching, which ultimately improves student achievement (Baloglu et al., 2008, Wanjala et al., 2014) hence internal efficiency, which was a dependent variable in this study. The principals, teachers and PA chairpersons were in this regard, asked to indicate whether improving pedagogy was a completed or an ongoing activity. Their responses were as presented in Figure 4.21.

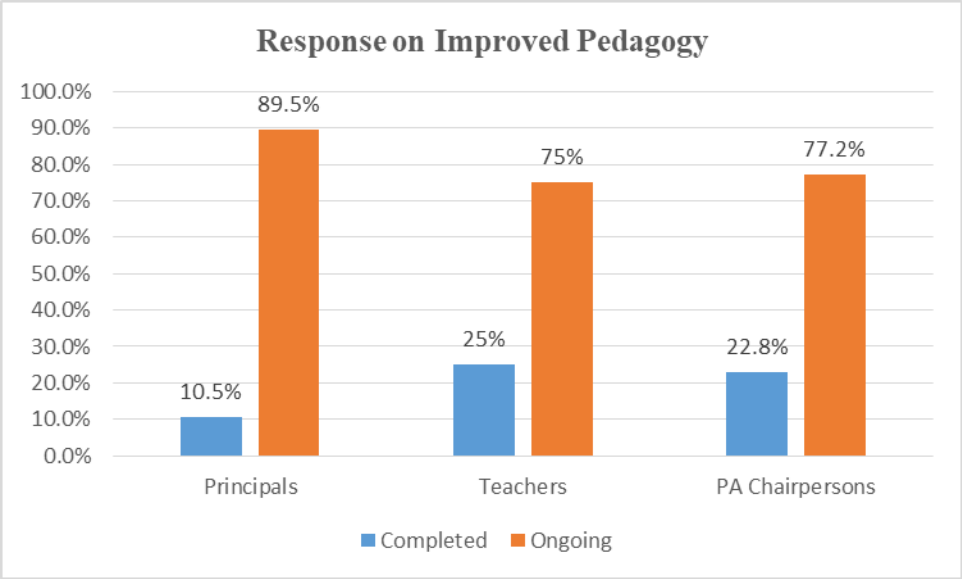

Figure 4.21: Principals, teachers and PA chairpersons response on improved pedagogy

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From Figure 4.21, majority of the respondents (89.5% of principals, 77.2% of PA chairpersons and 75% of teachers) confirmed that improving pedagogy was still an ongoing activity while 25% of teachers, 22.8% of PA chairpersons and 10.5% of principals indicated that it was a completed activity. The finding reveals that majority of the schools did not expedite the pedagogical activity which could seriously affect the classroom practice hence students' progression. This finding is supported by Wanjala et al., (2014) that some strategic plans display ineffective programmes to establish professional development when this is the crucial area in enhancing student performance. Yet this is what ultimately leads to grade promotion and retention hence internal efficiency.

(d) Improving student/teacher ratio

Student/teacher ratio is considered to mean the number of students per teacher in a given class for classroom instruction. This information is important because earlier studies had confirmed that student/teacher ratio is a more significant factor affecting promotion of learners (Otieno, 2014) hence internal efficiency which was the dependent variable for this study. The principals, teachers and PA chairpersons were therefore asked to indicate whether improving student: teacher ratio was a completed or an ongoing activity. Their responses are as presented in Table 4.11.

Table 4.11: Principals, teachers and PA chairpersons response on improved student: teacher ratio

	Principals		**Teachers**		**PA Chairpersons**	
Status	**N_1**	**%**	**N_2**	**%**	**N_3**	**%**
Completed	14	24.6	77	33.8	17	29.8
Ongoing	43	75.4	151	66.2	40	70.2
Total	**57**	**100**	**228**	**100**	**57**	**100**

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

N_1 = 57
N_2 = 228
N_3 = 57

From Table 4.11, majority of the respondents (75.4% of principals, 70.2% of PA chairpersons and 66.2% of teachers) indicated that improved student: teacher ratio was still an ongoing process while 33.8% of teachers, 29.8% of PA chairpersons and 24.6% of

principals noted that it was a completed activity. The finding implies that employing more teachers to help improve the student/teacher ratio amidst exponential rise in the number of students in majority of the sampled schools was still a challenge to both BOM and the government. This may require deliberate commitment by both parties to come up with a policy which can help fast track the improvement of student/teacher ratio.

This finding is in tandem with the report by Adepoju et al., (2011) that many state governments in Nigeria have made several attempts to make it a policy not to have more than 30 students per class in public secondary schools in order to improve the performance of students academically through effective curriculum delivery. The essence of such measures is to ensure students' progression and retention hence internal efficiency.

(e) Improving Student/Textbook ratio Activity

Student/Textbook ratio refers to the number of students sharing one book. Status of improving student/text books ratio is significant to this study because improved ratio means the books are adequate and leads to attainment of qualitative objective of education hence internal efficiency which was dependent variable of this study. This is in reference to Charles (2009) that inadequate provision of teaching and learning resources such as textbooks greatly hinders the attainment of qualitative objective of education.

The principals, teachers and PA chairpersons were thus asked to indicate whether improving student: textbook ratio was a completed or an ongoing activity. Their responses are as presented in percentages in Figure 4.22.

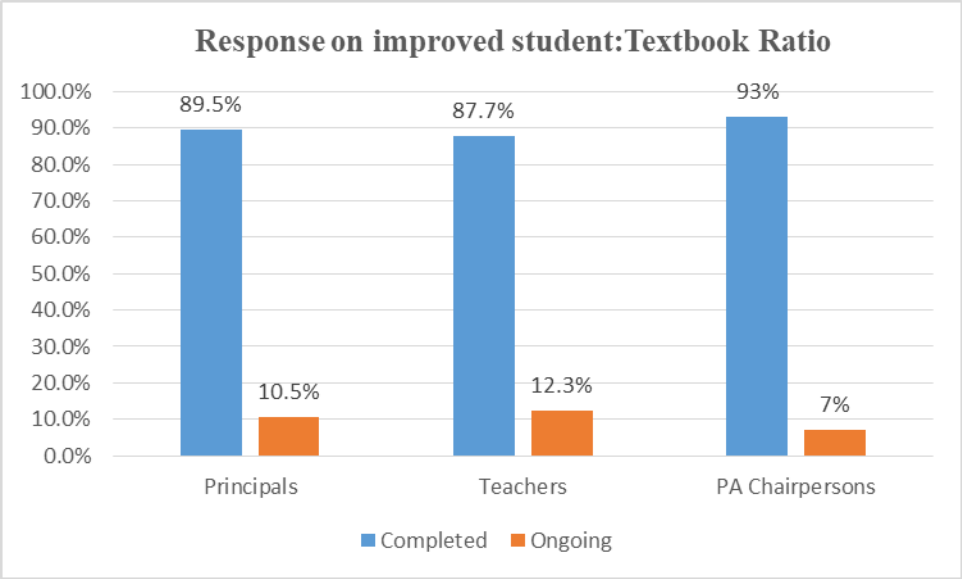

Figure 4.22: Principals, teachers and PA chairpersons response on improved student: textbook ratio

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From Figure 4.22, most of the respondents (93% of PA chairpersons, 89.5% of principals and 87.7% of teachers) indicated that improved student: textbook ratio was still an ongoing activity while 12.3% of teachers, 10.5% of principals and 7% of PA chairpersons concurred that it was a completed activity.

The finding reveals an impressive scenario in most of sampled public secondary schools that textbooks were available and were being utilized among the students at an improved ratio. This ultimately led to improved academic performance in various targeted subjects though at a fluctuating rate. It means that adequate textbooks shared at an improved ratio among students will lead to improved student progression and retention hence internal

efficiency. This is an attainment of quality objective of education (Charles 2009; Otieno, 2014).

(f) Improving Students' Library Activity

Students' library activity refers to the academic work given to the students which involves library research. This makes students critical and creative in their reasoning and ultimately builds their capacity to perform better in academic work leading to improved grade promotion and retention hence internal efficiency. The principals, teachers and PA chairpersons were as such asked to indicate whether improving students' library work was a completed or an ongoing activity. Their responses are as presented in Table 4.12.

Table 4.12: Principals, teachers and PA chairpersons response on improved students' library work

	Principals		**Teachers**		**PA Chairpersons**	
Status	**N_1**	**%**	**N_2**	**%**	**N_3**	**%**
Completed	6	10.5	35	15.4	10	17.5
Ongoing	51	89.5	193	84.6	47	82.5
Total	**57**	**100**	**228**	**100**	**57**	**100**

Source: Principals questionnaire, Teachers questionnaire and PA chairpersons questionnaire

N_1 = 57
N_2 = 228
N_3 = 57

From Table 4.12, majority of respondents (89.5% of principals, 84.6% of teachers and 82.5% of PA chairpersons) confirmed that improved students library work was still an ongoing activity while 17.5% of PA chairpersons, 15.4% of teachers and 10.5% of principals indicated that it was an ongoing activity. This finding reveals that majority of the sampled schools were still struggling with improving students library work which could help improve their capacity to progress and consequently be retained in school. This perhaps could be because these schools had not constructed libraries as indicated in Table 4.19. Such scenario has adverse effect on grade promotion and retention rates as corroborated by Sang et al., (2013) in their conclusion that repetition and drop out, which are opposite of grade promotion and retention, are higher in schools with inadequate infrastructure.

(iv) Participation in Co-Curricular Activities

Participation in co-curricular activities refers to schools allowing their students to take part in non- academic activities which are under Curriculum and Instruction. This information is significant to this study as it was a confirmation that the schools had comprehensive strategic plans which focus on the goal of developing an all - round student (Reeves, 2008; Rumelt, 2011). The principals, teachers and PA chairpersons were thus requested to indicate whether their schools participated in co-curricular activities or not. Their responses are as shown in Figure 4.23.

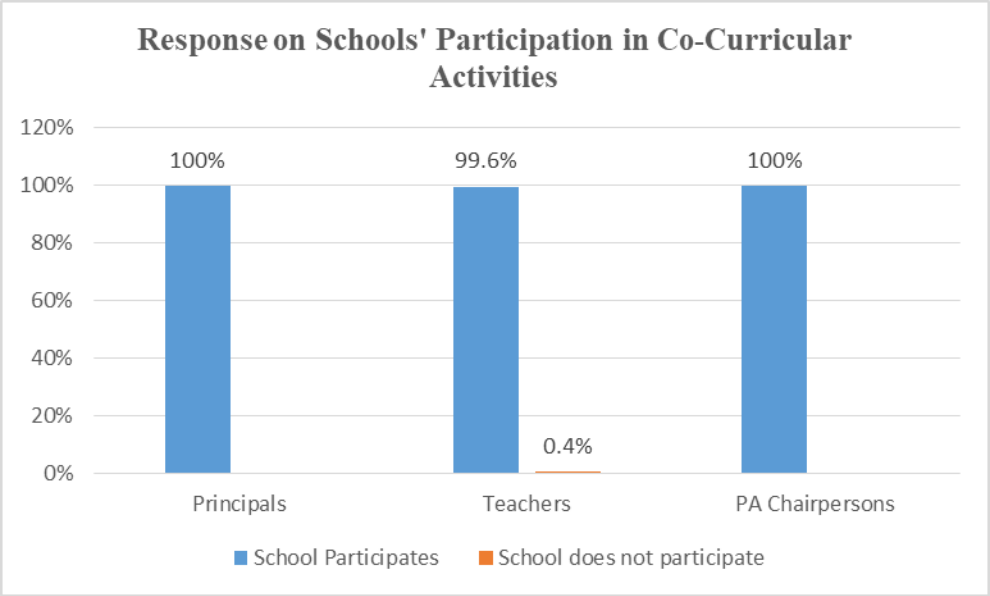

Figure 4.23: Principals, teachers and PA chairpersons responses on schools participation in co-curricular activities

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From Figure 4.23, most of the respondents (100% of principals, 100% of PA chairpersons and 99.6% of teachers confirmed that schools participated in co-curricular activities while 0.4% of teachers indicated that their school did not participate in co-curricular activities. The finding reveals that almost all the sampled public secondary schools participated in co-curricular activities. This means that schools had comprehensive strategic plans, as opposed to uncomprehensive plans, which they were implementing. Such plans take care of the needs of all students in terms of both academic and co-curricular so that the society can have all - round individuals.

This finding concurs with the argument of other researchers that some schools do not have comprehensive plans because they not only focus on material resources for the

school such as buses and building, ignoring teaching and learning but also lay great emphasis on the results of paper and pencil tests, thereby ignoring the goal of developing an all - round student (Reeves, 2008; Rumelt, 2011; Wanjala et al., 2014).

(v) Highest Level Reached in Co-Curricular Activities

Highest level reached in co-curricular activities refers to the top most level a school reached during competition with other schools in a particular activity. This information is of significance to this study because a student who competed in an activity up to a certain level would be motivated to remain and continue with schooling. The principals, teachers and PA chairpersons were therefore requested to indicate the highest level of participation reached by their schools in various co-curricular activities. The responses are as indicated in subsequent Figures and Tables.

(a) Highest Level Reached in Football Activity

Highest level reached in Football activity refers to the top most level that a particular school reached during ball games competition. This information is important to this study because Football as an activity at least made some students who could have dropped out of school to continue with learning. This is retention hence internal efficiency which was the dependent variable for this study. The principals, teachers and PA chairpersons were therefore requested to indicate the highest level of participation reached by their schools in Football activity. The responses are indicated in Figure 4.24.

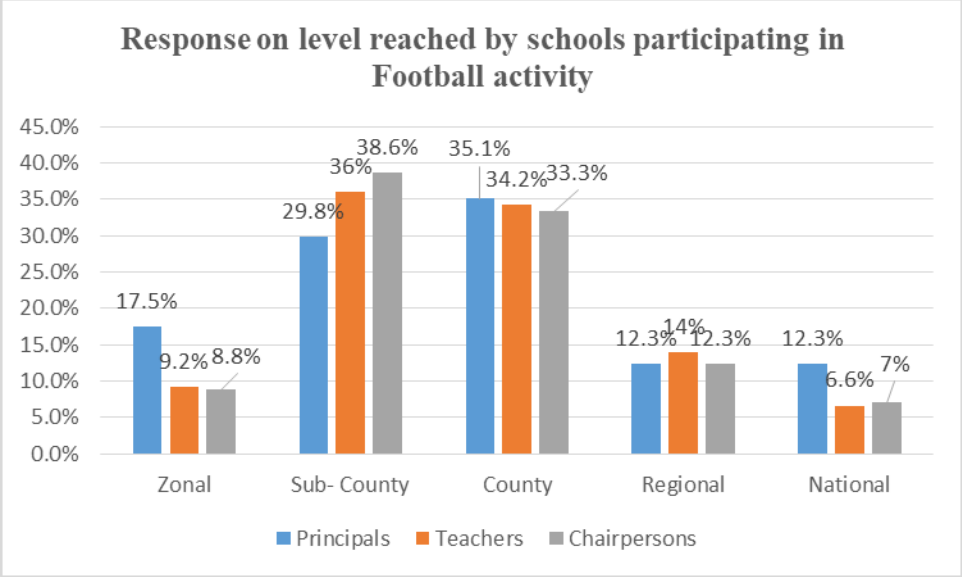

Figure 4.24: Principals, teachers and PA chairpersons response on level reached by schools participation in Football activity

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From Figure 4.24, 36.8% of PA chairpersons, 36% of teachers and 29.8% of principals indicated that their schools reached Sub-County level while 35.1% of principals, 34.2% of teachers and 33.3% of PA chairpersons confirmed that their schools reached county level in participating in Football. There were also schools which reached just zonal level as indicated by 17.5% of principals, 10.5% of PA chairpersons and 9.2% of teachers while other schools reached regional and national levels as indicated by 14% of teachers, 12.3% of both principals and PA chairpersons; and 7% of PA chairpersons, 6.6% of teachers and 5.3% of principals respectively.

The result reveals that each school participated in Football activity up to the level that was commensurate to the best ability of their players. This means that schools were

concerned about the development of interest and talent of all students such that even those who were weak academically but talented in Football continued with their school life. It enabled the sampled schools to produce all - round students. The result therefore places the schools in category different from the schools without comprehensive strategic plans which lay great emphasis on the results of paper and pencil tests, hence ignoring the goal of developing all - round student (Wanjala et al., 2014).

(b) Highest Level Reached in Netball Activity

Highest level reached in Netball activity refers to the top most level that a particular school reached during Netball games competition. This information is important to this study because Netball as an activity at least made some students who could have dropped out of school to continue with learning. This is retention hence internal efficiency which was the dependent variable for this study. The principals, teachers and PA chairpersons were requested to indicate the highest level of participation reached by their schools in Netball activity. The responses are as indicated in Table 4.13.

Table 4.13: Principals, teachers and PA chairpersons response on level reached by schools in Netball activity

	Principal		Teachers		PA Chairpersons	
	N_1	%	N_2	%	N_3	%
Zonal	13	22.8	39	17.1	12	21.0
Sub- County	22	38.5	92	40.4	18	31.6
County	10	17.5	41	18.0	12	21.0
Regional	3	5.3	18	7.9	5	8.8
National	1	1.8	6	2.6	1	1.8
Not participated	3	5.3	13	5.7	3	5.3
Not sure	5	8.8	19	8.3	6	10.5
Total	**57**	**100**	**228**	**100**	**57**	**100**

Source: Principals questionnaire**,** teachers questionnaire and PA chairpersons questionnaire

N_1 = 57
N_2 = 228
N_3 = 57

From Table 4.13, majority of respondents (40.4% of teachers, 38.5% of principals and 31.6% of PA chairpersons) confirmed that their schools reached sub- county level in participating in Netball while 21.1% of PA chairpersons and 17.5% of both principals and teachers concurred that their schools reached county level. There were also schools which reached just zonal level as indicated by 22.8% of principals, 21.1% of PA chairpersons and 17.1% of teachers while others reached regional and national levels as indicated by 8.8% of PA chairpersons, 8.3% of teachers and 5.3% of principals; and 2.6% of teachers and 1.8% of both principals and PA chairpersons respectively. Further, there were schools which did not participate in Netball but they were either Girls schools or

Mixed schools as indicated by 5.7% of teachers and 5.3% of both principals and PA chairpersons while in other schools Netball was not applicable because they were Boys schools as indicated by 10.6% of PA chairpersons, 8.8% of principals and 8.3% of teachers.

The results reveal that all the girls and mixed schools participated in Netball. This means all the girls who were in the sampled public secondary schools and had talent in Netball were given the opportunity to develop their talents and played up to the level that was commensurate to their abilities. This was intended to develop all - round students and all also to keep in school the girls who were weak academically (Wanjala et al., 2014).

(c) Highest Level Reached in Volleyball Activity

Highest level reached in Volleyball activity refers to the top most level that a particular school reached during Volleyball games competition. This information is important to this study because Volleyball as an activity at least made some students who could have dropped out of school to continue with learning. This is retention hence internal efficiency which was the dependent variable for this study.

The principals, teachers and PA chairpersons were requested to indicate the highest level of participation reached by their schools in Volleyball activity. The responses were as indicated in percentages in Figure 4.25.

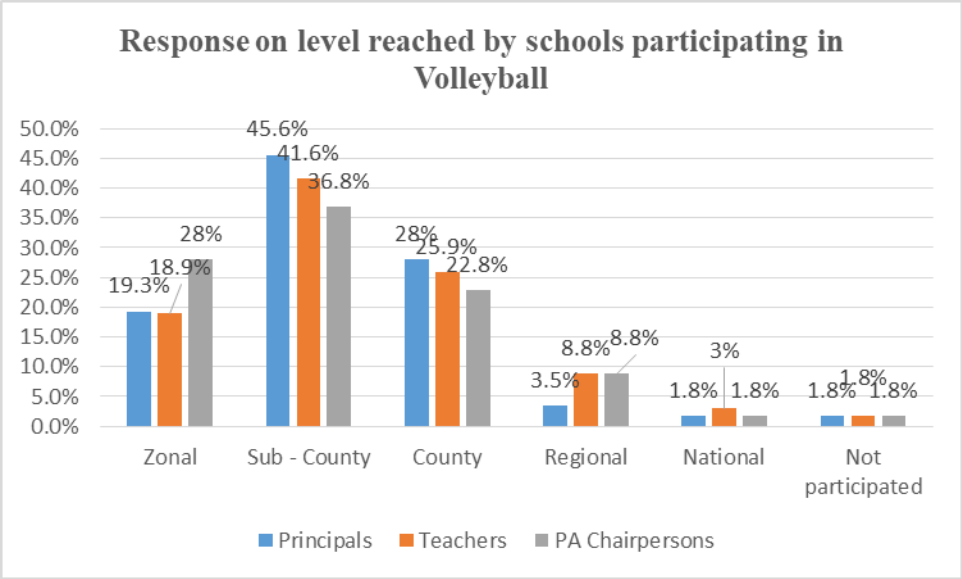

Figure 4.25: Principals, teachers and PA chairpersons response on level reached by schools participating in Volleyball

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From Figure 4.25, majority of respondents (45.6% of principals, 41.7% of teachers and 36.8% of PA chairpersons confirmed that their schools reached sub-county level in Volleyball while 28.1% of principals, 25.9% of teachers and 22.8% of PA chairpersons indicated their schools reached county level. There were schools which reached zonal level as indicated by 28.1% of PA chairpersons, 19.3% of principals and 18.9% of teachers while other schools reached regional level and national level as indicated by 8.8% of both teachers and PA chairpersons and 3.1% of principals; and 3.1% of teachers and 1.8% of both principals and PA chairpersons respectively. Finally, 1.8% of all the categories of the respondents concurred that their schools did not participate in Volleyball.

(d) Highest Level Reached in Basketball Activity

Highest level reached in Basketball activity refers to the top most level that a particular school reached during Basketball games competition. This information is important to this study because Basketball as an activity at least made some students who could have dropped out of school due to poor academic performance continue with learning. This is retention hence internal efficiency which was the dependent variable for this study. The principals, teachers and PA chairpersons were therefore requested to indicate the highest level of participation reached by their schools in Basketball activity. The responses are as indicated in Table 4.14.

Table 4.14: Principals, teachers and PA chairpersons response on level reached by schools participating in Basketball activity

	Principals		**Teachers**		**PA Chairpersons**	
Status	**N_1**	**%**	**N_2**	**%**	**N_3**	**%**
Zonal	2	3.5	6	2.6	1	1.8
Sub – County	8	14.0	36	15.8	9	15.8
County	11	19.3	39	17.1	12	21.0
Regional	1	1.8	8	3.5	2	3.5
National	1	1.8	5	2.2	1	1.8
Not participated	34	59.6	59.6	58.3	31	56.1
Total	**57**	**100**	**228**	**100**	**57**	**100**

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

N_1 = 57
N_2 = 228
N_3 = 57

From Table 4.14, majority of respondents (58.3% of teachers, 57.9% of principals and 54.4% of PA chairpersons) indicated that their schools did not participate in Basketball while 21.1% of PA chairpersons, 19.3% of principals and 17.1% of teachers confirmed

that their schools reached county level. Some schools reached sub-county level as indicated by 15.8% of PA chairpersons, 15% of teachers and 14% of principals while others reached zonal level as indicated by 3.5% of principals, 2.6% of teachers and 1.8% of PA chairpersons. There were schools which reached regional as indicated by 3.5% of both teachers and PA chairpersons and 1.8 % of principals while 2.2 % of teachers, 1.8% of both principals and PA chairpersons indicated that their schools reached national level. Finally, 1.8% of both principals and PA chairpersons and 0.4% of teachers indicated that they were not sure of the level their schools reached in Basketball.

The finding indicates that majority of the sampled schools did not participate in Basketball activity up to any level. This could have been because the students had no interest or there was not even a single teacher who could train Basketball.

(e) Highest Level Reached in Hockey Activity

Highest level reached in Hockey activity refers to the top most level that a particular school reached during Hockey games competition. This information is important to this study because Hockey as an activity at least made some students who could have dropped out of school to continue with learning. This is retention hence internal efficiency which was the dependent variable for this study. The principals, teachers and PA chairpersons were therefore requested to indicate the highest level of participation reached by their schools in Hockey activity. The responses are indicated in Figure 4.26.

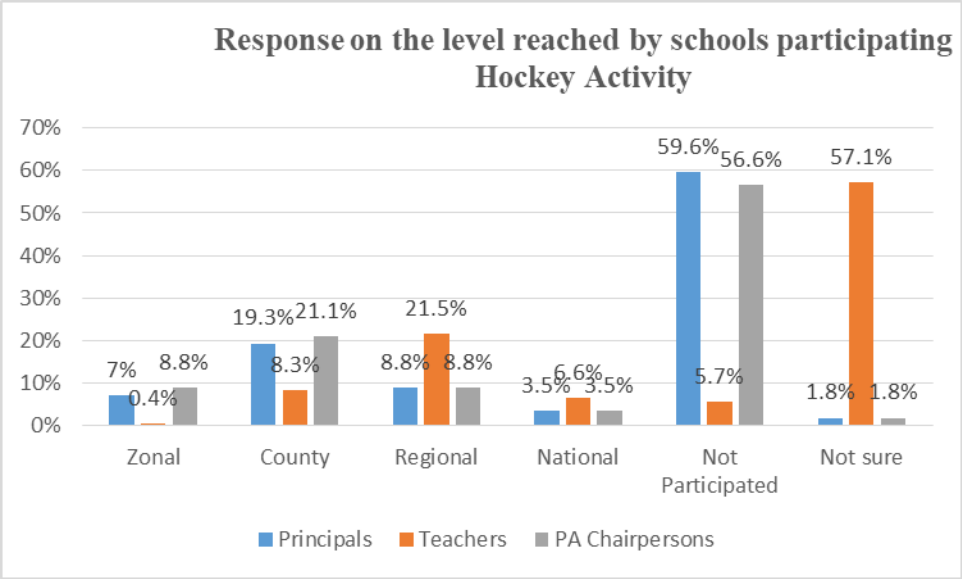

Figure 4.26: Principals, teachers and PA chairpersons response on level reached by schools participating in hockey activity

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From Figure 4.26, Majority (57.5%) of teachers were not sure of the level their schools reached in participating in Hockey while majority of principals (59.6%) and PA chairpersons (56.1%) confirmed that their schools did not participate in hockey. Some schools reached county level as indicated by 21.1% of PA chairpersons, 19.3% of principals and 8.3% of teachers while others reached regional level as confirmed by 21.5% of teachers, 8.8% of both principals and PA chairpersons. There was a group of schools which managed only zonal level as indicated by 8.8% of PA chairpersons, 7% by principals and 0.4% of teachers while another group managed to reach national level as confirmed by 6.6% of teachers and 3.5% of both principals and PA chairpersons.

The results reveal that more than a half of the sampled schools did not participate in Hockey activity. This meant that either the students did not have interest and talent in Hockey or there was no teacher who had interest and expertise to train the students in this activity.

(f) Highest Level Reached in Athletics Activity

Highest level reached in athletics activity refers to the top most level that a particular school reached during Athletics competition. This information is important to this study because Athletics as an activity at least made some students who could have dropped out of school to continue with learning. This is retention hence internal efficiency which was the dependent variable for this study. The principals, teachers and PA chairpersons were thus requested to indicate the highest level of participation reached by their schools in Athletics activity. The responses are as indicated in Table 4.15.

Table 4.15: Principals, teachers and PA chairpersons response on level reached by schools participating in Athletics activity

Status	**Principals**		**Teachers**		**PA Chairpersons**	
	N_1	**%**	**N_2**	**%**	**N_3**	**%**
Zonal	3	5.3	12	5.3	1	1.8
Sub – County					5	8.8
County	9	15.8	15	6.6	16	28.0
Regional	17	29.8	84	36.8	18	31.6
National	17	29.8	59	25.9	15	26.3
Not participated	11	19.3	58	25.4	2	3.5
Total	**57**	**10**	**228**	**100**	**57**	**100**

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

N_1 = 57
N_2 = 228
N_3 = 57

From the Table 4.15, the same number of schools reached regional and national levels in athletics as indicated by 29.8% of principals. This was confirmed by 36.8% of teachers and 31.6% of PA chairpersons for regionals while for national level it was confirmed by 26.3% of PA chairpersons and 25.9% of teachers. There were some schools which did not participate in athletics at all as confirmed by 25.4% of teachers, 19.3% of principals and 3.6% of PA chairpersons while other schools just reached only zonal level as indicated by 5.3% of both principals and teachers and 1.8% of PA chairpersons. Finally, only 8.8% of PA chairpersons indicated that some schools reached county level in athletics.

The finding reveals that majority of the sampled schools participated in Athletics competition and their participants reached various levels which definitely motivated the students (both athletes and non- athletes) to continue identifying with the school up to the end of their Form Four course.

(g) Highest Level Reached in Drama Activity

Highest level reached in Drama activity refers to the top most level that a particular school reached during Drama Festivals competition. This information is important to this study because Drama as an activity at least made some students who could have dropped out of school to continue with learning. This is retention hence internal efficiency which was the dependent variable for this study. The principals, teachers and PA chairpersons were therefore requested to indicate the highest level of participation reached by their schools in Drama activity. The responses are indicated in Figure 4.27.

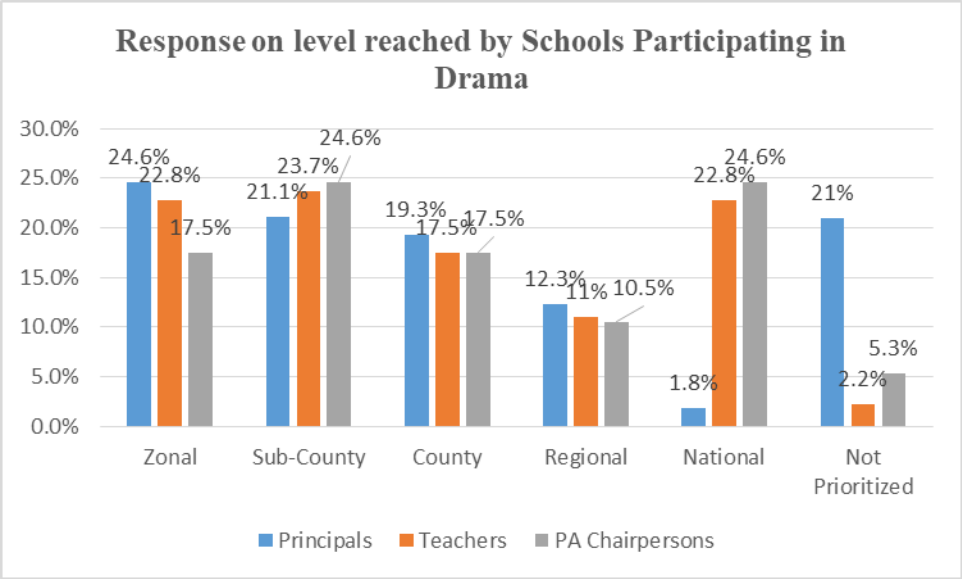

Figure 4.27: Principals, teachers and PA chairpersons responses on level reached by schools participating in drama activity

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

Figure 4.27 illustrates that 24.6% of principals indicated that their schools reached zonal level in Drama which was confirmed by 22.8% of teachers and 17.5% of PA chairpersons while equal number of principals (21.1%) indicated schools reaching both sub-county and county levels. This was confirmed by 24.6% of PA chairpersons and 23.7% of teachers for sub-county level while 17.5% of both teachers and PA chairpersons for county level. Finally, 5.3% of PA chairpersons, 2.2% of teachers and 1.8% of principals indicated that their schools reached national level while 24.6% of PA chairpersons, 22.8% of teachers and 21.1% of principals indicated that their schools did not participate in Drama.

The finding reveals that most of the sampled schools participated in Drama Festivals competitions and reached various levels. This was actually a motivator for students to

work hard in order to progress and remain in school so that they could continue identifying with their schools.

(h) Highest Level Reached in Rugby Activity

Highest level reached in Rugby activity refers to the top most level that a particular school reached during Rugby games competition. This information is important to this study because Rugby as an activity at least made some students who could have dropped out of school to continue with learning. This is retention hence internal efficiency which was the dependent variable for this study. The principals, teachers and PA chairpersons were therefore requested to indicate the highest level of participation reached by their schools in Rugby activity. The responses are as indicated in Table 4.16.

Table 4.16: Principals, teachers and PA chairpersons response on level reached by schools participating in Rugby activity

	Principals		**Teachers**		**PA Chairpersons**	
Status	**N_1**	**%**	**N_2**	**%**	**N_3**	**%**
Zonal	2	3.5	10	4.4	3	5.3
Sub - County	4	7.0	18	7.9	5	8.8
County	5	8.8	24	10.5	6	10.5
Not participated	46	80.7	176	77.2	43	75.4
Total	**57**	**100**	**228**	**100**	**57**	**100**

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

N_1 = 57
N_2 = 228
N_3 = 57

From Table 4.16, majority of respondents (78.9% of principals, 77.2% of teachers and 75.5% of PA chairpersons) confirmed that their schools did not participate in Rugby while 10.5% of principals, teachers and PA chairpersons confirmed that their schools reached county level in Rugby. There were some schools which reached sub-county level as indicated by 8.8% of PA chairpersons, 8.3% of teachers and 7% of principals while others reached zonal level as indicated by 5.3% of PA chairpersons, 3.9% teachers and 3.5% of principals.

The results reveal that majority of the sampled schools did not participate in Rugby perhaps because either the students were not interested and talented in Rugby or there was no teacher with expertise to train Rugby. Nevertheless, the schools which participated in Rugby gave the few talented and interested students opportunity to develop their talents and reason to continue identifying with their schools.

(i) Highest Level Reached in Handball Activity

Highest level reached in Handball activity refers to the top most level that a particular school reached during Handball games competition. This information is important to this study because Handball as an activity at least made some students who could have dropped out of school to continue with learning. This is retention hence internal efficiency which was the dependent variable for this study. The principals, teachers and PA chairpersons were as such, requested to indicate the highest level of participation reached by their schools in Handball activity. The responses are as indicated in percentages in Figure 4.28.

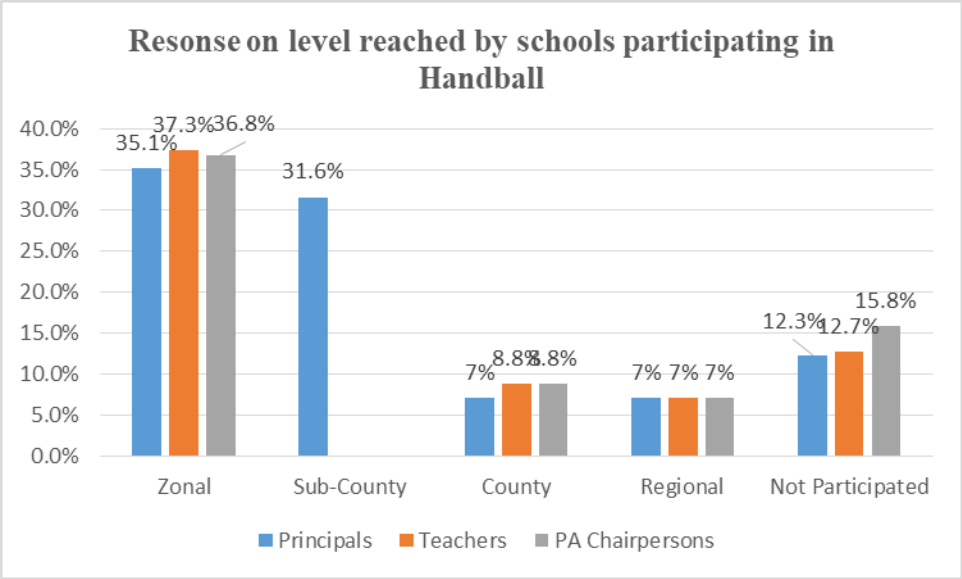

Figure 4.28: Principals, teachers and PA chairpersons response on level reached by schools participating in Handball activity

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From Figure 4.28, majority of principals (38.6%) indicated that their schools reached sub-county level and this was confirmed by 34.2% of teachers and 31.6% of PA chairpersons while 35.1% of principals indicated that their schools reached zonal level and was also confirmed by 37.3% of teachers and 36.8% of PA chairpersons. While 12.3% of principals indicated that their schools did not participate in Handball confirmed by 15.8% of PA chairpersons and 12.7% of teachers, equal number of principals (7%) indicated that their schools reached county and regional levels as confirmed by 8.8% and 7% of both teachers and PA chairpersons for county and regional levels respectively.

The finding reveals that majority of the sampled schools participated in Handball competition and their participants reached various levels which definitely motivated the

students (both the Handball players and non-players) to continue identifying with the school up to the end of their Form Four course.

(vi) Level of achievement of KPI in Curriculum and Instruction

Having indicated level of achievement per activity, which were strategized as whether complete or ongoing, it was important to establish the level of achievement of KPI in Curriculum and Instruction. Level of achievement of KPI in Curriculum and Instruction refers to the extent of the overall achievement of the Key Performance Indicators in Curriculum and Instruction following the observed achievement of KPI in every activity which had been earlier analyzed. This was important because it helped to run the regression analysis between achieved KPI in Curriculum and Instruction and Internal Efficiency (Grade Promotion Rate and Retention Rate). The principals, teachers and PA chairpersons were therefore asked to rate the extent of achievement of KPI in Curriculum and Instruction in sampled public secondary schools in the study locale. Their responses are indicated in Figure 4.29.

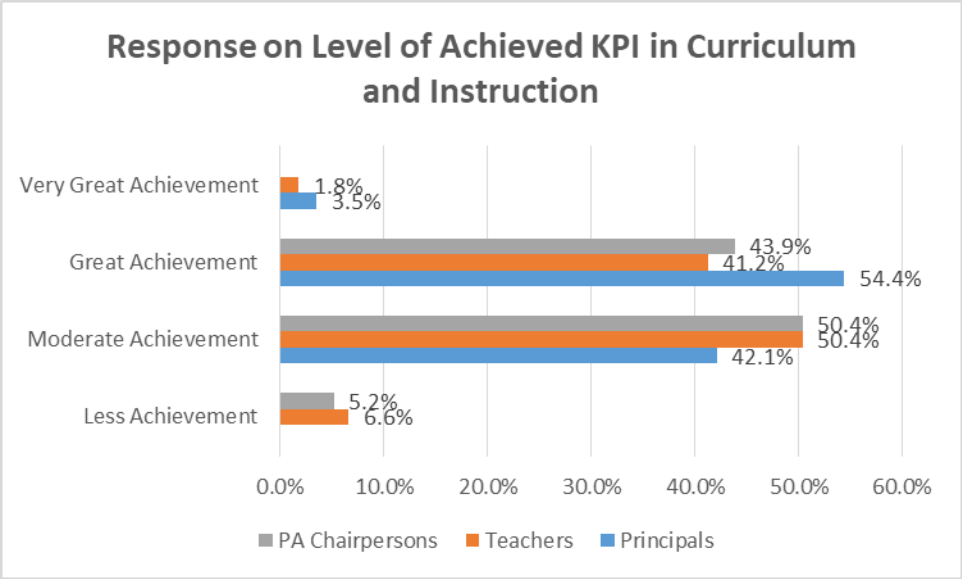

Figure 4.29: Principals, teachers and PA chairpersons response on level of Achieved KPI in curriculum and instruction

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From Figure 4.29, majority of principals (54.4%) indicated great achievement of KPI in curriculum and instruction while 42.1% of them indicated moderate achievement and 3.5% very great achievement. Majority of PA chairpersons (50.9%) indicated moderate achievement while 43.9% indicated great achievement and 5.2% less achievement. On the side of teachers, majority (50.4%) indicated moderate achievement while 41.2% great achievement, 6.1% less achievement, 1.8% very great achievement and 0.4% no achievement.

The finding reveals that majority of the schools had reached at least moderate level of achievement of KPIs in Curriculum and Instruction. This means that Curriculum and Instruction process was being conducted under the guidance of an organized system

which makes it easy to determine the level of performance. This finding is given support by other literature which purport that strategic planning provides better performance of significance than unplanned, opportunistic adaptive approach (IIEP, 2010; Republic of South Africa, 2013).

The qualitative data generated through the interview, document analysis and observation schedule, summarize the status of key performance indicators in curriculum and instruction. The results that have been revealed by the interview guide, document analysis and observation schedule are that: a) most schools prioritize Maths, Chemistry, Biology and Physics for improvement; b) achieved strategies for improving the subjects are improved textbook ratio through availing textbooks by the government, improved teacher student - contact time, improved pedagogy, improved library work, increased practicals in science, use of peer teaching; c) most schools participate in co-curricular activities because they want to produce all - round individuals as influenced by their vision and mission statements. This concurs with Wanjala et al., (2014). The respondents had a lot to say on this issue. For instance, one of the teachers averred that:

> They are doing all they can by increasing the number of personnel in the department, equipping the lab and engaging the students on a number of practicals and joint exams to enhance that. The textbooks are available, the principal is really working to get textbooks especially the revision books, despite the fact that the government has now taken over the textbooks but we have seen him still struggling to inject more textbooks. There are a number of teachers who usually attend SMASSE, particularly science teachers. We have a number of workshops for different subjects. The school has freely come in to support (T26).

The principals as the managers of the schools gave their views on this matter and one of them reported that:

> For textbooks, we have a ratio of one to one, courtesy of the Government. I believe we have enough revision books. The methodology science teachers use IT. I think you can also see in my office here that is the projector; they also use the method of student centered approach. That is why I have said they are adhering towards more practicals. You know when the students understand the practical aspect of it, when it comes to theory, they will be able to be conversant. And also again the students are exposed through symposiums, we have attended symposium in Siaya County, Kisumu County we have even gone outside Kisumu County. In the library, we have a policy where students borrow books for a fortnight then they return and borrow another one (P1).

For the purpose of all-inclusivity, the PA chairpersons' voices were added to this view. One of them had this to say:

> As a school based on vision and mission to develop wholesome individual, we do not only incline towards academics alone, we also have the co-curricular activities and our school has participated and has been sponsored in a number of co-curricular activities and that is drama, which reached regional level this year. We have music, they also reached regional level, in sports we have volleyball, soccer, handball, hockey, rugby and basketball so there is variety and I forgot to mention the racket games that participant reached regional level. I remember sometimes back, drama managed to reach national. Athletics is part of competitive area, where the school posted students and they reached county level (PAC 3)

The results from both quantitative and qualitative findings concur that Mathematics and Science subjects, especially Chemistry and Biology need improvement of performance. This targeting has perhaps been influenced by either past poor performance or Government policy in relation to Science Technology Engineering Mathematics (STEM). According to Rajput (2019), STEM is having critical position at the centre of Kenya's ability to attain Vision 2030. However, Kenya, like any other African countries, faces immense challenge in the field of STEM at all levels of education including secondary, in terms of performance, enrolment and gender disparity. This concurs with the findings

about the performance, in the last five years, of the targeted subjects for improvement which was reported by the majority of the respondents to be fluctuating but with improvement.

(vii) The Effect of Achieved Key Performance Indicators in Curriculum and Instruction on Internal Efficiency

To determine the effect of achieved key performance indicators in curriculum and instruction on internal efficiency in public secondary schools in the study locale, the researcher conducted regression analysis involving the second predictor of independent variable (achieved KPI in curriculum and instruction) and dependent variables (grade promotion rates and retention rates). The analysis was done in SPSS. The results are as presented in Table 4.17.

Table 4.17: Statistical measurement of the effect of achieved key performance indicators in curriculum and instruction on internal efficiency

	Dependent variable: Internal efficiency		
	Regression Statistics	Model 3 Grade promotion rate	Model 4 Retention rate
Predictor: Achieved Key performance indicators In curriculum and instruction	R	.664	.238
	R- squared (R^2)	.440	.057
	Adjusted R-squared (R^2 adj)	.439	.054
	Beta (β)	.669	.249
	Standard error of Est (ε)	.47532	.64123
	Constant	.908	2.709
	Durbin – Watson	1.958	1.770

Model 3 in Table 4.17 indicates data of a simple correlation between the predictor/independent variable component (Achieved Key Performance indicators in curriculum and instruction) and the first measure of the dependent variable (Grade Promotion Rate) in the sampled counties. The Pearson's R = .664 illustrates that there was a positive correlation between the achieved key performance indicators in curriculum and instruction and grade promotion rate in sampled schools. The R^2 squared (R^2) computed yielded a value of .440, suggesting that achieved key performance indicators in curriculum and instruction explained 44% of the variations in the Grade Promotion Rate in public secondary schools in the study locale. The adjusted R – squared (R^2 adj) also depicts that achieved key performance indicators in curriculum and instruction explained 43.9 percent variations in the Grade Promotion Rate and it is slightly lower than R^2 predicted. The Beta weight (β=.669) value predicts that one unit of increase in achieved key performance indictor in curriculum and instruction is expected to cause .669 increase in Grade Promotion Rate in public secondary schools.

The constant value suggests that the predicted value of Grade Promotion Rate is .908, if the value of the achieved key performance indicators in curriculum and instruction is zero. The standard error of estimate (ε) was found to be .47532, suggesting that there were other factors of magnitude .47532 that influence the grade promotion rate but not observed or taken into account. The Durbin – Watson test yielded a value of 1.958. A value approaching 2, as obtained in the model 3 means that there is no auto correlation in the sample values.

Model 4 presented in Table 4.18 shows data on the effect of achieved key performance indicators in the curriculum and instruction on retention rate in public secondary school

in the study locale. The Pearson's R = .238 illustrates that there was a positive correlation between the achieved key performance indicators in curriculum and instruction and retention rate in sampled schools. The R-squared (R^2) computed gave a value of .057, showing that achieved key performance indicators explained 5.7% of variations in the retention rate in public secondary schools in the study locale. The adjusted R-squared (R^2 adj) also indicates that achieved key performance indicators in curriculum and instruction explain 5.4% variation in the retention rate and it is slightly lower than the R^2 predicted.

The Beta weight (β=.249) value predicts that one unit increase in achieved key performance indicators in curriculum and instruction is expected to cause .249 increase in retention rate in public secondary schools in the study locale. The constant value suggests that the predicted value of retention rate is 2.709 if the value of the achieved key performance indicators in curriculum and instruction is zero. The standard error of estimate (ع) was found to be .64123, suggesting that there were other factors of magnitude .64123 that influence the retention rate but not observed or taken into account. The Durbin Watson test yielded a value of 1.770. A value approaching 2, as obtained in model 4 means that there is no auto correlation in the sample value.

The finding reveals that there is a positive correlation between achieved key performance indicators (KPIs) in Curriculum and Instruction and grade promotion rate as well as retention rate. However, the correlation between the achieved KPIs and grade promotion rate was higher at .664 than between achieved KPIs and retention rate at .238. This implies that the influence of achieved KPIs was greater on grade promotion rate than on retention rate as confirmed by the simple linear regression coefficients (R^2 =.440 and .057 respectively). This means that achieved KPIs can influence 44% and 5.7% of grade

promotion rate and retention rate respectively. It is also worth noting that one unit increase in achieved KPIs will cause .669 and .249 increase in Grade Promotion Rate and Retention Rate respectively.

The qualitative data generated through the interview, document analysis and observation schedule, summarize the status of key performance indicators in curriculum and instruction and the effect on internal efficiency. The result from the interview guide, document analysis and observation schedule is that: achieved key performance indicators have influence on grade promotion rate as well as retention rate in public secondary schools. For instance, one of the teachers had this to say:

> It helps increase both grade promotion and retention rates (T25).

A principal supported the same view and stated that:

> Yes the achieved KPI have helped improve grade promotion rates and also retention rates, nearly over ninety eight percent (P7).

Further, PA chairpersons equally gave insightful report on the matter and one of them averred that:

> As a school we are foreseeing an improved enrolment and there is increased grade promotion rate as well as increased retention rates (PA 9).

The results from both quantitative and qualitative findings concur that the achieved key performance indicators have influence on grade promotion rate and retention rate in Public secondary schools. The findings corroborate the finding of a study by Otieno (2015) that student/ teacher ratio, availability of good text books are among the significant factors which influence students progression hence grade promotion rates.

The findings of the current study further resolve the conflict between the findings of the study by Macgowen (2007) and study by Souck et al., (2017) about whether there is significant relationship between school facility conditions and internal efficiency. The resolve has been achieved by diversifying sources of information as well as method of collecting them focusing mainly on achieved key performance indicators under curriculum and instruction without mixing the indicators of physical infrastructure. The current study findings equally resonate with the finding of the study by Charles (2009) that inadequate provision of teaching and learning resources pose a great hindrance in attaining quality objective of education, by establishing that availing text books, revision books, improved pedagogy, increased science practicals and increased teacher/student contact time greatly influence grade promotion rate and retention rate hence internal efficiency in public secondary schools.

The results from both quantitative and qualitative findings corroborate that plans of schools in the study locale are comprehensive by not only focusing on material resources alone such as buses and buildings but also teaching and learning. This disconfirms the findings of other researchers who argue that some schools' plans are not comprehensive since they focus on material resources for the schools such as buses and buildings, ignoring teaching and learning (Reeves, 2008; Rumelt, 2011). The results from both quantitative and qualitative findings further established that schools in the study locale have the goal of developing an all - round student and have effective programmes to monitor and evaluate growth in teacher performance and professional development. This finding exonerates the schools in the study locale from the list of schools without

comprehensive plans according to Wanjala et al., (2014) which lay great emphasis on the result of paper and pencil tests, thereby ignoring the goal of developing an all - round student; and in addition the plans display ineffective programmes to establish, monitor and evaluate growth in teacher performance and professional development, when this area is crucial in improving classroom practice and teaching methodology, which finally improves student achievement (Balogu et al., 2008; Wanjala, et al., 2014).

4.5 Achieved Key Performance Indicators in Physical Infrastructure and Internal Efficiency

The third objective of the study was to determine the effect of achieved key performance indicators in physical infrastructure on internal efficiency in public secondary schools in Kisumu and Uashin Gishu Counties, Kenya. The addressed issues were as follows: The achieved key performance indicators in physical infrastructure, achieved key performance indicators and internal efficiency and the effect of the achieved key performance indicators in physical infrastructure on retention and grade promotion rates.

4.5.1 The Achieved Key Performance Indicators in Physical Infrastructure

Achieved Key Performance Indicator in Physical Infrastructure in this study refers to level of achievement of what was set to be done in every activity under Physical Infrastructure. This information is significant to this study because every achievement of KPI in a given activity under infrastructure leads to state of the art infrastructure which Sang et al., (2013) recommends for lowering dropout thereby increasing retention. The principals, teachers and PA chairperson as such requested to indicate the level of achieved key performance indicators in terms of whether the given activities were completed or ongoing. The respondents gave responses according to each activity.

(i) Achieved KPI in construction of Administration Block

Achieved KPI in construction of Administration Block in this study refers to the completion of the building which houses various offices in the school such as the principal's office, the deputy principal's office, the Bursar's office, staff room and departmental offices. This information is important to this study because administration block is the nerve centre of the school and completion of its construction is a great milestone in the process of strategic plan implementation. The principals, teachers and PA chairpersons were therefore requested to indicate whether the construction of administration block was completed or ongoing in their schools. Their responses are as indicated in Figure 4.30.

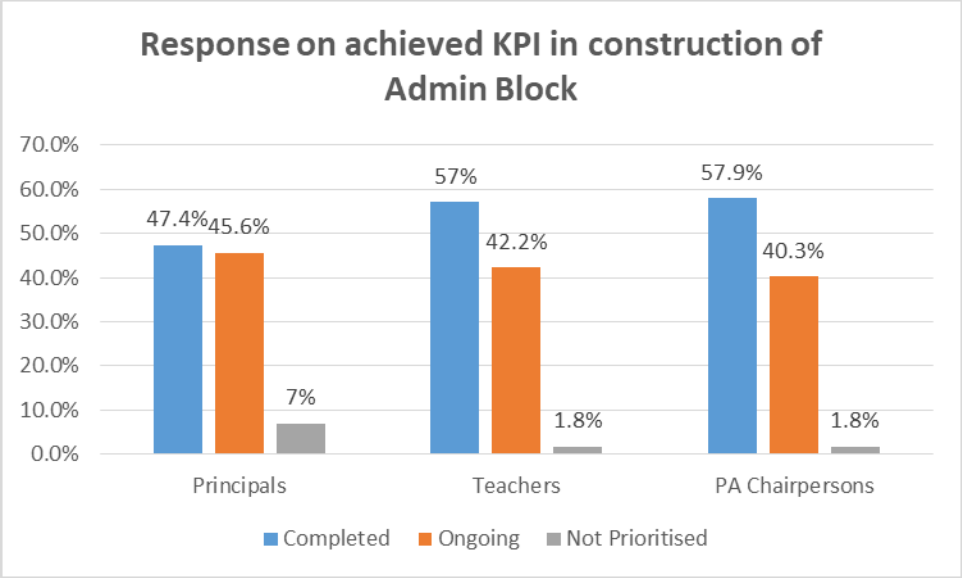

Figure 4.30: Principals, teachers and PA chairpersons response on achieved KPI in construction of administration block

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From Figure 4.30, majority of respondents (57.9% of PA chairpersons, 57% of teachers and 47.4% of principals) concurred that construction of administration block was a completed activity while 45.6% of principals, 41.2% of teachers and 40% of PA chairpersons confirmed that it was still an ongoing activity. On the other hand, 4% of principals, 1.8% of teachers and PA chairpersons each indicated Not prioritized. This meant that the concerned schools had constructed the block earlier. The finding therefore implies that majority of the sampled schools had constructed Administration blocks showing that these schools embraced the integral role of administration block in the implementation of strategic plans and hence internal efficiency.

(ii)Achieved KPI in construction of ICT Room

ICT room means the room set aside by the schools to keep the IT materials such as computers, projectors, Video Decks, TVs and Radios among others. This information is significant to this study because it confirms that such schools have embraced ICT which is useful for both strategic plan implementation and internal efficiency. The principals, teachers and PA chairpersons were therefore requested to indicate whether the construction of ICT room was completed or ongoing in their schools. Their responses were as indicated in Table 4.18.

Table 4.18: Principals, teachers and PA chairpersons response on achieved KPI in construction of ICT room

	Principals		Teachers		PA Chairpersons	
Status of construction	**N_1**	**%**	**N_2**	**%**	**N_3**	**%**
Completed	22	38.6	86	37.7	24	42.1
Ongoing	27	47.4	117	51.3	27	47.4
Not Prioritized	8	14.0	25	11.0	6	10.5
Total	**57**	**100**	**228**	**100**	**57**	**100**

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

N_1 = 57
N_2 = 228
N_3 = 57

From Table 4.18, majority of respondents (51.3% of teachers, 47.4% of both principals and PA chairpersons concurred that construction of ICT room was still an ongoing activity in their schools while according to 42.1% of PA chairpersons, 38.6% of principals and 37.7% of teachers it was a completed activity in their schools. Finally, 14% of principals, 11% of teachers and 10.5% of PA chairpersons confirmed that construction of ICT room was not a priority in their schools to mean that they had already done the construction and the rooms were functional. The finding means that majority of the sampled schools had embraced ICT implying that strategic planning and implementation being an iterative activity did pose a challenge. Whenever there was need for adjustment they just pressed a button. Such schools also had both their teachers and students undertaking interactive teaching and learning process which ultimately led to

improved progression and retention rates hence internal efficiency. This is in tandem with UNESCO (2019).

(iii) Achieved KPI in construction of Laboratory

Achieved KPI in construction of Laboratory in this study refers to the extent to which the planned activities in relation to the construction of laboratory had been achieved. Laboratory is the room where students do their science subjects practical lessons. This information is important to this study because when such rooms are available and are properly utilized then students' academic performance improves hence improved grade promotion and retention rates. The principals, teachers and PA chairpersons were thus requested to indicate whether the construction of Laboratory was completed or ongoing in their schools. Their responses were as indicated in Figure 4.31.

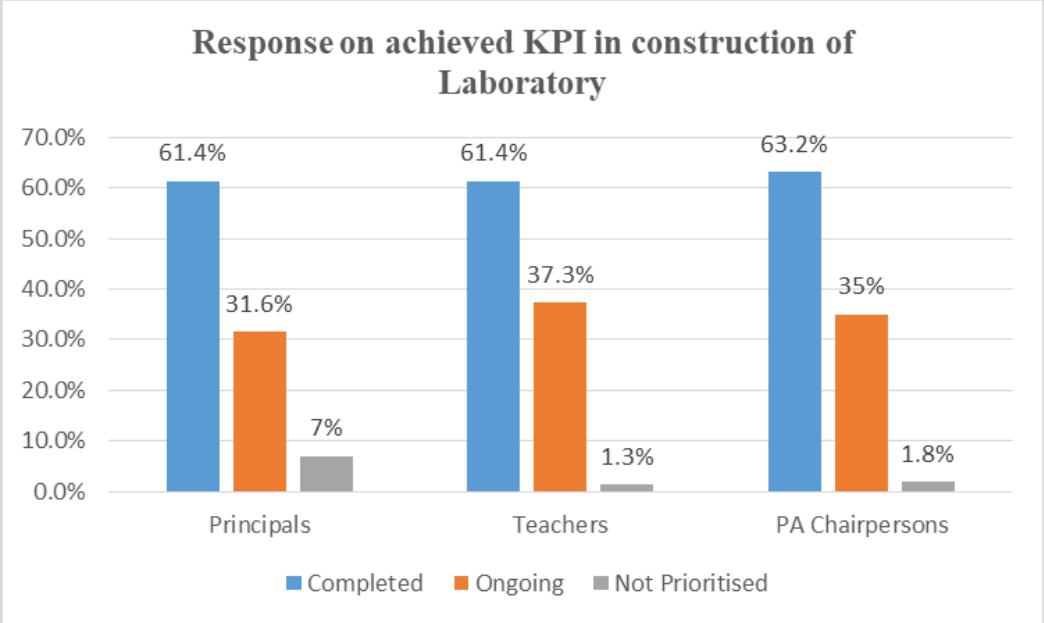

Figure 4.31: Principals, teachers and PA chairpersons response on achieved KPI in construction of laboratory

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From Figure 4.31, majority of respondents (63.2% of PA chairpersons and 61.4% of both principals and teachers concurred that construction of Laboratory was a completed activity in their schools while 37.3% of teachers, 35.1% of PA chairpersons and 31.6% of principals confirmed that it was an ongoing activity. Finally, 7% of principals, 1.8% of PA chairpersons and 1.3% of teachers indicated that construction of laboratory was not a priority in their schools. The finding reveals that majority of the sampled schools had functional laboratories implying that these schools were embracing practical science lessons. This ultimately led to improved performance in Science subjects especially Chemistry which many schools prioritized for improvement.

(iv) Achieved KPI in construction of Library

Achieved KPI in construction of Library in this study refers to the extent to which the planned activities in relation to the construction of library had been achieved. Library is the room stocked with resources containing knowledge and information where students can carry out their research. This information is important because school library encourages curiosity, innovation and problem-solving. This is because it is a central hub for all kinds of reading, cultural activities, access to information, knowledge building, deep thinking and lively discussion which can help improve students' learning outcome (Valenza & Johnson, 2009). The principals, teachers and PA chairpersons were requested to indicate whether the construction of Library was completed or ongoing in their schools. Their responses were as indicated in Table 4.19.

Table 4.19: Principals, teachers and PA chairpersons response on achieved KPI in construction of Library

	Principals		**Teachers**		**PA Chairpersons**	
Status of construction	**N_1**	**%**	**N_2**	**%**	**N_3**	**%**
Completed	16	28.1	90	39.5	26	45.6
Ongoing	31	54.4	122	53.5	27	47.4
Not Prioritized	10	17.5	16	7.0	4	7.0
Total	**57**	**100**	**228**	**100**	**57**	**100**

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

N_1 = 57

N_2 = 228

N_3 = 57

From Table 4.19, majority of respondents (54.4% of principals, 53.5% of teachers and 47.4% of PA chairpersons) concurred that construction of library was still an ongoing activity while 45.6% of PA chairpersons, 39.5% of teachers and 28% of principals indicated that it was a completed activity in their schools. Lastly, 17.5% of principals, 7% of both teachers and PA chairpersons concurred that construction of library was not a priority in their schools. The finding illustrates that majority of the schools are still struggling with completion of construction of the libraries. This implies that students in such schools are missing a lot in terms of the benefits which accrue from the library utilization. This concurs with the assertion by Valenza et al., (2009) that school library's collections, services and environment are all designed to help the school meet its targets and goals for raising student achievement. This ultimately leads to internal efficiency.

(v) Achieved KPI in construction of Sanitation and Ablution

Achieved KPI in construction of Sanitation and Ablution in this study refers to the extent to which the planned activities in relation to the construction of sanitation and ablution had been achieved. This information is important because sanitation is of great significance and can encourage students to attend school regularly leading to better performance hence improved grade promotion rate and retention rate. The principals, teachers and PA chairpersons were therefore requested to indicate whether the construction of sanitation and ablution block was completed or ongoing in their schools. Their responses were as indicated in Figure 4.32.

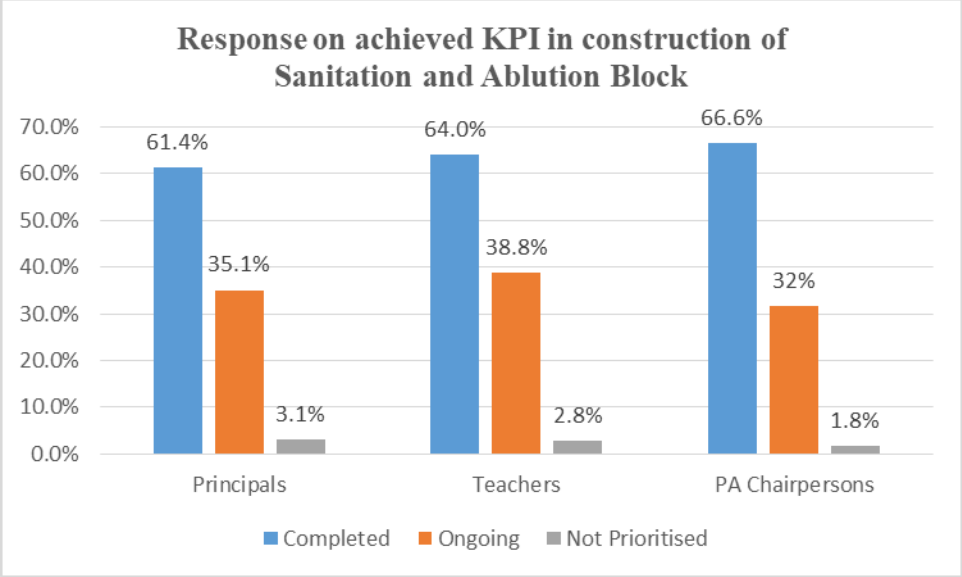

Figure 4.32: Principals, teachers and PA chairpersons responses on achieved KPI in construction of sanitation and ablution block

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From the Figure 4.32, majority of respondents (66.6% of PA chairpersons, 64% of teachers and 61.4% of principals) confirmed that construction of sanitation and ablution block is a completed activity in their schools while 35.1% of principals, 33.6% of teachers and 31.6% of PA chairpersons concurred that it was still an ongoing activity in their schools. Finally, 3.5% of principals, 2.2% of teachers and 1.8% of PA chairpersons indicated that construction of sanitation and ablution block was not a priority in their schools.

The indication of Not prioritized refers to the schools which already had adequate sanitation and ablution facilities (MoEST, 2014). The finding reveals that majority of the schools had achieved KPI in construction of sanitation and ablution and in these schools grade promotion rate and retention rate had improved. This resonates well with the

finding of (MoEST, 2014) that in public secondary schools, the Students Toilet Ratio was 22:1 for male and 18:1 for female which compares favorably with the national norm. This implies adequacy of these facilities which corroborates the finding of Chukwumah et al., (2015) that inadequacy of essential facilities such as sanitation are responsible for low internal efficiency. The finding further fulfils recommendation by Itegi (2016) that planning must focus on among others, sufficient infrastructure including sanitary facilities which provide favorable environment for learning and teacher support.

(vi) Achieved KPI in Construction of Pavements

Construction of pavements in this study refers to the construction of cemented pathways and corridors in the school. This is for beautification leading to state of the art infrastructure as recommended by Sang et al., (2013). This information is important in this study because state of the art infrastructure leads to reduced repetition and dropout rates. Reduced repetition implies improved grade promotion rate and reduced dropout rate implies improved retention rate hence internal efficiency which is the dependent variable for this study. The principals, teachers and PA chairpersons were therefore requested to indicate whether the construction of pavements was completed or ongoing in their schools. Their responses are as indicated in Table 4.20.

Table 4.20: Principals, teachers and PA chairpersons response on achieved KPI in construction of Pavements

	Principals		Teachers		PA Chairpersons	
Status of construction	**N_1**	**%**	**N_2**	**%**	**N_3**	**%**
Completed	13	22.8	50	21.9	18	31.6
Ongoing	28	49.1	137	60.1	30	52.6
Not Prioritized	16	28.1	41	18	9	15.8
Total	**57**	**100**	**228**	**100**	**57**	**100**

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

N_1 = 57
N_2 = 228
N_3 = 57

From Table 4.20, majority of respondents (60.1% of teachers, 52.8% of PA chairpersons and 49.1% of principals concurred that construction of pavements was still an ongoing activity while 31.6% of PA chairpersons, 22.8% of principals and 21.9% of teachers concurred that it was a completed activity in their schools. Finally, 28.1% of principals, 17.9% of teachers and 15.8% of PA chairpersons indicated that construction of pavements was not a priority in their schools.

The finding reveals that majority of the schools were still struggling to construct pavements for beautification to reach the level of state of the art infrastructure. This implies that they were still on the path of creating favourable environment for learning which is in tandem with conclusion by Souck et al., (2017) that good state of school

facilities will motivate and make teachers and learners committed to undertake their respective roles hence optimum educational internal efficiency.

(vii) Achieved KPI in Construction of Store Rooms

Achieved KPI in construction of store rooms in this study refers to the extent to which the planned activities in relation to the construction of store rooms had been achieved. This information is important because storage is of great significance in ensuring that school materials and resources are carefully utilized and taken care of. This ensures judicious utilization of scarce educational resources. The principals, teachers and PA chairpersons were thus requested to indicate whether the construction of store rooms was completed or ongoing in their schools. Their responses are as indicated in Table 4.22.

Table 4.21: Principals, teachers and PA chairpersons response on achieved KPI in construction of store rooms

	Principals		**Teachers**		**PA Chairpersons**	
Status of construction	**N_1**	**%**	**N_2**	**%**	**N_3**	**%**
Completed	18	31.6	93	40.8	22	38.6
Ongoing	29	50.9	108	47.4	29	50.9
Not Prioritized	10	17.5	27	11.8	6	10.5
Total	**57**	**100**	**228**	**100**	**57**	**100**

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

N_1 = 57
N_2 = 228
N_3 = 57

From Table 4.21, majority of respondents (52.6% of both principals and PA chairpersons and 47.4% of teachers concurred that construction of store rooms was still an ongoing activity in their schools while 40.8% of teachers, 36.8% of PA chairpersons and 29.8% of principals confirmed that it was a completed activity in their schools. Lastly, 17.5% of principals, 11.8% of teachers and 10.5% of PA chairpersons indicated that construction of store rooms was not a priority.

The finding reveals that majority of the schools sampled were still working on the construction of storage facilities for the educational resources and materials. This implies that educational resources and materials were not appropriately being taken care of, which perhaps led to wastage of such materials and resources. This undermines the intention of strategic plan implementation which is judicious utilization of educational scarce resources for internal efficiency (UNESCO, 2010).

(viii) Achieved KPI in Construction of Fence

The achieved KPI in construction of Fence in this study refers to the extent activity of putting up the school fence had been achieved. This information is important to this study because it determines the level of security in the school. Insecurity on the other hand is a hindrance to retention of students in school. The principals, teachers and PA chairpersons were requested to indicate whether the construction of fence was completed or ongoing in their schools. Their responses are indicated in Figure 4.33.

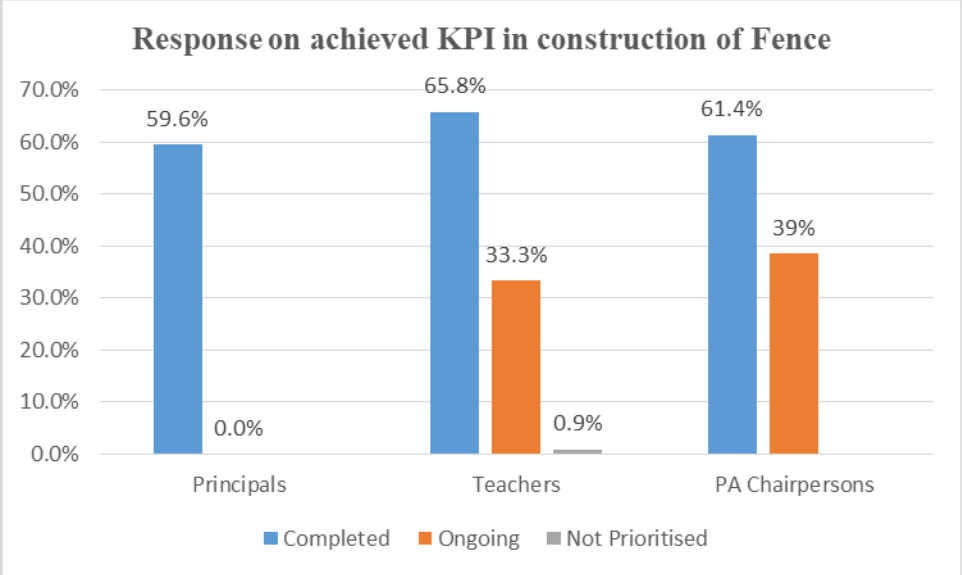

Figure 4.33: Principals, teachers and PA chairpersons response on achieved KPI in construction of fence

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From Figure 4.33, majority of respondents (65.8% of teachers, 61.4% of PA chairpersons and 59.6% of principals concurred that construction of fence was a completed activity while 40.4% of principals, 38.6% of PA chairpersons and 33.3% of teachers indicated that it was still an ongoing activity in their schools. Finally, only 0.9% of teachers indicated that construction of fence was not a priority in their schools.

The finding reveals that majority of schools are concerned about the security in the schools. This implies safety of both the physical and human resources in the school.

(ix) Achieved KPI in Construction of Tuition Block

Achieved KPI in construction of Tuition Block refers to the extent which activity of putting up new classrooms has been realized. This information is significant to this study

because completion of more required classrooms eases congestion of students leading quality learning hence improved grade promotion rate and retention rate. The principals, teachers and PA chairpersons were therefore requested to indicate whether the construction of tuition block was completed or ongoing in their schools. Their responses are indicated in Table 4.22.

Table 4.22: Principals, teachers and PA chairpersons responses on achieved KPI in construction of Tuition Block

	Principals		**Teachers**		**PA Chairpersons**	
Status of construction	**N_1**	**%**	**N_2**	**%**	**N_3**	**%**
Completed	29	50.9	117	51.3	29	50.9
Ongoing	28	49.1	111	48.7	28	49.1
Total	**57**	**100**	**228**	**100**	**57**	**100**

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

N_1 = 57
N_2 = 228
N_3 = 57

From Table 4.22, majority of respondents (51.3% of teachers and 50.9% of both principals and PA chairpersons) concurred that construction of tuition block was a completed activity while 49.1% of both principals and PA chairpersons and 48.7% of teachers indicated that it was still an ongoing activity in their schools.

The finding implies that majority of the sampled schools did not have any problem with the classroom shortage. This resonates well with the finding of MoEST (2014) that most of the public secondary schools in the study locale had average Class size of 40 according to the number of students and classrooms available.

(x) Achieved KPI in Construction of School Gate

Achieved KPI in the construction of the School Gate in the context of this study means the completion of putting up the gate which controls the entry into and exit from the school. This information is important to this study because the gate enhances security in the school. At the same time it is on the gate wall where the school vision and mission statements are written for the school stakeholders to first have interaction with the statements. The principals, teachers and PA chairpersons were thus requested to indicate whether the construction of school gate was completed or ongoing in their schools. Their responses were as indicated in Figure 4.34.

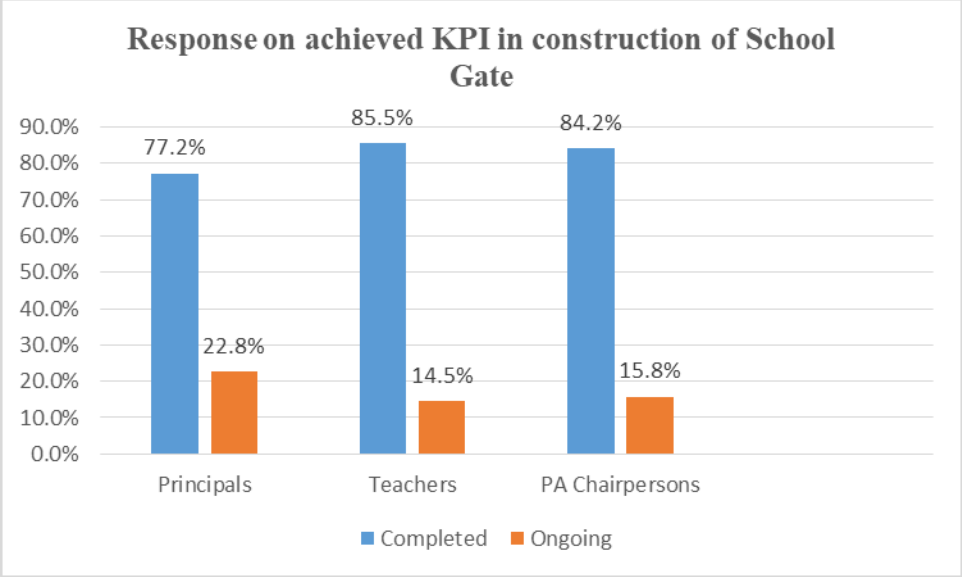

Figure 4.34: Principals, teachers and PA chairpersons response on achieved KPI in construction of school gate

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From Figure 4.34, majority of respondents (85.5% of teachers, 84.2% of PA chairpersons and 77.2% of principals concurred that construction of school gate is a completed activity while 22.8% of principals, 15.8% of PA chairpersons and 14.5% of teachers indicated that it was still an ongoing activity in their schools.

The finding reveals that most of the schools had put up functional gates. This implies that the schools were secure and had their vision and mission statements well printed on the gate walls to enhance the stakeholders' awareness of these statements. The availability of these statements on the gate walls is also an indication that the schools are committed to the strategic plan implementation. This is in tandem with the requirement the principals

and other education stakeholders got during their training on strategic planning (Kevogo, et al, 2015).

(xi) Achieved KPI in Developing Water System

Achieved KPI in Developing Water System refers to accomplished programmes of availing water by schools. This information is considered in this study because it is one of the infrastructure which provide favourable environment for learning and teacher support system which strategic planning must focus on (Itegi, 2016). The principals, teachers and PA chairpersons were as such requested to indicate whether the development of water system was completed or ongoing in their schools. Their responses were as indicated in Table 4.23.

Table 4.23: Principals, teachers and PA chairpersons responses on achieved KPI in Developing Water System

	Principals		Teachers		PA Chairpersons	
Status of construction	**N_1**	**%**	**N_2**	**%**	**N_3**	**%**
Completed	37	64.9	152	66.7	37	64.9
Ongoing	20	35.1	76	33.3	20	35.1
Total	**57**	**100**	**228**	**100**	**57**	**100**

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

N_1 = 57

N_2 = 228

N_3 = 57

From Table 4.23, majority of respondents (66.7% of teachers and 64.9% of both principals and PA chairpersons) concurred that developing water system was a completed activity in their schools while 35.1% of both principals and PA chairpersons; and further 33.3% of teachers indicated that it was an ongoing activity in their schools.

This finding implies that majority of the sampled schools had embraced the important role water plays in creating a favourable environment for learning. This is a great improvement compared to the finding of MoEST (2014) that only 36.8% of the public secondary schools nationally had access to water by 2014.

(xii) Achieved KPI in Acquisition of School Bus or Van

Achieved KPI in acquisition of school Bus or Van in the context of this study refers to the accomplishment of purchasing school bus or van for the purpose of transport and transportation in schools. This information is considered in this study because availability of school bus or van for transport in the school helps in reducing cost of running school which could have been higher if the school had to out - source such means. This ultimately means more students can participate and benefit in learning activities outside the school at minimal cost hence improved grade promotion rate and retention rate. The principals, teachers and PA chairpersons were therefore requested to indicate whether the acquisition of school bus or van was completed or ongoing in their schools. Their responses were as indicated in Figure 4.35.

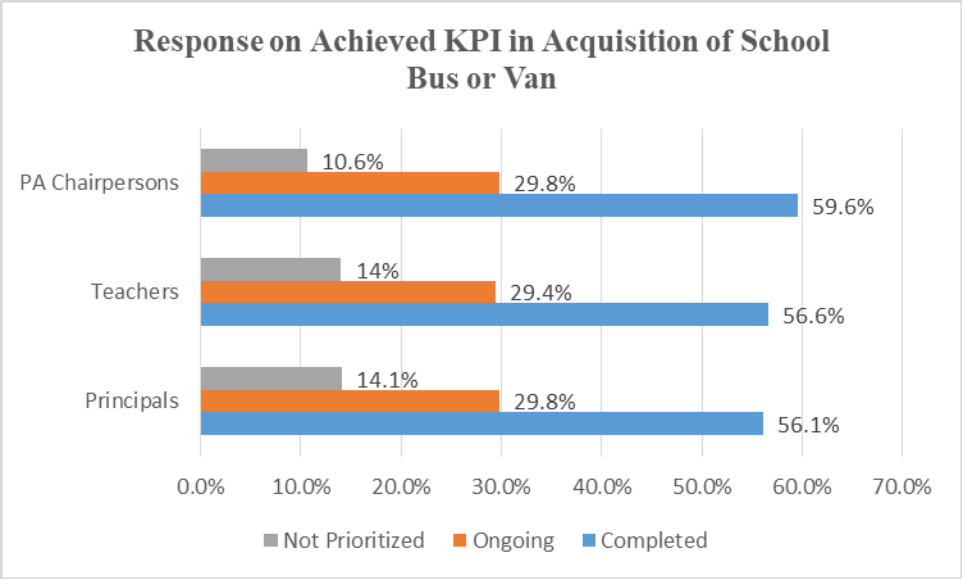

Figure 4.35: Principals, teachers and PA chairpersons response on achieved KPI in acquisition of school bus or van

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

From Figure 4.35, majority of respondents 59.6%, 56.6% and 56.1% of PA chairpersons, teachers and principals respectively concurred that acquisition of school Bus or Van was a completed activity in their schools while 29.8% of both principals and PA chairpersons and 29.4% of teachers indicated that it was still an ongoing activity in their schools. Further, 14.1% of principals, 14% of teachers and 10.6% of PA chairpersons concurred that acquisition of school Bus or Van was not a priority.

This finding reveals that majority of sampled schools had invested in the acquisition of school bus and van. This implies that these schools had the benefit of transport cost reduction to ensure that more students get opportunity to participate in learning activities outside the school. Acquisition of a school bus or van contributes to the good state of

school facilities which motivate both teachers and students. This finding concurs with the conclusion of Souck et al., (2017) that the good state of school facilities will motivate and make teachers and learners committed to undertake their respective roles, hence optimizing educational internal efficiency.

(xiii) Achieved KPI in Construction of Dormitories

Achieved KPI in construction of dormitories in this study refers to the accomplished programmes of putting up dormitories in boarding schools. This information was considered in this study because living in school is likely to enable students' progress in the academics and hence more capable of attaining a high degree of academic performance thereby leading to improved grade promotion rate and retention rate. In this regard, the principals, teachers and PA chairpersons were requested to indicate whether the construction of dormitories was completed or ongoing in their schools. Their responses are indicated in Table 4.24.

Table 4.24: Principals, teachers and PA chairpersons response on achieved KPI in construction of Dormitories

	Principals		Teachers		PA Chairpersons	
Status of construction	**N_1**	**%**	**N_2**	**%**	**N_3**	**%**
Completed	12	21.1	57	25.0	15	26.3
Ongoing	17	29.8	62	27.2	16	28.1
Not Applicable	28	49.1	109	47.8	26	45.6
Total	**57**	**100**	**228**	**100**	**57**	**100**

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

N_1 = 57
N_2 = 228
N_3 = 57

From Table 4.24, majority of respondents (49.1% of principals, 47.8% of teachers and 45.6% of PA chairpersons) concurred that construction of dormitories was not applicable in their schools. This could have been because most of the schools in the study locale were Day schools. It is worth noting, however that 29.8% of the principals, 28.1% of the PA chairpersons and 27.2% of teachers concurred that construction of dormitories was an ongoing activity in their schools while 26.3% of PA chairpersons, 25% of teachers and 21.1% of principals confirmed that it was a completed activity.

The finding reveals that in the majority of the sampled schools, construction of the dormitories was not applicable. These were Mixed Day Secondary schools which did not require boarding facilities. Further to this, majority of the boarding schools were still

struggling with the programmes of completing the construction of the dormitories. This means that schools which had completed the construction and the ones with ongoing construction projects underscore the contribution of dormitories to the level of academic achievement.

Qualitative data on achieved KPI in Physical Infrastructure was collected using interview, document analysis, and observation schedule. The principals, teachers and PA chairpersons who participated in the qualitative strand of the study, gave very insightful information on this issue which was analyzed thematically and yielded findings which corroborate the quantitative findings. It is evident that a lot of key performance indicators had been achieved and others were still on going in the area of physical infrastructure. For instance, a number of respondents reported completion of construction of classrooms, some dormitories, latrines, dining halls, stores, libraries, laboratories, CCTVs and many others. They also reported ongoing processes for acquisition of more physical infrastructure. To confirm this, one of the principals averred that:

> We don't have a real space but what you saw in the upper part of the laboratory that is a library and the work of completing it is ongoing. We believe that by the end of this year or in the beginning of next year we will have library up there. We have enough latrines and they were inspected just recently. We have latrines for both boys and girls and for the teachers. That is a requirement. In this school we are lucky we have enough classrooms. We have two extra rooms but we will not call it extra rooms because the school is expanding. Like our 3rd stream we are now ready for form three but not ready for form four. As we are talking, we already got infrastructure development funds and by July we should be beginning to construct two classrooms so the money is already in the bank (P6).

To give support to this, teachers added their voices and one of them had this to say:

> The classrooms are to our satisfaction but the laboratory somehow overstretched. I have not heard of the plan to increase the capacity though it has been a concern. We have a library and the school bus. Owing to the fact that our school is an old school, infrastructure as per the strategic plan, there are a number of steps that have been made like classes have been tiled, so as to reduce dust and make classes look modern and descent. Two, in order to curb security, the school has managed to install CCTV and also enhancing lighting by installing flood light at strategic places so that at night the school is well lit, and also any activity that takes place can be monitored without worrying about what will trouble next. Due to growing number of students, there is a storey dormitory that is being constructed which is also on the verge of completion. Sanitation, there are a number of latrines that have been added to cope with the rising number of users that is the students. School is also planning to put up a modern lavatories to curb the issue of congestion (T18).

According to the PA chairpersons, a lot had been achieved and they were impressed with their contribution on this. One of them added their voice by reporting that:

> This school was started under economic stimulus, and most of the infrastructure was done by the government like four classrooms, the lab and the administration block. Ministry of education also gave us money to build dormitory. The parents have also done much through harambee. Our strategic plan, has really helped. CDF has also given us some Classrooms and Fencing. The other thing that the parents did, were the classrooms made of the iron sheets to accommodate the rising number of students temporarily. We have also acquired the physical plan for the school. The gate is up to date. We have a big compound about 22ha so issue of land is not a problem though the land is rather swampy, so we are thinking on how we can reclaim it ie by planting some trees. In our AGM, we are planning it to be a tree planting day, where all students, teachers, parents and some other stakeholders can plant a tree (PAC4).

4.5.2 Level of achievement of KPI in Physical Infrastructure

Having indicated level of achievement per activity, which was strategized as whether complete or ongoing, it was important to establish the level of achievement of KPI in Physical Infrastructure. Level of achievement of KPI in Physical Infrastructure refers to the extent of the overall achievement of the Key Performance Indicators in this Priority

Area following the observed achievement of KPI in every activity which had been earlier analyzed. This information is important because it was going to help in running the regression analysis between achieved KPI in Physical Infrastructure and Internal Efficiency (Grade Promotion Rate and Retention Rate). The principals, teachers and PA chairpersons were therefore asked to rate the extent of achievement of KPI in Physical Infrastructure in public secondary schools in the study locale. Their responses are as indicated in Table 4.25.

Table 4.25: Principals, teachers and PA chairpersons responses on level of achievement of KPI in Physical infrastructure

	Principals		**Teachers**		**PA Chairpersons**	
Level of Achievement	**N_1**	**%**	**N_2**	**%**	**N_3**	**%**
No Achievement					1	1.8
Less Achievement			10	4.4		
Moderate Achievement	21	36.8	99	43.4	21	36.8
Great Achievement	30	52.6	108	47.4	33	57.9
Very Great Achievement	6	10.6	11	4.8	2	3.5
Total	**57**	**100**	**228**	**100**	**57**	**100**

Source: Principals questionnaire, teachers questionnaire and PA chairpersons questionnaire

N_1 = 57
N_2 = 228
N_3 = 57

From Table 4.25, majority of respondents (57.9% of PA chairpersons, 52.6% of principals and 47.4% of teachers) concurred that achievement of KPI in physical infrastructure was great while 43.4% of teachers and 36.8% of both principals and PA chairpersons indicated moderate achievement in their schools. Further, 10.6% of principals, 4.8% of teachers and 3.5% of PA chairpersons indicated very great achievement while 4.4% of teachers and 1.8% of PA chairpersons indicated less achievement and no achievement respectively.

4.5.3 Effect of Achieved KPI in Physical Infrastructure on Internal Efficiency

To analyze the effect of key performance indicators in physical infrastructure on internal efficiency in public secondary schools in the study locale, the researcher conducted simple linear regression analysis involving the third predictor of independent variable (achieved KPI in physical infrastructure) and dependent variables (grade promotion rate and retention rate). The analysis was done in SPSS at 95% confidence level. The results are presented in Table 4.26.

Table 4.26: Statistical measurement of the effect of achieved key performance indicators in physical infrastructure on internal efficiency

Dependent variable: Internal Efficiency			
	Regression Statistics	Model 5 Grade Promotion Rate	Model 6 Retention rate
Predictor: Achieved key Performance indicators in Physical infrastructure	R	.996	.963
	R- squared (R^2)	.993	.927
	Adjusted R-squared (R^2 adj)	.993	.927
	Beta (β)	.996	.965
	Standard error of Est (ξ)	.05388	.17781
	Constant	.030	.109
	Durbin – Watson	**2.011**	**.735**

Model 5 in Table 4.26 contains data of a simple correlation between the predictor/independent variable component (Achieved key performance indicators in physical infrastructure) and first measure of the dependent variable (Grade Promotion Rate) of students in public secondary school in Kisumu and Uasin Gishu counties, Kenya. The Pearson's R = .996 indicates that there is a strong positive linear relationship between achieved key performance indicators in physical infrastructure and Grade Promotion Rate in public secondary schools in Kisumu and Uasin Gishu counties, Kenya. The R- squared (R^2) computed yielded a value of .993, suggesting that achieved key performance indicators explained 99.3 % of variations in students' grade promotion rate in public secondary schools in the study locale. The adjusted R – squared (R^2 adj) also illustrates that achieved key performance indicators in physical infrastructure explained 99.3 % of the variation in Grade Promotion rate. The Beta Weight (β=.996) value predicts that one unit change in achieved key performance indicators is expected to cause .996 increase in Grade promotion Rate, in public secondary school in the study locale.

The constant value suggests that the predicted value of grade promotion rate in public secondary schools is .030 if the value of the achieved key performance indicators is zero. The standard error of estimate (ع) was found to be .05388, suggesting that there were other factors of magnitude .05388 that influence the grade promotion rate but not observed or taken into account. The Durbin – Watson test yielded a value of 2.011. A value of 2, as obtained in model 5 means that there is no auto correlation in the sample values.

Model 6 presented in Table 4.26 contains data on the effect of achieved key performance indicators in physical infrastructure (predictor) on retention rate in public secondary schools in Kisumu and Uasin Gishu counties, Kenya. The Pearson's R = .968 indicates

that there was a strong positive relationship between achieved key performance indicators in physical infrastructure and retention rate in public secondary schools in the study locale. The R- squared (R^2) computed yielded a value of .927 suggesting that achieved key performance indicators in physical infrastructure explained 92.7% of the variation in retention rate in public secondary schools in the study locale.

The Beta weight (.965) value predicted that one unit change in achieved key performance indicators is expected to cause .965 increase in retention rate in public secondary schools in the study locale (constant = .109, β = .965). The constant value suggests that the predicted value of retention rate in public secondary schools in the study locale is .109 if the value of the achieved key performance indicators in physical infrastructure is zero. The standard error of the estimate (ε) was found to be .17781; suggesting that there were other factors not observed in the model but which had some influence on the retention rate of the magnitude of .17781. The Durbin Watson value of .735 in the model 6 indicated that there was some positive auto correlation in sample data.

The finding reveals that there is a very strong positive correlation between achieved key performance indicators (KPIs) in physical infrastructure and grade promotion rate as well as retention rate. However, the correlation between the achieved KPIs and grade promotion rate was higher at .996 than between achieved KPIs and retention rate at .963. This implies that the effect of achieved KPIs was greater on grade promotion rate than on retention rate as confirmed by the simple linear regression coefficients (R^2=.993 and .927 respectively). This means that achieved KPIs can influence 99.3% and 92.7% of grade promotion rate and retention rate respectively. It is also worth noting that one unit

increase in achieved KPIs will cause .965 and .996 increase in Retention Rate and Grade Promotion Rate respectively.

To get deeper insight on the effect of achieved KPI in Physical Infrastructure on grade promotion rate and retention rate, data were gathered from document analysis, observation schedule; and the principals, teachers and PA chairpersons were interviewed to get their view on this. They gave insightful information relevant to the study which was analyzed thematically and reported.

The dominant tone from the interview is that the achieved and ongoing performance indicators had led to state of the art physical infrastructure which greatly influenced internal efficiency in terms of great influence on retention rate and slight influence on grade promotion rate in the public secondary schools in the study locale. For instance, one of the teachers had this to say:

> Occasionally, I do interact with these students, every student would yearn to learn in a school of progression in terms of infrastructure, what they can see and also in terms of results that is academics. I must say, that this development have of course made most of the students become proud of their school and by becoming proud they remain students in school and work towards not disappointing but improving their final academic grade (T24).

Another teacher reported his observation concerning the effect and had this to say:

> The students will be very excited to have their own bus and be like other students who also enjoy their facilities, the bus. The students not only go to play, they relax and when they come back they are very fresh and there is that excitement of being in school so it motivates them even to work hard. Students are very excited about the new dormitory because of being the only storey building in the school and it is a bit specious as compared to the older ones. I believe having a good dormitory for example will make our students have a good environment so they will feel happy and motivated to stay in school (T30).

Teachers gave dominant tone on this issue because they are the ones who are always in school most of the time. On the side of the principals, one of them categorically stated that:

> Physical infrastructure has helped in the retention because the facilities make learning comfortable and enjoyable. You know when you are in a congested environment it repels but our environment is very conducive for learning given that we have the basic facilities required for curriculum implementation (P2).

The qualitative data generated through the interview, document analysis and observation schedule, summarize the status of key performance indicators in physical infrastructure and the effect on internal efficiency. The results which have been revealed through the interview guide, document analysis and observation schedule are that: a) most schools are in the process of acquiring more land for expansion; b) achieved key performance indicators in physical infrastructure in most schools include administration block, latrines, adequate classrooms, laboratories, sanitation facilities, water system, fencing, school gate, acquisition of buses/ van and dormitories (especially for boarding schools); c) the ongoing key performance indicators in most schools include construction of the library, pavements, stores; d) the achieved and ongoing performance indicators have led to state of the art physical infrastructure which has greatly influenced internal efficiency in terms of grade retention rate and slightly grade promotion rate in the public secondary schools in the study locale.

The results from both quantitative and qualitative findings are in concurrence concerning achieved key performance indicators and ongoing activities. The achieved key performance indicators enable schools have state of the art physical infrastructure which are attractive and conducive to not only students but also teachers. These indicators have

great influence on retention rates and slightly on grade promotion rate in public secondary schools in Kisumu and Uasin Gishu counties, Kenya. These results are consistent with the results of previous studies by a number of authors who concur that condition of school physical infrastructure affects the repetition and dropout rates in public secondary schools (Sang et al., 2013; Chukwumah et al., 2015; Souck et al., 2017). For instance, the current study established state of the art physical infrastructure which greatly has influence on grade promotion rates and retention rates in the public secondary schools in the study locale. This finding resonates with the study by Sang, et al (2013) second conclusion that repetition and dropout are higher in schools with inadequate or dilapidated infrastructure which led to the recommendation for the state of the art infrastructure to lower the dropout and repetition rates.

The findings further confirm that the plans in the public secondary schools in the study locale are comprehensive as pointed out by Itegi (2016) that planning must focus on sufficient infrastructure including laboratories, electricity, water, and sanitary facilities which provide favourable environment for learning and teacher support system. The findings are in tandem with Souck et al., (2017) conclusion that the good state of school facilities will motivate and make teachers and learners committed to undertake their respective roles, eventually optimizing educational internal efficiency.

The results from the quantitative data reveal that achieved key performance indicators in physical infrastructure have greatest effect than other variables on both grade promotion and retention rates hence internal efficiency in public secondary schools in the study locale. This is corroborated by qualitative results which, however, lament that the funds to develop physical infrastructure are inadequate. This position is in tandem with Nyagah

(2015) recommendation that there is need to equip school leaders with the necessary leadership skills, train the stakeholders and allocate adequate funds to schools for infrastructure development. This is because the resources are dwindling and hence it is prudent to focus more on the most influential key priority area such as physical infrastructure.

To determine overall effect of strategic plan implementation (in terms of awareness of vision and mission statements by stakeholders, achieved KPIs in curriculum and instruction; and physical infrastructure) on internal efficiency (in terms of grade promotion rate and retention rate), multiple regression was conducted. The analysis was done in SPSS at 95% confidence level. The results are presented in Table 4.27 and 4.28.

Table 4.27: Statistical measurement of the overall effect of strategic plan implementation on internal efficiency

Dependent variable: Internal Efficiency			
	Regression Statistics	Model 7 Grade Promotion Rate	Model 8 Retention rate
Predictor: Strategic Plan Implementation (awareness Of vision and mission Statements, achieved KPIs In curriculum and Instruction; and Physical infrastructure)	R	.996	.963
	R- squared (R^2)	.993	.928
	Adjusted R-squared (R^2 adj)	.993	.927
	Standard error of Est (ع)	.05398	.17808
	Constant	.024	.142
	Durbin – Watson	2.025	.734
Unstandardised coefficients	Beta (β_1)	-.002	-.018
	Beta (β_2)	.005	-.009
	Beta (β_3)	.990	.984

Model 7 in Table 4.27 contains data of a multiple correlation coefficient between the predictor/independent variables component (Awareness of vision and mission statements

by stakeholders, Achieved key performance indicators in curriculum and instruction; and in physical infrastructure) and first measure of the dependent variable (Grade Promotion Rate) of students in public secondary school in Kisumu and Uasin Gishu counties, Kenya. The Pearson's R = .996 indicates a high level of prediction of grade promotion rate by independent variables (awareness of vision and mission statements by stakeholders, achieved KPIs in curriculum and instruction; and in physical infrastructure) in public secondary schools in Kisumu and Uasin Gishu counties, Kenya. The R-squared (R^2) computed yielded a value of .993, suggesting that the independent variables explained 99.3 % of variations in students Grade Promotion Rate in public secondary schools in the study locale. The adjusted R – squared (R^2 adj) also illustrates that the independent variables explained 99.3 % of the variation in Grade Promotion Rate.

The Beta Weights (β_1 = -.002; β_2 =.005 and β_3 =.990) values indicate how much dependent variable (grade promotion rate) varies with an independent variable (either awareness of vision and mission statements by stakeholders, achieved KPIs in curriculum and instruction or achieved KPIs in physical infrastructure respectively) when all other independent variables are held constant, in public secondary school in the study locale. The result reveals that achieved KPIs in physical infrastructure has greatest contribution, among other independent variables, of .990 to the variation in dependent variable (grade promotion rate) in public secondary schools in the study locale.

The constant value suggests that the predicted value of grade promotion rate in public secondary schools is .024 if the value of the independent variables is zero. The standard error of estimate (ع) was found to be .05398, suggesting that there were other factors of

magnitude .05398 that influence the grade promotion rate but not observed or taken into account. The Durbin – Watson test yielded a value of 2.025. A value of 2, as obtained in model 7 means that there is no auto correlation in the sample values.

Model 8 in Table 4.27 contains data of a multiple correlation coefficient between the predictor/independent variables component (Awareness of vision and mission statements by stakeholders, Achieved key performance indicators in curriculum and instruction; and in physical infrastructure) and second measure of the dependent variable (Retention Rate) of students in public secondary school in Kisumu and Uasin Gishu counties, Kenya. The Pearson's R = .96 indicates a high level of prediction of grade promotion rate by independent variables (awareness of vision and mission statements by stakeholders, achieved KPIs in curriculum and instruction; and in physical infrastructure) in public secondary schools in Kisumu and Uasin Gishu counties, Kenya.

The R- squared (R^2) computed yielded a value of .928, suggesting that the independent variables explained 92.8 % of variations in students Retention Rate in public secondary schools in the study locale. The adjusted R – squared (R^2 adj) also illustrates that the independent variables explained 92.7 % of the variation in Retention Rate. The Beta Weights (β_1 = -.018; β_2 = -.009 and β_3 =.984) values indicate how much dependent variable (retention rate) varies with an independent variable (either awareness of vision and mission statements by stakeholders, achieved KPIs in curriculum and instruction or achieved KPIs in physical infrastructure respectively) when all other independent variables are held constant, in public secondary school in the study locale. The result reveals that achieved KPIs in physical infrastructure has greatest contribution, among

other independent variables, of .984 to the variation in dependent variable (retention rate) in public secondary schools in the study locale.

The constant value suggests that the predicted value of grade promotion rate in public secondary schools is .142 if the value of the independent variables is zero. The standard error of estimate (ع) was found to be .17808 , suggesting that there were other factors of magnitude .17808 that influence the retention rate but not observed or taken into account. The Durbin – Watson test yielded a value of .734. The Durbin Watson value of .734 in the model 8 indicated that there was some positive auto correlation in sample data.

The finding reveals that there is a very strong positive correlation between strategic plan implementation (independent variables) and internal efficiency (dependent variables-grade promotion rate and retention rate). However, the correlation between the independent variables (awareness of vision and mission statements by stakeholders, achieved KPIs in curriculum and instruction; and in physical infrastructure) and grade promotion rate was higher at .996 than between independent variables and retention rate at .963. This implies that the effect of strategic plan implementation was greater on grade promotion rate than on retention rate as confirmed by the multiple regression coefficients (R^2=.993 and .928 respectively). This means that strategic plan can influence 99.3% and 92.8% of grade promotion rate and retention rate respectively hence greater influence on internal efficiency. It is also worth noting that among the independent variables, achieved KPIs in physical infrastructure has the greatest contribution to internal efficiency at .990 and .984 to Grade Promotion Rate and Retention Rate respectively.

Finally, results from quantitative and qualitative data establish that strategic plan implementation has positive effect on internal efficiency in public secondary schools. This resonates with the finding of the study by Abdulkhareem et al., (2014) that the relationship between strategic plan and internal efficiency was positive. The previous study used graduation and dropout rates of students as indicators of internal efficiency while the current study used grade promotion rates and retention rates as indicators of internal efficiency, yet the results are similar. Therefore, it does not matter the level of institution and the indicators of internal efficiency.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

Data for this study were obtained in two strands: quantitative and qualitative strands from 57 public secondary schools in Kisumu and Uasin Gishu counties, which were selected using random sampling. The sample size was 342 respondents out of whom 54 respondents participated in both quantitative and qualitative strands of data collection. In addition, more information was obtained from each of the sampled schools through the use of document analysis and observation schedule.

5.2 Summary of Findings

This section summarizes the research findings presented, analyzed and discussed in chapter 4 by objectives which guided the study.

5.2.1 Awareness of Vision and Mission Statements on Internal Efficiency

The first objective of the study was to establish the effect of stakeholders' awareness of vision and mission statements on internal efficiency in public secondary schools in Kisumu and Uasin Gishu counties. It involved interrogating whether the principals, teachers, PA chairpersons, students and parents were aware of the statements. Thereafter, the overall level of stakeholders' awareness of the statements was assessed. This was an important predictor of students' grade promotion rate and retention rate hence internal efficiency in public secondary schools in Kisumu and Uasin Gishu counties, Kenya. A number of findings were established in this objective.

It was established that most of the stakeholders (all principals, majority of teachers, PA chairpersons, students and three quarters of parents) were aware of the statements. This was because of all-inclusivity of the stakeholders during the formulation process of the statements. However, the same result revealed that just having the statements on the gate walls, noticeboards or in prints is not enough to create deeper understanding. A lot more needs to be done. The overall level of stakeholders' awareness of the statement was therefore found to be moderate. The simple linear regression analysis revealed that this awareness had a significant effect on internal efficiency. The effect of such awareness was higher on grade promotion rate than on retention rate where 52.7% of variations in students' grade promotion rate while 13.6% of variations in students' retention rate could be contributed by stakeholders' awareness of vision and mission statements.

5.2.2 Achieved Key Performance Indicators in Curriculum and Instruction and Internal Efficiency

The second objective of the study was to determine the effect of achieved key performance indicators in curriculum and instruction on internal efficiency in public secondary schools in Kisumu and Uasin Gishu counties, Kenya. It involved investigating three prioritized subjects for improvement together with level of achievement of strategies set to improve them and level of participation in Co-curricular activities under Curriculum and Instruction. Thereafter, overall level of achievement of KPIs in Curriculum and Instruction was determined. The achieved KPIs in Curriculum and Instruction was a significant predictor of students' grade promotion rate and retention rate hence internal efficiency in public secondary schools in Kisumu and Uasin Gishu counties, Kenya. It had a number of findings which were determined.

It was determined that schools prioritized Mathematics, Chemistry and Biology for improved performance which was established to be fluctuating improvement. For this to happen, there were a number of key performance indicators which were achieved while others were still ongoing. On the other hand, schools participated in a number of Co-curricular activities up to various levels. The overall level of achievement of KPIs in Curriculum and Instruction was established to be moderate. The simple linear regression analysis determined that the achieved KPIs in Curriculum and Instruction had a considerable positive influence on grade promotion rate and retention rate hence internal efficiency. The achieved KPIs in Curriculum and Instruction had higher influence on grade promotion rate than on retention rate, In this regard, 44% of variations in students' grade promotion rate while 5.7% of variations in students' retention rate were attributed to the achieved KPIs in Curriculum and Instruction.

5.2.3 Key Performance Indicators in Physical Infrastructure and Internal Efficiency

The third objective of the study was to determine the effect of achieved key performance indicators in physical infrastructure on internal efficiency in public secondary schools in Kisumu and Uasin Gishu counties, Kenya. Achieved key performance indicators in physical infrastructure involved establishing the prioritized activities in physical infrastructure and their level of completion. Thereafter overall level of achievement of KPIs was determined. The achieved KPIs in physical infrastructure was important predictor of students' grade promotion rate and retention rate hence internal efficiency in public secondary schools in Kisumu and Uasin Gishu counties, Kenya. A number of findings were established in relation to this objective.

It was established that a number of prioritized activities under physical infrastructure were completed while others were still ongoing due to inadequacy of funds. This led to some level of state of the art infrastructure in public secondary schools in the study locale. The overall level of achievement of key performance indicators in physical infrastructure was established to be greater. The simple linear regression analysis revealed that the achieved key performance indicators in physical infrastructure had greater influence on retention rate than on grade promotion rate. It established that 99.3% of variations in students' grade promotion rate while 92.7% of variations in students' retention rate were influenced by the achieved key performance indicators in physical infrastructure. Hence, greater effect on internal efficiency.

A multiple linear regression was conducted to establish overall effect of strategic plan implementation variables on internal efficiency variables. It was established that the effect was greater. The multiple linear regression analysis revealed that strategic plan implementation variables (stakeholders' awareness of vision and mission statements; achieved KPIs in curriculum and instruction; and in physical infrastructure) had greater effect on grade promotion rate than on retention rate as variables of internal efficiency. It established that 99.3% of variations in students' grade promotion rate while 92.8% of variations in students' retention rate could be explained by the strategic plan implementation variables. However, greatest contribution was given by achieved KPIs in physical infrastructure in both cases.

5.3 Conclusion

The purpose of the study was to establish strategic plan implementation and its effect on internal efficiency in public secondary schools in Kisumu and Uasin Gishu Counties, Kenya. Based on the research findings and summary, the following conclusions were made in tandem with the objectives of the study:

The first objective of the study was to establish the effect of stakeholders' awareness of vision and mission statements on internal efficiency. Stakeholders' awareness included the awareness of principals, teachers, PA chairperson, students and parents. Various literature reviewed associated this awareness to students progression and retention rates. The current study revealed that stakeholders' awareness was moderate and it was due to all-inclusivity during the formulation process of the statements. This awareness had higher effect on grade promotion rate than on retention rate. However, the effect was positive in both cases. It is concluded that stakeholders have certain level of awareness which has moderate influence on internal efficiency, especially on grade promotion rate in public secondary schools in Kisumu and Uasin Gishu counties, Kenya.

The second objective of this study was to determine the effect of key performance indicators in Curriculum and Instruction and Internal Efficiency. In this objective, the study revealed that three subjects prioritized for improvement were Mathematics, Chemistry and Biology. During the last five years, the performance in these subjects has been fluctuating but with improvement. The achieved key performance indicators aimed at improving the prioritized subjects together with the level reached by schools in participating in various Co-curricular activities had higher effect on grade promotion rate than on retention rate, but the effect was positive. It is therefore, concluded that achieved

key performance indicators has moderate influence on internal efficiency, particularly on grade promotion rate in public secondary schools in Kisumu and Uasin Gishu counties, Kenya.

The third objective of this study was to analyze the effect of achieved key performance indicators in physical infrastructure on internal efficiency in public secondary schools in Kisumu and Uasin Gishu counties, Kenya. A number of reviewed literature attributed internal efficiency in terms of students' retention rate and progression rate to state of the art physical infrastructure. The current study revealed that the achieved and ongoing key performance indicators in physical infrastructure led to state of the art physical infrastructure which had greatest effect on both grade promotion rate and retention rate. The influence is positive in both cases. In this regard, it is concluded that achieved key performance indicators in physical infrastructure has greatest influence on internal efficiency.

Multiple linear regression was to establish overall effect of strategic plan implementation variables (stakeholders' awareness of vision and mission statements; achieved KPIs in curriculum and instruction; and in physical infrastructure) and variable with greatest contribution on internal efficiency variables (grade promotion rate and retention rate). The analysis revealed that the strategic plan implementation variables could explain 99.3% and 92.8% of variations in grade promotion rate and retention rate respectively as variables of internal efficiency. It further established that achieved KPIs in physical infrastructure made the greatest contribution to the variations. Hence strategic plan implementation has greatest effect on internal efficiency with achieved KPIs making the greatest contribution.

Finally, based on all findings and conclusion per objective, it is logical to generally conclude that strategic plan implementation has greatest positive effect on internal efficiency in public secondary schools in Kisumu and Uasin Gishu counties, Kenya.

5.4 Recommendations

On the basis of the findings, summary and conclusion, the following recommendations are made. The Ministry of Education together with the stakeholders in public secondary schools may consider the following in relation to strategic plan implementation so as to improve internal efficiency:

a) Regular and consistent sensitization of stakeholders on school vision and mission statements as schools ensure that their vision statement is regularly reviewed and appropriately stated to capture the scope in SMART terms and clearly stated such that the two statements are easily recognized.

b) To improve the pedagogy, schools should involve stakeholders in identifying training needs of the teachers in tandem with subjects prioritized for improvement and then organize in-service education training (INSET) for the affected teachers instead of waiting for SMASSE and other joint sub-county or county trainings organized by the ministry.

c) The government (MoE) should make grants available for revision books/materials to schools so that each school can avail these materials based on their specific needs. However, supply of textbooks by the government directly to schools to be continued.

d) MoE should continue providing grant for the state of art infrastructure. For instance, for construction of modern classrooms to help in accommodating and

retaining the exponential rise of number of students joining secondary as a result of 100% transition rate policy. MoE should also help schools in the construction of school libraries.

e) Schools to launch their strategic plans and use them as resource mobilization tool.

5.5 Areas for Further Research

On the basis of research findings, summary, conclusion and recommendation, the following areas are worth researching on:

(a) The study having focused on only three components of strategic plan implantation: school vision and mission statements, key performance indicators in Curriculum and Instruction; and key performance indicators in Physical infrastructure, there should be other studies focusing on staff and personnel, students; and finance and effect on internal efficiency.

(b) There is need to study the role of strategic plan implementation on Competency Based Curriculum preparedness of public secondary schools.

(c) There should be a study on strategic plan implementation and its effect on one hundred percent transition from primary to secondary policy in public secondary schools.

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APPENDICES

APPENDIX I

QUESTIONNAIRE FOR PRINCIPALS

INTRODUCTION

Dear Respondent,

It gives me great pleasure to interact with you by means of this questionnaire. This research is being undertaken as a requirement in partial fulfilment of my Ph.D study in the Planning and Economics of Education at Kenyatta University, Kenya. The study purposefully seeks to establish the effects of strategic plan implementation on internal efficiency in public secondary schools in Kisumu and Uasin Gishu counties, Kenya. The formulated questions are only for research purposes; and the responses will be treated with high degree of confidentiality. You will not be penalized for any answer you give.

Feel free to answer the questions according to the way the issues being investigated actually happen in your school as at present. There is no right or wrong answer. What is key is your own experience and truthfulness expressed in the responses you provide for the items in this questionnaire.

Your responses will provide valuable insight that will help in the establishment of the contribution of strategic plan implementation towards the achievement of internal efficiency.
In case of any enquiry, feel free to contact the researcher using either of the following contacts:
Mobile phone 0711505028 Email:ezekieln64@gmail

NB: Briefly state the responses in the spaces provided or tick where appropriate for each

of the proposed items.

Section A: Background information

1. Sub County where the school is located…….
2. .Your gender ☐ Male ☐ Female ☐
3. Experience in headship in years…….
4. Your experience in headship in the current school……years.

5 a) Have you been trained in strategic planning process? Yes ☐ No ☐
b) If yes in a) above, how long did the training take?.....months/years. Indicate as appropriate.

c) If yes in a) above, which body trained you?

6 **Academic qualification**: Doctor of Philosophy ☐ Master of Education ☐
Bachelor of Education ☐ Diploma in Education ☐

7 Your Age in range
Below 31 years ☐ 31- 35 years ☐ 36- 40 years ☐ 41-45 years ☐

46- 50 years ☐ Above 50 years ☐

Since when did your school commence strategic planning and implementation?

Last year ☐ 2 years ago ☐ 3 years ago ☐ 4 years ago ☐

5 years ago ☐ More than 5 years ago ☐

Section B: Awareness of school vision and mission statements by stakeholders

a) Indicate whether the following key stakeholders are aware of the school vision and mission statements or not by ticking provided options appropriately.

Key stakeholders	**Aware**	**Not aware**
The school principal		
The teachers		
The students		
The PA Chairperson		
The parents		

b) Indicate by ticking the overall level stakeholders' awareness of school vision and mission statements.

	No awareness at all	Less awareness	Moderate awareness	Great awareness	Very great awareness
Stakeholders' awareness of vision and mission statements					

Section C: Achieved key performance indicators in Curriculum and Instruction

1. Select only **three subjects,** which the school has been strategically working on their improvement, by ticking against them from the list below.

Subjects	
English	
Mathematics	
Kiswahili	
Biology	
Chemistry	
Physics	
History	
Geography	
Christian Religious Education	
Agriculture	
Business Studies	
Computer Studies	
Art and Design	

2. Indicate the extent to which the following have been achieved in the three subject areas you selected in (1) above in the scale of 1 - 2 where 1- Completed, 2-Ongoing

Statements	**1**	**2**
Availing of text books		
Availing of revision books		
Improving pedagogical approaches		
Improving student: teacher contact hour		
Improving student: teacher ratio		
Improving student: text book ratio		
Increasing library work for students		

3. Indicate the three subjects selected in section C with their KSCE mean scores in the years provided in the table below.

Subjects	2014	2015	2016	2017	2018

4 a. Tick the option that describes your school in relation to co-curriculum

i) The school participates in co-curricular activities ☐

ii) The school does not participate in co-curricular activities ☐

b. If it participates in co-curricular activities, tick to indicate the highest level ever attained in each of the following activities in the last 5 years

Activities	**Zonal**	**Sub-County**	**County**	**Regional**	**National**	**Not participated**
Football						
Netball						
Volleyball						
Basketball						
Hockey						
Athletics						

a) Indicate by ticking the overall level of achievement of key performance (KPIs) indicators in curriculum and instruction.

	No achievement at all	Less achievement	Moderate achievement	Great achievement	Very great achievement
Status of achievement of KPIs in Curriculum and Instruction					

Section D: Key Performance Indicators in Physical Infrastructure

a) Indicate the rate of the achievement of the following activities under physical infrastructure in the last 5 years by ticking on the scale 1-2, where 1- Completed, 2-Ongoing

Activities	**1**	**2**
Constructing tuition blocks		
Constructing administration blocks		
Constructing ICT room		
Constructing Laboratory		
Constructing Library		
Constructing sanitation and ablution blocks or toilets		
Constructing pavements		
Constructing store rooms		
Constructing fence		
Constructing school gate		
Developing water system		
Acquisition of more school land		
Acquisition of school bus or van		
Constructing dormitories		

b) Indicate by ticking the overall level of achievement of key performance indicators (KPIs) in physical infrastructure.

	No achievement at all	Less achievement	Moderate achievement	Great achievement	Very great achievement
Status of achievement of KPIs in Physical Infrastructure					

Section E: Effect of strategic plan implementation on internal efficiency

1. By ticking, indicate the extent to which you rate the following attributes in your school within the last FIVE years.

Attributes	Below 80%	Between 81%-85%	Between 86%-90%	Between 91%-95%	Between 96%-100%
Grade Promotion Rate					
Retention Rate					

2 (a) Please complete the table below on enrolment

Year	Enrolment per Form				Total
	1	2	3	4	
2012					
2013					
2014					
2015					
2016					
2017					

(b) Please complete the table below on repeaters, dropouts and Form Graduates in your school

Year	No. of repeaters per Form				Total	No. of dropouts per Form					No. of Form 4 Graduates
	1	2	3	4		1	2	3	4	Total	
2012											
2013											
2014											
2015											
2016											
2017											

Thank You

APPENDIX II

QUESTIONNAIRE FOR TEACHERS

INTRODUCTION

Dear Respondent,

It gives me great pleasure to interact with you by means of this questionnaire. This research is being undertaken as a requirement in partial fulfillment of my Ph.D study in the Planning and Economics of Education at Kenyatta University, Kenya. The study purposefully seeks to establish the effects of strategic plan implementation on internal efficiency in public secondary schools in Kisumu and Uasin Gishu counties, Kenya. The formulated questions are only for research purposes; and the responses will be treated with high degree of confidentiality. You will not be penalized for any answer you give.

Feel free to answer the questions according to the way the issues being investigated actually happen in your school as at present. There is no right or wrong answer. What is key is your own experience and truthfulness expressed in the responses you provide for the items in this questionnaire.

Your responses will provide valuable insight that will help in the establishment of the contribution of strategic plan implementation towards the achievement of internal efficiency.

In case of any enquiry, feel free to contact the researcher using either of the following contacts:

Mobile phone 0711505028 Email:ezekieln64@gmail

NB: Briefly state the responses in the spaces provided or tick where appropriate for each of the proposed items.

Section A: Background information

1 Sub County of the school……

2 Your gender Male ☐ Female ☐

3 Your teaching experience in years…….

4 Your teaching experience in the current school……years

5 a) Have you been inducted on strategic planning process? Yes ☐ No ☐

b) If yes in a) above, how long did the induction take?.....months/years. Indicate as appropriate.
c) If yes in a) above, which body/ who inducted you? .....

6. **Academic qualification**: Doctor of Philosophy ☐ Master of Education ☐
Bachelor of Education ☐ Diploma in Education ☐

Others (Specify)…….

7 Your Age

Below 31 years ☐ 31- 35 years ☐ 36- 40 years ☐ 41 -45 years ☐

Since when did your school commence strategic planning and implementation?

Last year ☐ 2 years ago ☐ 3 years ago ☐ 4 years ago ☐

5 years ago ☐ More than 5 years ago ☐

Section B: Awareness of school vision and mission statements by stakeholders

a) Indicate whether the following key stakeholders are aware of the school vision and mission statements or not by ticking provided options appropriately.

Key stakeholders	**Aware**	**Not aware**
The school principal		
The teachers		
The students		
The PA Chairperson		
The parents		

b) Indicate by ticking the overall level stakeholders' awareness of school vision and mission statements.

Attributes	No awareness at all	Less awareness	Moderate awareness	Great awareness	Very great awareness
Stakeholders' awareness of vision and mission statements					

Section C: Achieved key performance indicators in Curriculum and Instruction

1. Select only **three subjects,** which the school is strategically working on their improvement, by ticking against them from the list below.

Subjects	
English	
Mathematics	
Kiswahili	
Biology	
Chemistry	
Physics	
History	
Geography	
Christian Religious Education	
Agriculture	
Business Studies	
Computer Studies	
Art and Design	

2. Indicate the extent to which the following have been achieved in the three subject areas you selected in (1) above in the scale of 1 - 2 where 1- Completed, 2-Ongoing

Statements	**1**	**2**
Availing of text books		
Availing of revision books		
Improving pedagogical approaches		
Improving student: teacher contact hour		
Improving student: teacher ratio		
Improving student: text book ratio		
Increasing library work for students		

3. Indicate the three subjects selected in Section C with their KSCE mean scores in the years provided in the table below.

Subjects	2014	2015	2016	2017	2018

4 a. Tick the option that describes your school in relation to co-curriculum

i) The school participates in co-curricular activities ☐

ii) The school does not participate in co-curricular activities ☐

c) If it participates in co-curricular activities, tick to indicate the highest level ever attained in each of the following activities in the last 5 years

Activities	**Zonal**	**Sub-County**	**County**	**Regional**	**National**	**Not participated**
Football						
Netball						
Volleyball						
Basketball						
Hockey						
Athletics						

d) Indicate by ticking the overall level of achievement of key performance (KPIs) indicators in curriculum and instruction.

Attributes	No achievement at all	Less achievement	Moderate achievement	Great achievement	Very great achievement
Status of achievement of KPIs in Curriculum and Instruction					

Section D: Key Performance Indicators in Physical Infrastructure

a) Indicate the rate of the achievement of the following activities under physical infrastructure in the last 5 years by ticking on the scale 1-2, where 1- Completed , 2-Ongoing

Activities	**1**	**2**
Constructing tuition blocks		
Constructing administration blocks		
Constructing ICT room		
Constructing Laboratory		
Constructing Library		
Constructing sanitation and ablution blocks or toilets		
Constructing pavements		
Constructing store rooms		
Constructing fence		
Constructing school gate		
Developing water system		
Acquisition of more school land		
Acquisition of school bus or van		
Constructing dormitories		

b) Indicate by ticking the overall level of achievement of key performance indicators (KPIs) in physical infrastructure.

Attributes	No achievement at all	Less achievement	Moderate achievement	Great achievement	Very great achievement
Status of achievement of KPIs in Physical Infrastructure					

Section E: Effect of strategic plan implementation on internal efficiency

1 By ticking, indicate the extent to which you rate the following attributes in your school within the last FIVE years

Attributes	Below 80%	Between 81%-85%	Between 86%-90%	Between 91%-95%	Between 96%-100%
Grade Promotion Rate					
Retention Rate					

Thank you

APPENDIX III

QUESTIONNAIRE FOR PARENTS ASSOCIATION (PA) CHAIRPERSONS

INTRODUCTION

Dear Respondent,

It gives me great pleasure to interact with you by means of this questionnaire. This research is being undertaken as a requirement in partial fulfillment of my Ph.D study in the Planning and Economics of Education at Kenyatta University, Kenya. The study purposefully seeks to establish the effects of strategic plan implementation on internal efficiency in public secondary schools in Kisumu and Uasin Gishu counties, Kenya. The formulated questions are only for research purposes; and the responses will be treated with high degree of confidentiality. You will not be penalized for any answer you give.

Feel free to answer the questions according to the way the issues being investigated actually happen in your school as at present. There is no right or wrong answer. What is key is your own experience and truthfulness expressed in the responses you provide for the items in this questionnaire.

Your responses will provide valuable insight that will help in the establishment of the contribution of strategic plan implementation towards the achievement of internal efficiency.

In case of any enquiry, feel free to contact the researcher using either of the following contacts:

Mobile phone 0711505028 Email:ezekieln64@gmail

NB: Briefly state the responses in the spaces provided or tick where appropriate for each of the proposed items.

Section A: Background information

1. Sub County of the school……

2. Your gender: Male ☐ Female ☐

3. Your experience as PA chairperson in years……

4. Your experience as PA member in the current school…….years

5. a) Have you been inducted on strategic planning process? Yes ☐ No ☐

b) If yes in a) above, how long did the induction take?.....months/years. Indicate as appropriate.

c) If yes in a) above, which body/ who inducted you? .....

6. Academic qualification: Primary CPE/KCPE ☐

Secondary KJSE/KCE/KCSE/KACE/EACE ☐

University (Specify) …….

Others (Specify)…….……

7. Your Age

Below 31 years ☐ 31- 35 years ☐ 36- 40 years ☐ 41 -45 years ☐

46- 50 years ☐ Above 51 years ☐

Academic qualification: Primary CPE/KCPE ☐

Secondary KJSE/KCE/KCSE/KACE/EACE ☐

University (Specify)…….

Others (Specify)…….……

Since when did your school commence strategic planning and implementation?

Last year ☐ 2 years ago ☐ 3 years ago ☐ 4 years ago ☐ 5 years ago ☐

More than 5 years ago ☐

Section B: Awareness of school vision and mission statements by stakeholders

a) Indicate whether the following key stakeholders are aware of the school vision and mission statements or not by ticking provided options appropriately.

Key stakeholders	**Aware**	**Not aware**
The school principal		
The teachers		
The students		
The PA Chairperson		
The parents		

b) Indicate by ticking the overall level stakeholders' awareness of school vision and mission statements.

Attributes	No awareness at all	Less awareness	Moderate awareness	Great awareness	Very great awareness
Stakeholders' awareness of vision and mission statements					

Section C: Achieved key performance indicators in Curriculum and Instruction

1. Select only **three subjects,** which the school is strategically working on their improvement, by ticking against them from the list below.

Subjects	
English	
Mathematics	
Kiswahili	

Biology	
Chemistry	
Physics	
History	
Geography	
Christian Religious Education	
Agriculture	
Business Studies	
Computer Studies	
Art and Design	

2. Indicate the extent to which the following have been achieved in the three subject areas you selected in (1) above in the scale of 1 - 2 where 1- Completed, 2-Ongoing

Statements	**1**	**2**
Availing of text books		
Availing of revision books		
Improving pedagogical approaches		
Improving student: teacher contact hour		
Improving student: teacher ratio		
Improving student: text book ratio		
Increasing library work for students		

3. Indicate the three subjects selected in Section C with their KSCE mean scores in the years provided in the table below.

Subjects	2014	2015	2016	2017	2018

4 a. Tick the option that describes your school in relation to co-curriculum

iii) The school participates in co-curricular activities ☐

iv) The school does not participate in co-curricular activities ☐

b. If it participates in co-curricular activities, tick to indicate the highest level ever attained in each of the following activities in the last 5 years

Activities	**Zonal**	**Sub-County**	**County**	**Regional**	**National**	**Not participated**
Football						
Netball						
Volleyball						
Basketball						
Hockey						
Athletics						

c) Indicate by ticking the overall level of achievement of key performance (KPIs) indicators in curriculum and instruction.

Attributes	No achievement at all	Less achievement	Moderate achievement	Great achievement	Very great achievement
Status of achievement of KPIs in Curriculum and Instruction					

Section D: Key Performance Indicators in Physical Infrastructure

a) Indicate the rate of the achievement of the following activities under physical infrastructure in the last 5 years by ticking on the scale 1-2, where 1- Completed, 2-Ongoing

Activities	**1**	**2**
Constructing tuition blocks		
Constructing administration blocks		
Constructing ICT room		
Constructing Laboratory		
Constructing Library		
Constructing sanitation and ablution blocks or toilets		
Constructing pavements		
Constructing store rooms		
Constructing fence		
Constructing school gate		
Developing water system		

Acquisition of more school land		
Acquisition of school bus or van		
Constructing dormitories		

b) Indicate by ticking the overall level of achievement of key performance indicators (KPIs) in physical infrastructure.

	No achievement at all	Less achievement	Moderate achievement	Great achievement	Very great achievement
Status of achievement of KPIs in Physical Infrastructure					

Section E: Effect of strategic plan implementation on internal efficiency

1. By ticking, indicate the extent to which you rate the following attributes in your school within the last FIVE years

Attributes	Below 80%	Between 81%-85%	Between 86%-90%	Between 91%-95%	Between 96%-100%
Grade Promotion Rate					
Retention Rate					

Thank you

APPENDIX IV

INTERVIEW SCHEDULE FOR THE PRINCIPALS

1. Tell me more about yourself in terms of your profession, teaching and work experience and your knowledge about strategic planning process.
2. What is your view about strategic planning process in secondary schools?
3. How did you develop school fundamental statements (vision, and mission statements)?
4. What is your comment about stakeholders' awareness of school vision and mission statements?
5. What effects does the awareness of the school vision and mission statement have on the grade promotion and retention rates in school?
6. Comment on the achieved Key Performance Indicators in the following Key Priority Areas?
   (i) Curriculum and instruction
   (ii) Physical infrastructure
7. What are the effects of achieved Key Performance Indicators in each of the Key Priority Areas on grade promotion and retention rates?

Thank you

APPENDIX V

INTERVIEW SCHEDULE FOR TEACHERS

1. Tell me more about yourself in terms of profession, work experience and your knowledge about strategic planning process.
2. Who were involved in developing the school fundamental statements (vision, mission and statements)?
3. How are the statements communicated to the stakeholders (students and staff/personnel and parents?
4. What is your comment about each stakeholder's awareness of the statements?
5. What effect does the awareness of the statements have on the grade promotion and retention in the school?
6. What are the achieved Key Performance Indicators in the following Key Priority Areas?
    (i) Curriculum and instruction
    (ii) Physical infrastructure
7. What are the effects of the achieved Key Performance Indicators in each of the Key Priority Areas on grade promotion and retention rates

Thank you

APPENDIX VI

INTERVIEW FOR PARENTS ASSOCIATION CHAIRPERSON

1. Tell me more about yourself in terms of profession, work experience and your knowledge about strategic planning process.

2. Who were involved in developing the school fundamental statements (vision, mission and statements)?

3. How are the statements communicated to the stakeholders (students and staff/personnel and parents?

4. What is your comment on each stakeholder's awareness of the statements?

5. What effects does the awareness of the school statements have on the retention and grade promotion rates in the school?

8. What are the achieved Key Performance Indicators in the following Key Priority Areas?

(i) Curriculum and instruction

(ii) Physical infrastructure

9. What are the effects of the achieved Key Performance Indicators in each Key Priority Area on grade promotion and retention rates in the school?

Thank you

APPENDIX VII

RESEARCHERS OBSERVATION CHECKLIST

1 a. How clear are the school vision and mission statements?

Vision

Mission

b. Are stakeholders showing awareness of the school vision and mission statements? What are the evidences?

2. Are there clear evidence of achieved key performance indicators in curriculum and instruction? What are the evidences?

3. Are there clear evidence of achieved key performance indicators in physical infrastructure? What are the evidences?

APPENDIX VIII

DOCUMENT ANALYSIS

(a) Table on enrolment

Year	**Enrolment per Form**				**Total**
	1	2	3	4	
2012					
2013					
2014					
2015					
2016					
2017					
2018					

(b) The table on repeaters, dropouts and Form Graduates in your school

Year	**No. of repeaters per Form**				**Total**	**No. of dropouts per Form**					**No. of Form 4 Graduates**
	1	2	3	4		1	2	3	4	Total	
2012											
2013											
2014											
2015											
2016											
2017											
2018											

(c) Analysis of strategic plan document

APPENDIX IX

RESEARCH AUTHORIZATION: FROM COUNTIES

THE PRESIDENCY

MINISTRY OF INTERIOR AND COORDINATION OF NATIONAL GOVERNMENT

Telephone: Kisumu 2022219/Fax: 2022219
Email: ckisumucounty@gmail.com

COUNTY COMMISSIONER
KISUMU COUNTY
P.O. BOX 1912-40100
KISUMU

Ref: CC/KC/ED/3/VOL.4/80

Date: 14th May, 2019

All Deputy County Commissioner
KISUMU COUNTY

RESEARCH AUTHORIZATION: EZEKIEL ONYANGO NYANGIA

Reference is made to a letter from National Commission for Science Technology and Innovation Ref: NACOSTI/P/19/68893/30118 of 6th May 2019 on the above subject matter.

The above named is a student of Kenyatta University, he has been authorized to carry out a research on ***"Strategic plan implementation and effect on internal efficiency in public secondary schools in Kisumu County"***. The research ends on 3rd May 2020

Kindly accord him any assistance that he may need.

P.A. DOLLA (MBS)
COUNTY COMMISSIONER
KISUMU COUNTY

Copy to:

Ezekiel Onyango Nyangia
Kenyatta University
P. O. Box 43844-00100
NAIROBI.

APPENDIX X

RESEARCH AUTHORIZATION: NACOSTI

NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION

Ref No: **NACOSTI/P/19/68893/30118**

Date: **6th May, 2019**

Ezekiel Onyango Nyangia
Kenyatta University
P.O. Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Strategic plan implementation and its effect on internal efficiency in public secondary schools in Kisumu and Uasin Gishu Counties, Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **Kisumu and Uasin Gishu Counties** for the period ending **3rd May, 2020.**

You are advised to report to **the County Commissioners and the County Directors of Education, Kisumu and Uasin Gishu 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 Commissioner
Kisumu County.

The County Director of Education
Kisumu County.

The County Commissioner
Uasin Gishu County.

The County Director of Education
Uasin Gishu County.

COUNTY COMMISSIONER
UASIN GISHU COUNTY

15 MAY 2019

APPENDIX XI

RESEARCH PERMIT

THIS IS TO CERTIFY THAT:
MR. EZEKIEL ONYANGO NYANGA
of KENYATTA UNIVERSITY, 0-40102
KOMBEWA,has been permitted to
conduct research in Kisumu ,
Siaya County

on the topic: STRATEGIC PLAN IMPLEMENTATION AND ITS EFFECT ON INTERNAL EFFICIENCY IN PUBLIC SECONDARY SCHOOLS IN KISUMU AND UASIN GISHU COUNTIES, KENYA

for the period ending:
3rd May,2020

Applicant's
Signature

Permit No : NACOSTI/P/19/4899/30138
Date Of Issue : 6th May,2019
Fee Received :Ksh 2000

Director General
National Commission for Science,
Technology & Innovation