

**INFLUENCE OF SCHOOL BASED FACTORS ON INTERNAL
EFFICIENCY IN MIXED PUBLIC SECONDARY SCHOOLS IN
NYATIKE SUB COUNTY, KENYA**

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DECLARATION

This research project is my original work and has not been presented for award of degree in any other University.

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DEDICATION

I dedicate this research project to my family; Linet my wife, Britney my daughter and Elroy my son.

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TABLE OF CONTENTS

Declaration.....	ii
Dedication	iii
Acknowledgement	iv
List of tables.....	viii
List of figures.....	x
List of acronyms and abbreviations	i
Abstract.....	ii

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study	1
1.2 Statement of the Problem	4
1.3 Purpose of the study	5
1.4 Objectives of the study	5
1.5 Research Questions	5
1. 6 Significance of the study	6
1.7 Limitations of the study	7
1.8 Delimitation of the study	7
1.9 Assumptions of the study	8
1.10 Definition of key terms	8
1.11 Organization of the study	9

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction	10
2.2 Concept of internal efficiency in learning institutions.....	10
2.3 Measurements of internal efficiency in education.....	11
2.4 Influence of school based factors on internal efficiency in learning institutions..	12
2.4.1 Students' grade to grade promotion policy and internal efficiency in secondary schools	13
2.4.2 Teaching and learning resources and internal efficiency in learning institutions	14
2.4.3 Time management policy and internal efficiency in learning institutions ...	16

2.4.4 School physical infrastructure and internal efficiency in learning institutions	18
2.5 Summary of literature review.....	20
2.6 Theoretical framework.....	22
2.7. Conceptual Framework.....	23

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction	26
3.2 Research design	26
3.3 Target population.....	26
3.4 Sample size and sampling procedure.....	27
3.5 Research instrument.....	28
3.5.1 Validity of the instruments	28
3.5.2 Reliability of the instruments.....	29
3.6 Data collection procedures	30
3.7 Data analysis techniques	30
3.8 Ethical considerations	31

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATIONS AND DISCUSSION

4.1 Introduction	32
4.2 Questionnaire return rate.....	32
4.2.1 Demographic information of principals	32
4.2.2 Demographic information of classroom teachers	34
4.2.3 Demographic information of students	36
4.3.1 To assess the influence of student grade to grade promotion policy on internal efficiency in mixed public secondary schools in Nyatike sub county ..	37
4.3.2 To assess how provision of teaching and learning resources affect internal efficiency in mixed public secondary school	42
4.3.3 To assess how time management policy affect internal efficiency in mixed public secondary schools.....	47
4.3.4 To assess how provision of adequate physical facilities affect internal efficiency in mixed public secondary schools in Nyatike Sub County.	50
4.3.4 Students' responses on availability of physical facilities	51
4.3.5 Response of teachers on availability of playing ground.....	59

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction	61
5.2 Summary of the study	61
5.3 Conclusion.....	65
5.4 Recommendations.....	66
5.5 Suggestions for further studies	67

REFERENCES.....	68
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APPENDICES

Appendix I: Letter Of Introduction	72
Appendix II: Principals' Questionnaire	73
Appendix III: Class Teachers' Questionnaire	76
Appendix IV: Students' Questionnaire.....	78
Appendix V: Observation Checklist.....	81
Appendix VI: Interview Schedule For Students	82
Appendix VII: Research Authorization Letter	83
Appendix VIII: Research Permit.....	84

LIST OF TABLES

Table 1.1: KCSE Result of Nyatike Sub County 2016.....	3
Table 3.1 Sample frame	27
Table 4.1: Responses of principals by gender.....	33
Table 4.2: Number of years the principals have taken in their stations.....	33
Table 4.4: Teachers’ response on professional training.	35
Table 4.5: Teachers’ response on their stay in their work stations	35
Table 4.6: Ages of Form Three and Form Four students	36
Table 4.7: Response of students by gender.....	37
Table 4.8: Teachers’ response on learners’ promotion being pegged on exams	38
Table 4.9: Students’ response on grade to grade policy	38
Table 4.10: Teachers’ response on grade to grade promotion policy.....	39
Table 4.11: Dropout rates from form one	40
Figure 4.1 pie hart on schools promotion guideline	41
Table 4.12: Response of teachers on teaching /learning resources on learners.	42
Table 4.13: Responses of teachers on availability of text books	43
Table 4.14: Status of revision materials in mixed public secondary schools in Nyatike.	44
Table 4.15: Data on laboratory apparatus and chemicals	45
Table 4.16: Response on availability of professional working tools	46
Table 4.17: Response by principals on availability of strategic plans	47
Table 4.18: Teachers’ (principals and class teachers) responses on time management policy	48
Table 4.19: The response of teachers on accessibility of schools (good road network) schools, in Nyatike Sub County	50
Table 4.20: Response on availability of physical facilities by the students	51
Table 4.21: Response by teachers on availability of electricity, clean water and teacher houses	55

Table 4.22: Information by teachers on availability of equipped computer laboratory	55
Table 4.23: Response on availability of sufficient departmental offices	56
Table 4.24: Response on the school examination production by teachers.	57
Table 4.25: Teachers' responses on the number of laboratories in their schools	57
Table 4.26: Teachers' information on availability of dining hall facilities in schools	58
Table 4.27: Teachers' response on availability of playing ground	59

LIST OF FIGURES

Figure 2.1 relationship between schools based factors and internal efficiency.	24
Figure 4.1 pie hart on schools promotion guideline.....	41

LIST OF ACRONYMS AND ABBREVIATIONS

BOM	Board of Management
EFA	Education For All
FDSE	Free Day Secondary Education
FPE	Free Primary Education
FSE	Free Secondary Education
KCPE	Kenya Certificate of Primary Education
KCSE	Kenya Certificate of Secondary Education
MDGs	Millennium Development Goals
ROK	Republic of Kenya

ABSTRACT

A study was carried out on the influence of school-based factors on internal efficiency in mixed public secondary schools in Nyatike Sub County, Kenya. The study was guided by four objectives touching on students' grade to grade promotion policy. Another objective was on the influence that learning and teaching resources have on students' retention and performance. Thirdly the researcher considered the schools time management policy on students' performance and finally the researcher considered the influence of school physical infrastructure on internal efficiency. The design employed in this study was descriptive survey. The researcher targeted 52 secondary schools in Nyatike sub-county. Stratified random sampling was used to arrive at the chosen samples for the study. The school-based factors analyzed were found to affect the internal efficiency of mixed public secondary schools. The government's policy of no repetition, was found not to be adhered to by schools as they had their own students' grade to grade promotion policy. All schools visited were found to be using exams for promotions. Ninety point zero percent of the students responded that rules put by schools on student grade to grade affects their wellbeing and stay in school. Sixty one point five percent of the students sampled believed student grade to grade policy has an impact on repetition of students. The shortage of teaching and learning material resources in the sub county was found to be acute. One hundred percent of the teachers involved in the study indicated that teaching and learning resources affect student retention and performance in schools which in turn affect drop out and retention of student in classes. The shortage was recorded on books, revision materials for exams and laboratory chemical equipment were found to be so acute that most of the practicals in science subjects were not being done. On time management policy, all the teachers admitted having time table for lessons, although their conformity to ministry's guideline could not be ascertained. The majority of the teachers (74.6%) confirmed that their schools have got daily programs which reinforce student well-being in schools. Co-curricular activities also form part of the daily programs but some students admitted that teachers are not keen to undertake games outside the sports competition calendar. School physical facilities were established to have an influence on internal efficiency in mixed public secondary schools by all the students who participated in the study affirming their importance. Sixty three point zero percent of the students who participated in the study confirmed that the library services in their schools are inadequate. Majority of the students averred that they don't have adequate science laboratories in their schools. Forty point two percent of the students who participated in study said that toilets were inadequate with 5.0 percent of the students affirming they are not there. The researcher established that the provision of adequate school physical facilities influences internal efficiency in mixed public secondary schools as indicated by dropout rates among students in public mixed secondary schools within Nyatike Sub County. The researcher recommends that schools to promote learning by advocating for students' grade to grade promotion policies that do not hamper quality learning. Further recommendation is for education stakeholders to ensure that teaching/ learning materials and school physical facilities are availed sufficiently in all secondary schools to improve the internal efficiency of mixed public secondary schools.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Education is a purposive, conscious or unconscious, psychological, sociological, scientific and philosophical process, which brings about the development of the individual to the fullest extent and also maximizes the development of society for happiness and prosperity, (Kumar and Ahmad 2007). Education is the development of an individual according to his needs and demands of society, of which he is an integral part. No country has achieved constant economic development without considerable investment in human capital through education (Ozturk, 2011).

According to Roberts (2011), the primary determinants of a country's standard of living is how well it succeeds in developing and utilizing the skills and knowledge, furthering the health and educating the majority of its population. This is because education is viewed as a catalyst in economic growth and development of a nation via developing the requisite human capital through training and schooling. This is evidenced by the huge investment made in education sector by governments, communities as well as private investors. Furthermore, balanced education system promotes not only economic development, but also productivity, translating into higher income per capita. Conversely, low education and uneducated society is regarded as an obstacle to any nation's prosperity in all spheres of life. The society therefore benefits only if the learners are encouraged and given the opportunity to learn and transit through the education system. The education system is composed of inputs, process, outputs and outcomes.

Inputs in education refer to the elements such as teachers, administrators, students, educational materials, buildings, and various equipment that are necessary for the proper functioning of a teaching/learning process in a school. On the other hand, output refers to the expected outcomes of the education system achieved in terms of knowledge, skills, and attitudes.

Internal efficiency is defined as the amount of learning achieved during the school age attendance, compared to the resources availed to support education (Klein, 2011). Effectively, it measures the performance of the education system as indicated by students successfully transiting through the education system without wastage. Lerotholi (2001) asserts that internal efficiency of an education system is indicated by grade promotion, repetition and dropout rates.

Therefore, indicators of internal efficiency include performance rates, dropout rates, promotion rates and repetition rates. Consequently, the student grade to grade promotion policies, teaching and learning resources, school time management policy, and school physical infrastructure can have great bearing on internal efficiency.

The major problems highlighted by the Migori County Education Board to be affecting the students have been stated as school based, parental failures and economic hardships experienced by the locals. The school based factors highlighted that affect internal efficiency include rigid student grade to grade promotion policies by schools fighting for good school and subject means; lack of teaching and learning resources within schools as a result of inadequate government and public spending; and lack of school physical facilities like science laboratories, classrooms and latrines. There has also been a concern of poor time management by schools leading to absence of or late syllabus coverage. The Nyatike Education Office has been

pressurizing schools to adopt the government policy of standardized teaching timetable from eight in the morning to four in the evening. Most of the schools have been defying this, adopting other schedules like teaching during dawns and evening preps to hasten syllabus coverage. Others due to inaccessibility have had time wastage during morning hours before the teaching staffs arrive. The internal efficiency indicated by dropout rate has been very high in Nyatike. This could also be due to lack of physical facilities like classrooms leading to congestion, poor learning environment which may lead to drop outs and poor performance. The performance rate has been below average with quality grades that can lead to university entries in the entire Sub County being low as compared to the performance in other sub-counties in Migori County. The Sub-County's 2016 performance in KCSE is as follows.

Table 1.1: KCSE Result of Nyatike Sub County 2016

Grade	Frequency	Percentage	Cumulative %
A-	3	0.2	0.2
B+	16	0.9	1.1
B	40	2.3	3.4
B-	83	4.7	8.1
C+	130	7.5	15.6
C	189	10.8	26.4
C-	174	9.9	36.3
D+	307	17.6	53.9
D	346	19.6	73.5
D-	399	22.8	96.3
E	45	2.6	98.9
X	20	1.1	100
TOTAL	1752	100	100
MEAN	4.1801		

(Source: Nyatike education office; 2016 Performance index)

From the data in table 1.1, it is clear that wastage grade of D and below constituted 46.3 percent of the total 1752 students who enrolled for the exams. Twenty students who after enrolling for exams didn't do the exams could constitute the dropout rate in that particular class for that year. This number is more than those who attained grade B+ and above.

1.2 Statement of the Problem

According to Okwach (1997), increasing internal efficiency in secondary education would mean higher number of graduates, access to quality of education and higher earning capacity of graduates as a result of low drop-out, repetition and higher promotion rate. This has not been the case with public secondary schools where drop outs and repetition are still being recorded. When dropout and repetition rates of cohorts are high before completing education cycle, system is said to have serious internal inefficiency. However, most developing countries including Kenya continue to experience low internal efficiency as a result of high dropout and repetition rate due to limited educational opportunities, inadequate educational facilities, poor management of time and rigid school policy on students' promotion to the next level. Nyatike had been recommended by the Migori County Education Board to improve on retention of students and discourage drop out of learners to improve internal efficiency. The data from Nyatike Education Office shows that the dropout rate has been high especially from schools neighboring the lake and in gold mining regions. The dropout rate has been at 29 percent in Muhuru division, 26 percent in Kaler division, 21 percent in Kachola division, 19 percent in Nyatike division and 18 percent in Karungu division, with fingers pointing at the school administrators to improve on internal mechanisms on the school environment. The 2015 Migori

Education Board meetings had pin pointed that secondary schools within Nyatike must work towards minimizing drop outs and repetition to curtail on educational wastage.

1.3 Purpose of the study

The purpose of the study was to investigate the influence of school based factors on internal efficiency in mixed public secondary schools in Nyatike Sub County.

1.4 Objectives of the study

This study was to address the following objectives:

- (i) To determine the extent to which students' grade to grade promotion policy in schools influences the internal efficiency in mixed public secondary schools in Nyatike Sub County.
- (ii) To determine the extent to which the teaching and learning resources influence the internal efficiency in mixed public secondary schools.
- (iii) To establish the influence of time management policy on the internal efficiency in mixed public secondary schools.
- (iv) To establish the influence of schools' physical infrastructure on the internal efficiency in mixed public secondary schools.

1.5 Research Questions

This study was guided by the following questions:

- (i) To what extent do students' grade to grade promotion policies influence the internal efficiency in mixed public secondary schools in Nyatike Sub County?

- (ii) To what extent do the teaching and learning resources influence the internal efficiency in mixed public secondary schools?
- (iii) To what extent does time management policy influence the internal efficiency in mixed public secondary schools?
- (iv) To what extent do schools' physical infrastructure influence internal efficiency in mixed public secondary schools?

1. 6 Significance of the study

The findings of the study may provide useful guidelines to various stakeholders including policy makers, educationists, among others, on the best ways possible to address factors affecting internal efficiency in education system. This study may serve to provide school management with an insight into school-based internal efficiency factors as well as related factors contributing to the current status in the sub-county. The findings of the study may be of great help to the school principals and school managers in ensuring that there are sufficient teaching and learning resources, physical facilities, and an insight of planning for time as the greatest resource for performance of the students in the school. The findings may also be very significant to the learners as they will be able to appreciate the importance of the available teaching and learning resources, time as a production factor, the school facilities, and even the services offered by their teachers.

This will help the students to have better performance, low dropout rates, low repetition and high completion rates. The findings tallied may also make additional contribution in generating knowledge to the existing literature; it may provide information to the scholars interested to conduct further research on the topic.

1.7 Limitations of the study

The vast nature of the sub county posed a challenge to the researcher in covering the four corners of the sub county. There are other parts of the county which were impassable during the rainy season like Kabuto regions which posed a challenge in data accessibility and collection. Getting information from drop outs was technical since they had already exited the schools where the research was carried out but this was mitigated by concentrating on students who were present in their various schools at the time of data collection and views expressed assumed to be affecting even the absentees.

1.8 Delimitation of the study

Delimitation of the research provides a clear demarcation that ensures the topic is manageable and therefore the need to demarcate the exact boundaries of the research problem, (Leedy & Ormrod, 2005). The study focused on mixed public secondary schools only because they are the majority in the sub county. Private schools were excluded from the study since they are only two in the sub county. Secondly, the study investigated the influence of school based factors on internal efficiency in mixed public secondary schools in Nyatike Sub County. Besides, the study looked at students' grade to grade promotion policies, adequacy of teaching and learning resources, time management policy, and schools' physical infrastructure and therefore excluded other school based internal efficiency variables. The study restricted itself to these variables because of their application by majority of the schools in Nyatike Sub County. The study was also restricted to students, classroom teachers and principals without taking the input of the support staff and other stakeholders like the parents.

Public secondary schools are many with different challenges, from environment to economic, to be covered within limited timeframe hence the study was confined to cover schools in Nyatike Sub County only.

1.9 Assumptions of the study

The study assumed the following:

1. All respondents participated in the study willingly.
2. All respondents were rational and knowledgeable of internal efficiency.

1.10 Definition of key terms

Academic performance- refers to how well students perform in their school work and how well they accomplish various tasks assigned to them by their teacher.

Automatic promotion- refers to the practice of allowing students to progress from one class to the next without any evaluation or assessment programme.

Internal efficiency- refers to the system that is revealed by grade promotion, repetition and dropout of students in the school.

KCSE certificate- refers to document issued to student after sitting for final examination at the end of the fourth year.

Mixed public secondary schools- refer to public schools where both boys and girls attend the same school.

Schools' physical infrastructure- refers to the essential buildings which must be made available for the objectives of the school system to be accomplished.

Students' grade to grade promotion policies- refer to regulations and rules put in place by the schools to guide on the transition of students from one level to the next.

Teaching and learning resources- refer to the materials that are used in promoting teaching and learning in the classroom, laboratory, and computer rooms.

Time management policy- refers to those behaviors that aim at achieving an effective use of time while performing certain goal-directed activities.

1.11 Organization of the study

This study is organized into five chapters as follows: Chapter one captures the background of the study, statement of the problem, the purpose of the study, objectives of the study, research questions, significance of the study, limitations, delimitation, assumptions, definition of key terms, and Organization of the study. Chapter two is literature review which covers: introduction, concept of the internal efficiency, theoretical framework underpinning all variables covered in research questions, and summary of literature review. Chapter three outlines research methodology namely: introduction, research design, population, sample size and sampling technique, research instruments, validity, reliability, data collection procedure, data analysis technique and ethical considerations. Chapter four covers: data analysis, presentations and findings. Chapter five is section that covers summary of the findings, conclusions, recommendations and suggested areas for further research.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This section reviews relevant literature that relates to the study. This covered concept and measurement of internal efficiency, and influence of various independent variables covered in the study; students' grade to grade promotion policy on internal efficiency in learning institutions; teaching and learning resources on internal efficiency in learning institutions; time management policy on internal efficiency in learning institutions; school physical facilities on internal efficiency in learning institutions; and, finally, a summary of the literature review.

2.2 Concept of internal efficiency in learning institutions

Efficiency typically means a potential for increase in the desired outcomes of education without increases in the physical quantities of resources used. Efficiency has two major aspects: production efficiency which refers to the efficiency with which inputs are combined in the educational process to achieve desired outputs, and exchange efficiency which refers to the efficiency with which appropriate educational outcomes are matched with the country's educational needs. Inputs of the education are composed of the students, the teachers, the time factor, the physical infrastructure and other equipment, and recurrent expenditure. On the other hand, output refers to intangible characteristics that pupils acquire in the course of education programme, knowledge, skills, behavior, and attitudes normally revealed by examination results such as KCSE.

According to Yin and Wang (2005), internal efficiency is a phenomenon that describes the relationship between inputs and outputs of education system. Internal inefficiency may permeate much of primary, secondary, and higher education. This is because infrastructure, administrative staff, and teachers become underutilized as a result of falling rate of enrollment. Subsequently, this creates avenues of inefficiency, waste, and lower productivity. Waste/wastage in education entails the application of human and material resources committed on pupils who may have to repeat, and failures or drop out of school before completing a cycle. Wastage may take place in one of the following ways: wastage may be used to describe those who fail to graduate and leave the system before the completion of the course; it may occur between grades caused by repeating the grade; and those who drop out of the system between the grades.

2.3 Measurements of internal efficiency in education

Mullins (2005), identified promotion rate, repetition rate and dropout rate in the school system as measures of internal efficiency. He stated that promotion rate is the rate at which pupils move from one class to another in a cohort in a given year while repetition rate is the rate at which students are retained in the same classes in a cohort of pupils in a school system.

Psacharopoulos (1991), defined internal efficiency of an education system as “the ability of an education system to turnout its graduates at any level in the most efficient way, without wastage, stagnation or repetition”. An education system is internally efficient if maximum outputs are obtained from a given minimum input.

Dropout in relation to efficiency refers to the practice of students leaving a school before completion of a given phase of education or non-terminal point in level of education. This form of wastage is most influenced by the type of education systems. In absolute terms; dropout rate is the number of students who exit the school system at a given time occasioned by withdrawal, transfer, or incapability. School level factors also play a role in increasing pressures to drop out such as teacher's absenteeism, poor time management, school location and poor quality educational provision among others.

Repetition and dropout constitute wastage while promotions constitute efficiency in the system. Automatic, administrative or collective promotion seem to be a major strategy for the reduction of repeating (UNICEF, 2001). The practice of repetition is based on the idea that a repeater can get remedial support that can improve their foundational skills that are needed before proceeding to the next level. Tools such as brooms and cleaning materials must again be budgeted for. Adeboyeje (2000), postulates that efficient utilization of these items is necessary for the school to be pleasant, safe and comfortable for the learning to take place. These physical facilities affect the internal efficiency aiding one to progress to the next grade. In majority of the cases, repetition is considered as a mechanism to prevent schools from promoting students with inadequate basic skills necessary to be productive members of society.

2.4 Influence of school based factors on internal efficiency in learning institutions

Different scholars have identified different school based factors that contribute to efficiency or inefficiency in secondary schools. These factors can dictate the pass rates, dropout rate, repetition rate and completion rate in secondary schools. Robert

(2005), efficiency is a multidimensional concept. No one factor can justify its attainability. The Education for All (EFA) Report (2001), observes that the primary level of education in Kenya is characterized by high wastage in terms of repetition and dropout. Ngau (1999), notes that multiple repetition results to frustration of the students who in turn feel embarrassed to remain in the same form and cause the students to drop out. In this study therefore the researcher was limited to find out a few school based factors and their influence on internal efficiency in mixed public secondary schools in the provision of secondary education. These factors are: students' grade to grade promotion policy, teaching and learning resources, time management policy and the school physical facilities.

2.4.1 Students' grade to grade promotion policy and internal efficiency in secondary schools

Many schools have formulated several operational policies that guide teaching-learning process as well as assessment of students learning. These school policies have their both positive and negative impacts on school's internal efficiency performance. The school policies that affect educational wastage are the promotion policies that do not allow the student to proceed to the next grade level. Even though examinations are not fully efficient to measure student academic achievement, many schools use them to determine the chance of students to move to the next higher grade or level of education. As a result, examinations and promotion usually cause high or low rate of educational wastage (Psacharopoulos, 1991).

Many schools across the globe with Kenyan in particular have adopted automatic promotion policy to eliminate wastage by reducing high repetition rate and drop out in

schools. Ethiopia allows some automatic promotion in the lower grade with the sole objective of reducing repetition rate, however, in these grades, repetition rates are still reported (MOE, 2000). The ultimate purpose of such automatic policy is mainly to increase educational quality and reduce wastage in the system.

Ndaruhustse (2008) argues that academic performance of the low-achiever does not improve even if the student repeats the grade. Moreover, high repetition rate leads to crowding in classrooms as large number of students are held back in the same class.

The Ministry of Education has also found out that repetition gains are short-term. Students' grade to grade promotion policy therefore affects internal efficiency in that where schools have put mechanisms of automatic promotion, there is little wastage through drop outs and repetition but where schools have got regulations on promotions as is the case in most of the schools, a good number of students drop out due to frustrations and degraded self-esteem. The researcher intended to find students' grade to grade promotion policies put in place by Nyatike mixed public secondary schools and their impact on internal efficiency.

2.4.2 Teaching and learning resources and internal efficiency in learning institutions

Ngaroga (2007), talks of teaching and learning materials as those things, which are accessed in the school environment, collected, or bought. In secondary schools, such resources include teacher resources such as chalkboards, white boards, dusters, lesson notebooks, textbooks, reference books, student progress record books, laboratory chemicals and apparatus, computer services and programs, construction instruments

for mathematics, geography maps, scientific calculators, registers, pigeon holes, and all games equipment.

Despite of the many acknowledged benefits of secondary education, many of the developing countries still find it a challenge to provide the necessary material resources for teaching and learning mainly due to the limited national resources and the competing options. Onyango (2008), points out that the high number of pupils enrolled after the government made education to be free has brought about problems of low textbook ratios and overcrowded classrooms which affect participation in primary schools. The same problem could also be replicated in secondary schools with the introduction of FDSE.

Smith (2002), observes that availability of resources such as desks, textbooks and blackboards had been found to have an impact on students' participation in education. They provide easy access during teaching and learning process. Schools in Kenya have got the same challenges of lack of adequate seating facilities. Kenyan schools are not equally supplied with the material resources, though the government of Kenya, through the FDSE program, gives the students in public schools' equal amount of money for tuition facilities. There has also been a general concern among school administrators of delayance of disbursements of these funds to schools. Eshiwani (1981), observes that sharing of books lowers the morale and interest among students. This can lead to non completion of education program or poor performance leading to repetition of classes. Murald (1998), supports this view by pointing out inadequate teaching and learning aids, lack of teacher system and gender insensitivity, classroom dynamics can work against a student.

Teaching and learning resources form a focal point of attention, arouse interest, stimulate the learners' imagination, save time and energy, and promote retention and good memory. Nyatike sub -county did not perform well generally in the KCSE examinations of the year 2016 as earlier indicated in table 1.1. Basing on the status of inefficiency, the researcher was set to study the effect of provision of teaching/learning material resources on internal efficiency in mixed government run secondary schools in Nyatike Sub – County, Kenya.

2.4.3 Time management policy and internal efficiency in learning institutions

Time management means those behaviors “that aim at achieving an effective use of time while performing certain goal-directed activities” (Claessens et al., 2007, 262). High demands on one's time are characteristic of many professions. As Britton and Glynn (1989, 429), observed, “savvy productive people usually have more things that they would like to do, or need to do, than they have time.” This description certainly applies to the job of most school principals, who entail responsibility for the time-intensive tasks of managing school operations, overseeing instructional programs, building relations among staff members, and so forth (Hornig, Klasik, & Loeb, 2010). In such professions, becoming more productive means finding ways to accomplish more, given limited time resources. Managing one's time more ably is one way to fulfill this goal.

Time management can also be considered as the process by which an individual more effectively accomplishes tasks and goals (Schuler, 1979). In order to utilize time effectively, individuals must first be able to predict how much time is needed for the activity within the school (Kelly, 2002). An individual will become effective in using

their time only when the individual clearly knows what they want to do, what they need to do, and for which specific target date (Soucie, 1986). Within the school, this time is needed to be planned for teaching, indulging in co-curricular activities and general maintenance of the environment to be conducive for learning and for sustainability. Individuals need to become more disciplined in their use of time by respecting their established priorities while minimizing distractions from others as well as from situations that have the ability to displace priorities in terms of time and energy (Soucie, 1986).

According to Crutsinger (1994), time management involves determining what one should do by setting goals, deciding which events are the most important and realizing that other activities will have to be scheduled around them (prioritizing), making decisions about how much time to allow for certain tasks (time estimation), adjusting to the unexpected (problem solving), reconsidering goals and priorities on a regular basis (evaluation), and observing patterns and trends in behavior. There is debate over exactly what skills and behaviors constitute effective time management. Jason, Sussana and Loeb (2010), found out that Principals with better time management skills allocate more time to managing instruction in their schools. Time management is also associated with increased student test score growth in math. This means that there will be higher performance and completion rates in institutions where there is efficient use of time in instructional and knowledge dissemination. The researcher looked at whether time management policy existed in Nyatike secondary schools and its impact on retention and performance of students in these schools.

2.4.4 School physical infrastructure and internal efficiency in learning institutions

Physical facilities refer to the essential resources which must be made available for the objectives of the school system to be accomplished. The availability of adequate facilities which include buildings, classrooms, chairs, desks and washroom/latrines, laboratory, the chalkboard and office. Their presence enhances learning and their absence hinder the retention of students in schools.

Physical infrastructure can contribute to a highly valued learning environment and acceptable learning outcomes for all students. For instance, adequate buildings including classrooms allow students to enjoy learning because overcrowding is eliminated hence they feel motivated to continue being in the system. Besides, lack of lavatories in schools can lead to disease outbreak which can keep students out of school for treatment and possible closure. Ndema, (2014), argued that parents would withdraw their children from school with inadequate infrastructure capable of providing a conducive learning environment. Well maintained classrooms and adequate provision of instructional resources facilitate teachers' instructional task performance and students' learning outcomes. It is against this development that has made the Kenyan government through the ministry of education to provide schools with funds to improve on their infrastructure and regularly review the school registration certificates to curtail over enrolment which brings inefficiency in the system. The presence of these facilities contribute to raise the morale of students to learn and their shortage affect learning negatively hence lead to the inefficiency of the education system in terms of poor academic performance. Urwick and Junaidu, (1991), concluded that quality physical facilities have an impact on internal

efficiency: they allow teaching strategies that permit active pupils participation; increase effective use of learning time; and improve the level of teachers' commitment. Limuli (2009), points out that availing proportionate learning facilities at all levels including equipment and human resources enhance the quality and relevance of imparted skills to learners. Teaching and learning processes do not take place in a vacuum but rather in an environment well structured to facilitate learning. Stoner, Freeman and Gilbert (1996), described the environment of an organization as all elements relevant to its operation and they include direct and indirect action elements. Several studies conducted in other parts of the country have shown that there is a direct relationship between the qualities of school facilities available and the school products. Studies have also shown that a close relationship exists between the physical environment and the academic performance of students. School facilities consist of all the building in the schools for both academic and non-academic activities, equipment for academic and non-academic activities, areas for sports and games, school physical planning (how the structures and paths are arranged).

Other physical facilities include furniture and toilet facilities, lighting, acoustics, storage facilities, ICT, food services, special facilities for the physically challenged people. Eshiwani (1993), factors responsible for poor performance are related to physical facilities such as classrooms, toilets, dormitories, libraries and dining halls. Wamahiu (1995), adds that learning occurs more easily when order prevails, facilities are clean and are in good condition and their adequacy guaranteed.

These facilities play a role in satisfying the physical and emotional needs of the staff and students of the school, Earthman (2002), reporting on California, stated that

comfortable classroom temperature and smaller classes enhance teachers' effectiveness and provide opportunities for students to receive more individual attention, ask more questions, participate more fully in discussions, reduce discipline problems and perform better than students in schools with substandard buildings by several percentage points. The total development of the learners in the cognitive, affective, and psychomotor domains can only take place in an environment that is conducive to teaching and learning. Where the school is located determines the academic standard of the schools. Secondary schools' environment should stimulate, motivate, and reinforce students' regular attendance in school.

Investing in educational facilities is the key to ensuring that schools become institutions where students work together, learn from each other and benefit from a supportive school environment, and consequently maximize student learning so that all students achieve their full learning potential (United Nations Scientific and Cultural Organization, UNESCO, 2007).

Rono (1990) raises concern that some schools started without prior planning. With the mushrooming of CDF (constituency development fund) funded schools, most of these facilities are missing in Nyatike secondary schools. The researcher looked at the effects of these physical facilities on internal efficiency in mixed public secondary schools found in Nyatike Sub County.

2.5 Summary of literature review

In this chapter, school based factors on internal efficiency in mixed public secondary schools both locally and other countries have been reviewed. A review of the

literature clearly indicates that there is a link between the students' grade to grade promotion policies, teaching and learning resources, time management policy, and school physical infrastructure on one hand and internal efficiency on the other. Public secondary schools face a myriad of challenges in acquisition of teaching and learning resources, inadequate physical facilities and a pressure to perform (Nekatibeb, 2002). The availability and condition of the facilities affect the performance of the teachers and in turn, the performance of the students in the schools. How an institution especially the head plans on time available and execution of tasks within the institution has a direct bearing on performance of students within the institution.

According to Yin and Wang (2005), internal efficiency is a phenomenon that describes the relationship between inputs and outputs of education system. Wastage occurs in one of the following way: students dropping out of school system before the completion of the course; grades repeaters leading to overcrowding in class which affect the quality of teaching, teacher-student ration. Some studies have also shown that lack of learning material, laboratory, library, text books, students-teacher ratio are major reasons for students' repetition and eventual dropping out. Although employment opportunities attract student to drop out of school, school based factors play a large part in education wastage. For instance, unattractive school facilities, defiance of government policies on education, irregular policies push students out of school. Within Nyatike, these factors and any research on internal efficiency haven't been carried out while they had been recommended by the county education board (Migori) for especially this region. Their impact after recommendations has not been ascertained. This research therefore tried to look at the impact of these school based factors on retention and performance of the students within the secondary set up. The

researcher looked into the four school based factors and whether they have had an impact on retention and promotion of students within Nyatike Sub County which is found within Migori county around the lake, neighboring Tanzania and found within a gold mining zone.

2.6 Theoretical framework

The study was based on two theories: Human Capital Theory and the System theory. Schultz developed the Human Capital Theory in 1960. Schultz (1960), maintained that increase in any output could only be realized by investing in human capital, hence the Human Capital Investment Theory. Investing in human capital through education is to enable graduates respond to changing opportunities (Schultz, 1971). The convention theory of human capital advocated for by Becker (1992), and Mincer (1974), views education and training as the major sources of human capital accumulation. Secondary schools therefore should participate in enabling students acquire knowledge, skills, and attitudes which are very crucial for human capital base. A system is any pattern with elements, which are related in an efficiently constant manner to validate attention. Ludwig von Bertalanffy initially proposed general systems theory in 1928. According to Ludwig, a system is featured by interactions of its components and nonlinearity of the interactions. Systems can be either controlled or uncontrolled. The researcher considered 54 secondary schools as processing systems comprising of different components: teachers, administration, students, time, resources and facilities. The raw materials (input) are the form ones enrolled into the schools, processed through teaching and learning to give rise to finished products (form four graduates). The more the school system is internally efficient, the more qualitative are the graduates, with less wastage. Both the Human Capital Theory and

the Systems Theory reinforces the main purpose of education. That is to improve learners' ability to make positive contribution in controlling and shaping of environment and its degradation. Governments, policy makers, and civil society have emphasized that developing countries need to invest more in education and ensure that systems of education are managed efficiently, that limited national resources allocated to the education sector yield maximum impact, and that cost-recovery measures are adopted. Even though these two theories look at learners as "machines" to be sharpened for better production, they still prove the best for this study since Kenya being one of the developing countries has embarked on educating her citizens as a way of empowering them to take responsibilities in the society and to improve their productivities.

2.7. Conceptual Framework

Conceptual framework shows the relationship between the independent variable and the dependent variables of the study. The dependent variable is conceptualized to be internal efficiency which depends upon various variables such as students' grade to grade policies, teaching and learning resources, schools' time management policy, and school's physical infrastructure. The independent variables in this study are students' grade to grade promotion policies, teaching and learning resources, schools' time management policy and schools' physical infrastructure. However, extraneous variable like school motivational programs to students might contribute to internal efficiency well outside the control of the researcher.

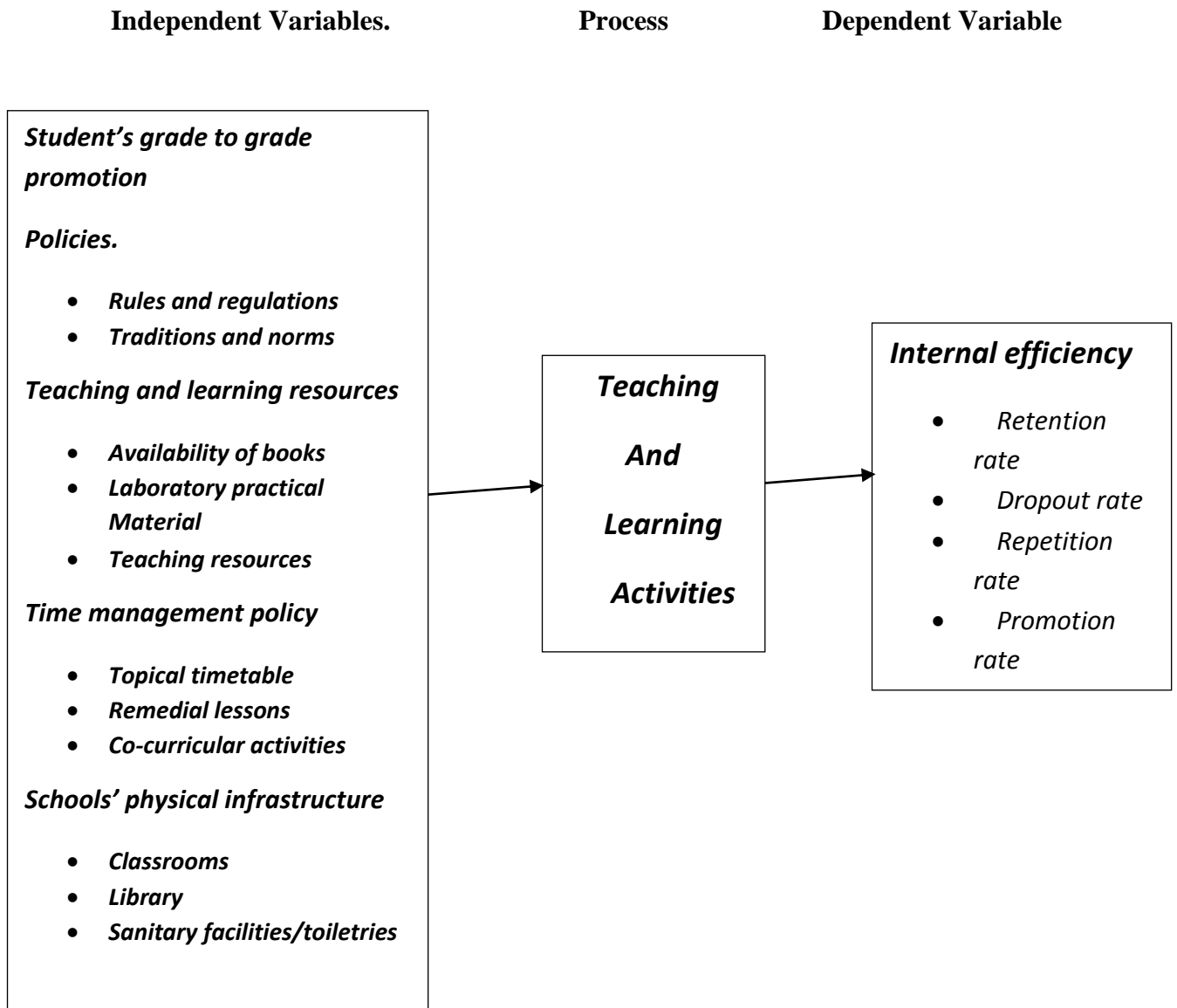


Figure 2.1 relationship between schools based factors and internal efficiency.

Figure 2.1 shows how the inputs in education are turned into output through the teaching and learning process. These independent variables include aspects of internal efficiency: students' grade to grade promotion policy, teaching/learning material resources, time management policy and school physical facilities. The interactions of these independent and the dependent variables during the teaching and learning process in schools may affect the dependent variables either positively or negatively. The dependent variables are the main determinants of internal efficiency of schools.

They include completion rate, repetition rate, dropout rate, and performance in KCSE examination.

The investigations of the researcher dwelt on the above variables in mixed government run schools in Nyatike.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter comprises of the research design, the target population, the population sample and the sampling technique, research instruments, validity and reliability of the instruments, data collection procedures, ethical considerations and finally the data analysis techniques.

3.2 Research design

This study employed a descriptive survey design. Kothari (2004) emphasizes that the main purpose of the descriptive/diagnostic research is to determine the frequency with which something occurs or its association with something else. Mugenda (2003) maintains that descriptive survey is a method of collecting information by interviewing or administering questionnaires to a sample of individuals. The researcher set out to establish the relationship between the school - based factors and the aspects of internal efficiency in mixed public secondary schools in Nyatike Sub County.

3.3 Target population

Nyatike Sub County had 52 mixed secondary schools, 389 teachers, and 9343 students (Nyatike Education Office 2017). The Form Three and Form Four students were targeted because they were assumed to be having enough and relevant information required for this study since they had stayed for the longest period in the secondary schools.

3.4 Sample size and sampling procedure

Orodho (2009), defines sampling as the process of selecting a sub set of cases in order to draw conclusions about the entire set, while a sample is a small part of a large population, which is thought to be representative of the large population. Mugenda (2003), says that for a large population, at least 20 percent of the population is a good representation. Since there were 52 schools in Nyatike (Education office Nyatike 2017), 13 (20% of the schools) schools were sampled randomly. Probability sampling was employed to select the teachers and students to participate in the study. 20 percent of the 389 teachers (TSC unit Nyatike office) had been engaged translating to about 109 teachers participating in this study. Fifteen Form Four and fifteen Form Three students in every school selected were randomly selected and involved in the study. This translated to 390 students. These sample sizes for teachers and students were deemed adequate for the study. The schools in the five divisions of Nyatike sub counties had been considered as follows. In each division the schools were chosen randomly .

Table 3.1 Sample frame

Category	Target population		Sample
Percentage			
Nyatike Division	15	3	28
Muhuru Division	6	2	11
Karungu Division	17	4	31
Got Kachola Division	8	2	15
Kaler Division	8	2	15
Total	54	13	100

3.5 Research instrument

During the study, the researcher used questionnaires, interviews and observation lists as the instruments for gathering information. Mugenda and Mugenda (2003), observed that questionnaires are commonly used to gather information since they are relatively cheaper, convenient, easier to construct and administer. The respondents had their freedom to answer sensitive questions in the absence of the researcher. Questionnaires with closed ended and open-ended questions were administered to get information from teachers, and students in the sampled schools. Another instrument that was used by the researcher was observation list. In this method, the information is sought by way of investigator's own direct observation without posing questions to the respondents. The observation method is subjective. Biasness was eliminated since the observation was made carefully. Lastly, interviews were used to get information from the students. Mugenda (2003), states that interview has an advantage of getting further clarification on an issue which is not possible to have while using questionnaire. Mugenda further states that interviews make it possible to obtain data required to meet specific objectives of the study. The interviewer can also clarify and elaborate the purpose of the research and get more information by probing questions.

3.5.1 Validity of the instruments

Orodho (2009), maintains that instrument validity is concerned with establishing whether the research instruments' contents are measuring what they are developed to measure. In consultation with supervisors, the researcher designed the questionnaire items to measure up to the objectives and to make sure that the observation checklist and interview questions were valid. The instruments were then administered and used very carefully to avoid collecting invalid information.

3.5.2 Reliability of the instruments

Reliability of an instrument is the degree of consistency that the instrument or procedures demonstrate. To establish whether the questionnaires were reliable, the researcher used test – retest method in the study. The questionnaires were dispensed to the same set of students twice, in a lapse of two weeks. Reliability was then calculated using Computational formula which does not require the calculation of the standard deviation nor the means prior to the computation of correlation coefficient r_{xy} where x is data collated in the first sample and y is data collated in the second sample. The formula below was used.

$$r_{xy} = \frac{N\sum XY - (\sum X)(\sum Y)}{[\sum X^2 - (\sum X)^2][\sum Y^2 - (\sum Y)^2]}$$

From the data captured, the researcher used 50 questionnaires given to 50 students during the pre-test and after 2 weeks this 50 were again given the same questionnaires

The following were the results

$$N\sum XY = 50 \times 2400 = 120000$$

$$(\sum X)(\sum Y) = 140 \times 183 = 25620$$

$$[\sum X^2 - (\sum X)^2] = 50 \times 1141.5 - 56730 = 345$$

$$[\sum Y^2 - (\sum Y)^2] = 50 \times 1106.8 - 55010$$

$$(120000 - 25620) \div (345 \times 330) = 0.82895507$$

According to Mugenda (2003) any value beyond 0.5 is considered appropriate hence the researcher went ahead to use the questionnaires

3.6 Data collection procedures

The researcher sought permission from National Council for Science, Technology and Information and Migori County Education Office and then proceeded to sampled schools where permission letter was presented to principals and intention of the research explained to them. Upon attainment of this permission the researcher made necessary arrangements and chose the dates for data collection.

On the material days of data collection, the researcher visited the sampled schools accompanied with introduction letters to the school principals. The researcher then administered the questionnaires after making brief introductions concerning the study. The researcher also ensured that the respondents were aware that confidentiality was ensured. The researcher also requested to interview students who were not part of the questionnaire and in Form Four for an interview session that was lasting twenty minutes in each of the sampled schools. The researcher gave enough time to the respondents to answer all the questions asked in the questionnaire. The researcher finally collected the questionnaires immediately they had been completed. Alongside administering the questionnaires and interviews, the researcher used observation list to observe the available physical and teaching /learning resources in the sampled schools.

3.7 Data analysis techniques

The collected data from the questionnaires, observation lists and interviews was edited, coded and analyzed statistically using Statistical Package for Social Sciences (SPSS) version 22. This is because analyzing the data manually was deemed tedious and might have led to errors. The quantitative data was analyzed and tabulated using

descriptive statistical tools. Tables of frequency distributions, percentages, and graphs were used. The frequencies and percentages are more convenient in giving the general view of the problem thus, making it easier to make conclusions and recommendations. Tables are easier to interpret.

3.8 Ethical considerations

The researcher explained to all the teachers and students who participated in the study that the study was for scholarly undertakings only and not for any other purpose. The researcher further ensured that the responses given by the respondents were treated with confidentiality. The researcher did not harass the respondents during the collection of data but each respondent was given enough time to fill in the questionnaire before submitting it back to the researcher.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATIONS AND DISCUSSION

4.1 Introduction

This chapter presents data analysis, presentation and interpretation of findings. The data presented in this chapter are processed using Statistical Package for Social Sciences (SPSS) version 22. All themes discussing the same research questions are presented and analyzed together. The analysis of data is presented by use of tables and in narrative forms.

4.2 Questionnaire return rate

A total of 512 questionnaires were issued to 13 principals, 109 teachers and 390 students selected during the study, all principals, 105 teachers and 381 students filled and returned the questionnaire, this percentage of 97.4 was deemed adequate for the study according to Mugenda (2003), who suffices that above 50 percent returned of the questionnaires is acceptable. The questionnaire returns rates of 96.7 percent and 96.7 percent for the teachers and students respectively were sufficient enough to give a good representation of the samples.

4.2.1 Demographic information of principals

The demographic information provides an insight on the experience of the administrators, gender and the time they have taken in their various stations. This has a bearing on how the students perceive their role models e.g. schools headed by madam teachers offer an encouragement to girls who in turn work hard to achieve good grades by the end of the year. The time an institutional head has taken in a

school determines how he understands the challenges and threats to the student wellbeing within that niche.

The demographic information on principals was based on gender, and teaching experience as a principal and this is shown in table 4.1

Table 4.1: Responses of principals by gender

Gender	Frequency	Percentage
Male	10	76.9
Female	3	23.1
Total	13	100

From values in table 4.1, it is observed that 10 schools making a percentage of 76.9 were headed by male principals, among the schools visited. This can pose a challenge to the female students who lack someone to look up to in the name of a role model and therefore could have low motivation to excel.

Asked to indicate the number of years they have taken in their stations, the responses are shown in table 4.2

Table 4.2: Number of years the principals have taken in their stations

Years	Frequency	Percentage
0 – 3	4	30.8
4 – 5	5	38.4
6 – 10	3	23.1
Over 10	1	7.7
Total	13	100

Table 4.2 shows that most of the principals at 69.2 percent in the sampled schools had stayed for four years and above. This is good for financial stability, good

cooperation with the parents and guardians, hence better knowledge of students' background that can avoid drop outs since the principal will be in a position to understand the students' background.

4.2.2 Demographic information of classroom teachers

The demographic information of classroom teachers was based on gender, professional training and years they have been teaching in their respective stations of service. Teachers who have stayed in the service for long tend to have a good mastery of the content, have ability to master individual differences in students. This makes each and every learner value his studies because they make students realize their self-worth and being valued to learn. Table 4.3 gives information on the gender of the class teachers involved in the study.

Table 4.3: Gender of classroom teachers involved in the study

Gender	Frequency	Percentage
Male	74	70.5
Female	31	29.5
Total	105	100

Table 4.3 shows that in the sampled schools most of the teachers sampled were male at 70.5 percent (74). This could disadvantage the girl child since there are fewer role models. Guidance and counselling might also not be easily accessible by the girls since there are fewer madam teachers who understand them better.

The teachers' response on their professional training is tabulated below in table 4.4

Table 4.4: Teachers' response on professional training.

Acquisition of professional training	Frequency	Percentage
Yes	89	84.7
No	16	15.3
Total	105	100

The data from table 4.4 shows that majority of the teachers had received the professional training (89) making a percentage of 84.7 percent. Well trained teachers have got skilled abilities to handle students in class as postulated by Gibbons et al., (1997) that teachers' academic level, experience, and professionalism are directly related to student achievement. To improve students' academic performance teachers must be given the right pedagogical skills matched with experience attained over the years of classroom experience.

The teachers' response on years of teaching in their respective work stations is tabulated in table 4.5.

Table 4.5: Teachers' response on their stay in their work stations

Length of stay	Frequency	Percentage
0 – 2	23	21.9
3 - 5	44	41.9
6 – 10	35	29.5
Over 10	07	6.7
Total	105	100

Table 4.5 shows that most of the teachers have stayed in their work stations for a period of more than three years which is good for classroom experience. Students are the direct beneficiaries of experienced teachers who have got different methodologies to handle a concept, bringing good learning environment.

4.2.3 Demographic information of students

The student demographics help us understand their age composition, gender to determine the ratio of boys to girls accessing education within the Sub County and determine areas of gaps that need to be addressed.

Table 4.6 shows response of 381 students on their ages.

Table 4.6: Ages of Form Three and Form Four students

Age of students	Frequency	Percentage
17 – 19	286	75.1
20 – 25	85	22.3
Above 25	10	2.6
Total	381	100

The data from table 4.6 shows that majority of students in form three and four in the sampled schools are in the age bracket of 17-19 years making a percentage of 75.1 percent. This is the age bracket advocated for by the ministry of education but it is also to be noted that there are those in the age bracket of above 25 years who even though are still in secondary schools ought to have finished college education

meaning they are using resources not meant for them leading to wastage on limited government resources.

The response of students in terms of gender is summarized in table 4.7 below

Table 4.7: Response of students by gender

Since students were asked to indicate their gender, the table 4.7 indicates students' population by gender in the sub county.

Gender	Frequency	Percentage
Male	233	61.2
Female	148	38.8
Total	381	100

From table 4.7 the male gender sampled from the Nyatike Sub County schools formed the majority by 61.2 percent. The male gender is prioritized in the sub county in the provision of secondary education. Incentives should therefore be put in place to assist the girl child acquire educational opportunities as the boy child.

4.3.1 To assess the influence of student grade to grade promotion policy on internal efficiency in mixed public secondary schools in Nyatike sub county

The ministry of education advocates for students to take four years in secondary schools meaning upon entry to form one in 2017, a student is expected to be in form four in the year 2020. This implies no repetition and drop outs. Formative evaluations are carried out in schools with the sole responsibility of gauging whether learning is

taking place appropriately. Schools have been found out not to be practicing automatic promotion as postulated by the findings of the study below.

Table 4.8: Teachers’ response on learners’ promotion being pegged on exams

Extent of response	Frequency	Percentage
Strongly agree	74	62.7
Agree	28	23.7
Undecided	12	10.2
Disagree	4	3.4
Total	118	100

Majority of the teachers at 62.7 percent strongly agreed that exams play a greater role in students’ promotion to the next level. Table 4.8 findings corroborate Warren’s findings (2014), that exams play a major role in promotion of learners. Schools sampled majorly relied on internal exams for promotion of students from one grade to another. Most of the schools sampled had promotion policy of a pass mark set to be attained by the students, failure to which no promotion to the other class. This was from the question asked “do you think the following factors affect student drop out and repetition of classes in your school; rules on grade to grade promotion. The response from students is shown in table 4.9.

Table 4.9: Students’ response on grade to grade policy

Response	Frequency	Percentage
Yes	343	90.0
No	38	10.0
Total	381	100

Majority of the students at ninety percent believed that the rules to grade to grade promotion put by their schools had an impact on one being promoted to the next class or not. This affects their wellbeing in school in that it enhances the dropout for those not willing to repeat a class upon failure to attain the laid down pass mark. These policies and traditions set by schools had precedence to the policy put in place by the ministry of education requiring that a student be promoted to the next class at the end of the year.

Table 4.10: Teachers’ response on grade to grade promotion policy

Response	Frequency	Percentage
Agree	89	75.4
Disagree	29	24.6
Total	118	100

Table 4.10 shows that a total of eighty-nine teachers (75.4%) were in agreement that forced repetition leads to drop out hence lower internal efficiency in schools of Nyatike sub County. No student likes to repeat a class but they are normally compelled by the rules. The data above corresponds to Ndaruhutse postulations that repetition demotivates learners and leads to drop outs. When these students repeat, they waste government resources by being allocated these resources twice.

The response from student to indicate the number of students that have dropped out since form one was as follows.

Table 4.11: Dropout rates from form one

Students	Frequency	%	x	fx	fx ²
0 – 9	73	19.16	4.5	328.5	1478.25
10 – 19	265	69.55	14.5	3842.5	55716.25
20 – 29	33	8.66	24.5	709.5	19808.25
30 – 39	10	2.63	34.5	345.0	11902.5
Total	381	100		5225.5	88905.25

Table 4.11 was used to calculate the mean dropout rates and the standard deviation of the dropout rates of students in the schools within Nyatike Sub County. X in this case is the midpoint of the grouped data in each class F is the frequency

Mean dropout rate in the sampled schools (both in form 3 and 4)

$$\sum fx / \sum f = 5225.5 / 381 = 13.71$$

This means that averagely both form three and form four class in the sampled schools had lost fourteen students who had dropped out. This is also confirmed by the frequency showing that students in the range of 10-19 was the highest at 69.6 percent.

Standard deviation for dropout rates is $\sqrt{\{(\sum fx^2 \div \sum f) - (\sum fx \div \sum f)^2\}}$

$$\sqrt{\{(\sum 88905.25 \div 381) - (5225.5 / 381)^2\}} = 6.72605$$

The standard deviation of the dropout rates in the sampled schools indicate that the issue of dropout is evenly distributed in the schools at 6.726

Enrolment recorded by the school principals was highest in form one, reduced in form two. It went further down in twelve out of thirteen schools in form three and finally regained numbers in form four. This could be an indication of drop outs majorly taking place in both form two and form three, the student population was higher in form four due to repetition of candidates wanting to improve their performances in KCSE.

Responses on transparent promotion process.

Both the principals and teachers had the following responses. 85.59 percent of the responses (101 teachers) agreed that their schools had a transparent promotion process based on defined school policy. 14.41 percent (17 of the teachers) strongly disagreed as a response meaning the student grade to grade promotion process was not clear. The response is summarized in the pie chart below.

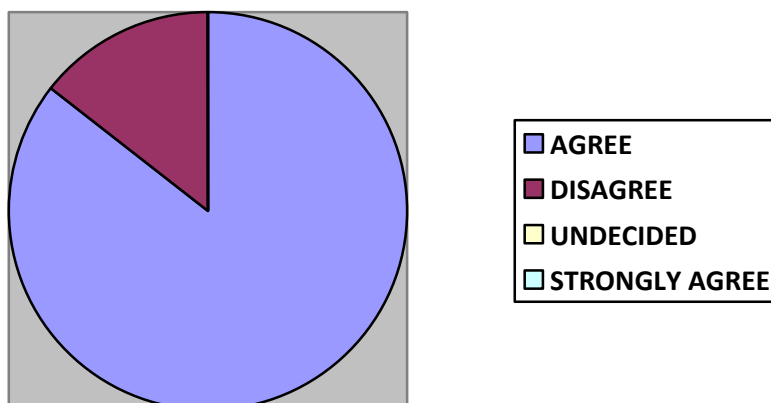


Figure 4.1 pie hart on schools promotion guideline

4.3.2 To assess how provision of teaching and learning resources affect internal efficiency in mixed public secondary school

Teaching and learning resources form core part of the learning process in that they are essential materials used by the teachers and learners to drive the content home. They include writing materials like chalk boards, dusters, books, laboratory chemicals for science practicals and computer services. The researcher wanted to find out their availability and adequacy and their influence on internal efficiency in secondary school provision among learners. The findings are tabulated below.

Table 4.12: Response of teachers on teaching /learning resources on learners.

Response	Frequency	Percentage
Strongly Agree	107	90.7
Agree	11	9.3
Total	118	100

The data in Table 4.12 shows that all the teachers agreed on the importance of teaching and learning resources on retention of students in learning institutions. Without these resources, no meaningful learning takes place leading to students leaving for schools well-endowed with these resources. These findings confirm the view of Smith (2002), who observes that availability of resources such as textbooks, desks, and blackboards had been found to have an impact on pupils' participation in education. They provide easy access during teaching and learning process.

Table 4.13: Responses of teachers on availability of text books

Response	Frequency	Percentage
Undecided	45	38.1
Disagree	73	61.9
Total	118	100

Table 4.13 has data that confirms that text books are not adequately available in Nyatike mixed public secondary schools with 61.9 percent disagreeing on availability of books. Inadequate provision of teaching and learning resources in secondary schools will always lead to low learning of concepts and principles, difficulty in development of cognitive abilities, demotivation of both teachers and students which results to poor performance, grade repetition and school dropout.

No teacher indicated that there are enough textbooks for teaching and learning in Nyatike sub county schools. Students in most mixed public secondary schools in Nyatike are forced to share the textbooks even when teaching is ongoing. The few books available cannot meet the demand and therefore leads to wastage of time. Assignments and homework are not done in time and the syllabus is not covered in time in most schools. The outcome of this as attested by Nyanya (2015) is poor performance in both internal and external examinations. As a result of poor performance in exams, students drop out and some are forced to repeat grades in anticipation of better grades.

Availability of revision materials

Table 4.14: Status of revision materials in mixed public secondary schools in Nyatike.

Response	Frequency	Percentage
Undecided	49	41.5
Disagree	58	49.2
Strongly Disagree	11	9.3
Total	118	100

The data in table 4.14 shows that the sampled schools do not have adequate revision materials for preparing candidates for exams. This is because majority of the teachers disagreed on their availability (58.5%). This means that these schools do not have sufficient revision materials for sharpening the students' skills and knowledge for KCSE. Once a school has inadequate revision materials, students are likely not be adequately prepared for the examination. The students go to the exam when they are not well prepared.

Poor results are thus recorded. Parents and students respond to poor results in KCSE by transferring their children to schools, which have relatively good results in KCSE examination. On the other hand, schools that had adequate revision materials post good results in KSCE exams and are well populated and staffed due to high demand and inflow of students who transfer from other schools. There is great fear that the resources and facilities in such schools, will be overstretched resulting to competition for facilities by the students. This results in overpopulation in some schools and under population in others.

Table 4.15: Data on laboratory apparatus and chemicals

Response	Frequency	Percentage
Agree	13	11.2
Undecided	21	17.8
Disagree	44	37.2
Strongly	40	33.8
Disagree		
Total	118	100

The findings in Table 4.15 show that 37.2 percent of the teachers disagreed on the availability of laboratory equipment and chemicals. This implies that most of the practical lessons are not taught or they are taught theoretically. The concepts to be learnt practically by the students are not adequately learnt. Students' performance in science subjects are therefore low compared to performance in other subjects. From the Kenya national examination council requirement of at least two science subject for grading purposes, many students achieve low mean grade in KCSE examinations. This account for general poor performance Nyatike Sub County and sciences in particular. These findings in Table 4.15 show that learning hardly take place easily in Nyatike sub county. Wamahiu (1995), found out that that learning occurs more easily when order prevails, facilities are clean and are in good repair, and the materials are adequate. Some schools visited did not have even the laboratory buildings in place meaning that laboratory equipment and chemicals are missing hence they do not conduct their experiments. This demoralizes the teachers handling these subjects and even the students who in most cases drop out or opt for transfers to well established schools.

Availability of professional working tools and their use

Table 4.16: Response on availability of professional working tools

Response	Frequency	Percentage
Strongly Agree	3	2.5
Agree	26	22.0
Undecided	54	45.8
Disagree	29	24.6
Strongly	6	5.1
Disagree		
Total	118	100

Table 4.16 findings show that 24.6 percent teachers among the ones sampled disagreed on the availability of professional documents. The teachers who do not have professional documents that include schemes of work, lesson notes, records of work covered and student progress records. The effectiveness of the teachers in execution of their duties is therefore compromised. This is because these tools of work ensure quality teaching and students are therefore motivated to continue learning.

4.3.3 To assess how time management policy affect internal efficiency in mixed public secondary schools.

Time is a limited resource as espoused by Britton and Glynn (1989). This is why if time is not well planned for, chances of failures are very high. The ministry of education controls the opening and closure of public and private schools but how schools utilize their time is at their own discretion. Some schools finish the syllabus earlier while others do not. Some schools also discourage co-curricular activities despite their importance in the name of conserving time but still end up not performing well. The researcher looked at the management of time on internal efficiency in schools and had the following findings from schools in Nyatike Sub County.

Availability of strategic plan

A question was posed to principals on whether their schools had strategic plans and if yes, whether they use them to achieve their goals in the questionnaire. The data captured is tabulated in table 4.17.

Table 4.17: Response by principals on availability of strategic plans

Response	Frequency	Percentage
Yes	4	30.8
No	9	69.2
Total	13	100

Table 4.17 shows that principals in majority of the schools (69.2%) did admit of not having the strategic plans. The ones who admitted having strategic plans (30.8%) have got challenges of finance especially fees collection from parents and grants from

the government not being adequate and congested academic program encompassing academics and co-curricular activities. This means most of the schools do not have time plan for achieving specific goals.

Table 4.18: Teachers’ (principals and class teachers) responses on time management policy

Responses	Strongly agree	agree	undecided	disagree	strongly disagree
	F	F	F	F	F
Availability of teaching time table	100	18	0	0	0
Presence of daily routines roster	88	26	4	0	0
Availability of weekly remedial time table	12	19	35	27	25
Time to recover missed lessons	9	17	23	30	39

From the schools sampled, 84.8 percent of the teachers had strongly agreed that teaching time table are available in their schools though the researcher was not able to ascertain all of them and their conformity to the ministry guideline while no response was gotten for lack of time table. Time table is the basic teaching tool showing when a teacher is to handle learners in a classroom set up at a given time. Whenever teaching takes place the objectives set by the teacher are to be attained but when these lessons go untaught learning is compromised.

Besides the time table, there are other activities to be attended to, forming the daily routines for example attendance of assembly where good behavior is reinforced and

bad behavior discouraged. Majority of the teachers (74.6 percent) confirmed that their schools have got these daily programs which reinforce student well-being in schools.

Co-curricular activities also form part of the daily programs but some students admitted that teachers are not keen to undertake games outside the sports competition calendar. Interviews conducted with students confirmed daily routines with minimal supervision from the teachers which discourages the students' participation.

Weekly remedial lessons were found to be favored in boarding school and 29.7 percent of the teachers admitted handling them in a week. These remedial lessons are important for weak students who remain behind in grasping the key concepts in a subject during class work. The schools that shy away from having these lessons tend to let off the weak students from the learning process. On the other hand, missed lessons were not being recovered at 33.1 percent. Very few schools had missed lessons recovery strategy with 7.6 percent of the teachers strongly agreeing. Lessons missed and not recovered always lead to a backlog of syllabus coverage that impedes students understanding leading to drop outs and repetition.

4.3.4 To assess how provision of adequate physical facilities affect internal efficiency in mixed public secondary schools in Nyatike Sub County.

School physical facilities include their accessibility by motor engines, the physical infrastructure like classes, electricity and provision of water and necessary equipment like computer hardware to be used in exams production.

Table 4.19: The response of teachers on accessibility of schools (good road network) schools, in Nyatike Sub County

Response	Frequency	Percentage
Strongly Agree	2	1.7
Agree	7	5.9
Undecided	15	12.7
Disagree	68	57.6
Strongly Disagree	26	22.1
Total	118	100

Data from table 4.19 shows that the feeling among 57.6 percent of the teachers was that their schools are not accessible due to poor status of the roads. This makes teachers to shy away from their schools or arrive late for work leading to wastage of manpower on the roads as the teachers strive to access their work stations. Only 1.7 percent of the teachers gave a strong agreement response meaning they were satisfied with their school accessibility. The above findings were corroborated by the researcher, upon visitation of schools and using the observation check list, it was noted that out of the thirteen schools visited only four could be easily reached by a

vehicle. Most of the schools had teachers who were nonresidents within the schools' compound leading to wastage of time and wherewithal in trying to reach their places of work.

4.3.4 Students' responses on availability of physical facilities

Table 4.20: Response on availability of physical facilities by the students

Item	Response					
	Adequate		inadequate		unavailable	
	F	%	F	%	F	%
School library services.	29	7.6	240	63.0	112	29.4
Computer laboratory services.	30	7.9	179	47.0	172	45.1
Science laboratory.	150	39.4	171	44.9	60	15.6
Playing fields and pitches.	148	38.9	213	55.8	20	5.3
Electricity supply.	239	62.8	63	16.5	79	20.7
Clean water supply	96	25.2	145	38.1	140	36.7
Catering/ kitchen department.	170	44.6	161	42.3	50	13.1
Toilets and latrines	209	54.9	15	40.1	19	5.0
Classrooms.	194	50.9	187	49.1	0	0

The findings in Table 4.20 show information concerning the availability of physical facilities. Twenty nine point four zero percent of the students who participated in the study upheld that school library services are unavailable while 63.0 percent highlighted that the library services were inadequate. Schools with no or inadequate library services are incapable of cultivating the reading culture on their students. Leisure times are wasted by students leading to poor academic performance. With poor performance, the dropout and repetition is enhanced. This agrees with Raw

(2003), who argues that appropriate utilization of physical facilities in schools control dropout rates, maintains students' discipline and makes students remain motivated for longer periods.

The data in the Table 4.20, show that only 7.9 percent confirmed that computer laboratory services are adequate in their schools. It implies that computer skills are hardly taught in most of the secondary schools in Nyatike Sub County despite the fact that computer has become a necessity in all the sectors of knowledge and economy.

In addition, the table 4.20 shows that 44.9 percent of the students in sampled schools have inadequate science laboratories with 15.8 percent reporting that they don't have science laboratories at all. This explains why there is poor performance in science subjects because practical lessons are not being conducted by the teachers and students. Limuli (2009) asserts that provision of adequate learning facilities at all levels including equipment and human resources enhance quality and relevance of imparted skills.

Further, 61.2 percent of the students noted that Playing fields and pitches are inadequate and 5.3 percent noted there are no fields in their schools. This implies that co- curricular activities are not being stressed. This also confirms that some of the objectives of secondary education are not being achieved. Games not only motivate but also psyche the students to continue learning and not to drop out of school. Actually games keep a good percentage of students in schools.

Considering electricity, 20.7 percent of the students confirmed that Electricity supply is unavailable in their schools. Alternatives to mains electricity are always expensive for schools especially the initial cost of installation which is a mirage to most of these public secondary schools. Electricity is used to run video classes by the use of projectors and running computer classes and result analysis of students. All these cannot be done in its absence; neither can the students refresh themselves through entertainment.

From the results in table 4.20, only 25.2 percent of the students who participated in the research had access to clean water. Despite neighbouring the largest African fresh water lake, most of the Nyatike boarding schools lack reliable water which makes the life of students unbearable and not conducive for learning since ample time is lost looking for this precious commodity. This can also be a source of deviant behavior because students interact with outside community. Some schools were observed to be allowing students to bathe in the lake which is a great threat to students' social wellbeing since they could be exposed to drugs and being that they are mixed schools, boy-girl relationships are going unchecked. This can in turn exacerbate dropout rates.

When it comes to catering/ kitchen department, 13.1 percent of the considered schools do not have kitchen/catering unit meaning they are pure day schools which do not have lunch programs, making students to walk home or to food kiosks. This in turn leads to poor time management. Forty two point two percent percent said that Catering/kitchen department is inadequate meaning that catering services offered are below average. This leads to poor retention of students in these schools as students would wish to associate with the best hence leaving to where this "best" is found

The findings in Table 4.20 indicates that 5.0 percent of the students who participated in the research do not have toilets and use the ones in primary school adjacent to them, 42.3 percent of the students admitted not having adequate toilets for their daily use. This implies students will have long queues going to the toilets and in some cases the privacy of the students is violated causing discomfort and irritation among the students. This leads to school dropout and transfers because of struggles to use the few basic facilities.

The students were further asked about the status of their classrooms. This was pointed out by 49.1 percent of the students who confirmed that classrooms are inadequate. During optional subjects, it was observed that students sit under a tree in some schools whiling away time. If classrooms were adequate, at these times students could be doing some constructive work to improve on academic performance. Some other classes were observed to be having extra students instead of the recommended forty-five by the ministry of education. Overcrowding normally compromises quality learning that leads to poor performance and encourages drop out of students. These findings from students were further confirmed by teachers as tabulated below.

Table 4.21: Response by teachers on availability of electricity, clean water and teacher houses

Response	Frequency	Percentage
Strongly Agree	6	5.1
Agree	13	11.0
Undecided	28	23.7
Disagree	41	34.8
Strongly Disagree	30	25.4
Total	118	100

The findings in Table 4.21 show that only 5.1 percent agreed that their schools have got adequate facilities. This doesn't augur well for quality learning meaning basic necessities of learning are compromised. The end result being that the students are the losers with some opting out of schools.

Table 4.22: Information by teachers on availability of equipped computer laboratory

Response	Frequency	Percentage
Strongly Agree	10	8.7
Agree	13	11.0
Undecided	24	20.3
Disagree	30	25.4
Strongly Disagree	41	34.8
Total	118	100

Table 4.22 shows that thirty four point eight percent of the respondents strongly disagreed that they had equipped computers in their schools. This means that very few

schools introduce their students to basic computer knowledge. Analysis of student marks whenever exams are done also becomes hectic in that without computers there is no software for its analysis.

Table 4.23: Response on availability of sufficient departmental offices

Response	Frequency	Percentage
Strongly Agree	14	11.9
Agree	16	13.6
Undecided	23	19.4
Disagree	48	40.7
Strongly Disagree	17	14.4
Total	118	100

The data from table 4.23 shows that forty point six percent of teachers who participated in the research responded that the departmental offices are inadequate. Departmental offices help teachers to prepare for lessons, mark students work and attend to students with questions. Without them teachers are likely not to attend to the listed functions hence demotivate learners by not being available for them, this in turn lead to poor results hence forcing students out of the system or to repeat a class to better performance. This was also confirmed by the observation check list that confirmed that its only two schools that had adequate departmental offices with the remaining having congested staffrooms. Three schools did not have the office of the deputy principal who were sitting in stores where food stuffs and agricultural tools were kept.

Table 4.24: Response on the school examination production by teachers.

Response	Frequency	Percentage
Strongly Agree	13	11.0
Agree	26	22.1
Undecided	51	43.2
Disagree	24	20.3
Strongly Disagree	4	3.4
Total	118	100

The findings from table 4.24 show that 43.2 percent of the teachers were non-committal on the status of school examination production. This shows that the students are ill prepared for exams leading to poor performance in the last exams of Form Four.

Table 4.25: Teachers' responses on the number of laboratories in their schools

Response	Frequency	Percentage
Strongly Agree	3	2.5
Agree	6	5.1
Undecided	73	61.9
Disagree	21	17.8
Strongly Disagree	15	12.7
Total	118	100

The findings in Table 4.25 show that 61.9 percent of the teachers were undecided whether whatever they had was adequate, meaning only one laboratory in the school. This was corroborated by the observation check list where the researcher confirmed

presence of a single laboratory in eight schools out of the thirteen schools visited. Those that disagreed in the table above had a combined percentage of 30.5 percent. This are schools without a standing laboratory facility, information corroborated by the researcher on his observation check list that three schools were lacking laboratory as a science necessity. This information is supported by Nyanya T. (2015) who argued out that in such instances there is low performance in science.

From the research findings, many schools are unable to conduct the laboratory sessions effectively for all the three sciences. This explains the poor performance in science subjects in Nyatike Sub-County. It is in only one school where three laboratories were observed. In the other cases, there is limited time for preparation of the laboratory, as one teacher follows another immediately for the laboratory usage. For the schools with totally no science laboratory, students are not taken through practical sessions hence cannot discern practical questions in the exams leading to poor performance in KCSE.

Table 4.26: Teachers’ information on availability of dining hall facilities in schools

Response	Frequency	Percentage
Agree	6	5.1
Undecided	12	10.2
Disagree	40	33.9
Strongly Disagree	60	50.8
Total	118	100

The results in Table 4.26 indicate that for the teachers that disagreed and strongly disagreed had a combined percentage of 84.7 percent affirming the inadequacy and unavailability of these facilities in mixed secondary schools in Nyatike. Data from the observation check list corroborated whatever is tabulated above as no school was found with equipped dining hall, with only two schools having halls which are not used due to lack of chairs and tables. Students eat outside the buildings under trees or in their classrooms. It becomes more hectic during rainy season. The classrooms are messed up with food remains. This makes the learning environment not conducive for teaching and learning process bringing about poor results. Students then respond to this poor results through dropouts, transfers and even grade repetition. Ndema, (2014), argued that parents would withdraw their children from school with inadequate infrastructure to those capable of providing a conducive learning environment.

4.3.5 Response of teachers on availability of playing ground

Table 4.27: Teachers' response on availability of playing ground

Response	Frequency	Percentage
Strongly Agree	17	14.5
Agree	24	20.3
Undecided	53	44.9
Disagree	50	12.7
Strongly Disagree	9	7.6
Total	118	100

The findings of table 4.27 show the response of 44.9 percent of the teachers as undecided implying that most of the schools do not have well equipped fields with facilities. The information acquired by observation found out that three secondary

schools did not have fields and were operating from the primary schools neighboring them. Fields are used for recreational purposes and nurturing talents. Whenever students don't get time to refresh, they become dull and demotivated to carry on with rigorous academic work. They are also likely to opt for transfers to schools with good facilities or drop out from the system completely.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

In this Chapter of the report, the researcher has summarized the study, made conclusions, and recommendations based on the study findings. This chapter gives a summary of the main findings of the study, conclusions, and suggestions for further research.

5.2 Summary of the study

The purpose of the study was to investigate the influence of school-based factors on internal efficiency in mixed public secondary schools in Nyatike Sub-County, Kenya. These school- based factors included: students' grade to grade promotion policy, teaching and learning resources, time management policy and schools' physical facilities as they influence internal efficiency in mixed public secondary schools.

The objectives of the study were as follows: to determine the extent to which students' grade to grade promotion policy in schools influence the internal efficiency in mixed public secondary schools in Nyatike Sub-County; to determine the extent to which the teaching and learning resources' influence the internal efficiency in mixed public secondary schools; to establish the influence of time management policy on internal efficiency in mixed public secondary schools; to establish the influence of school's physical infrastructure on the internal efficiency in mixed public secondary schools.

The study employed descriptive survey design. The target population was 52 secondary schools comprising; principals, teachers and students in the entire Nyatike Sub County. The sample consisted of 499 respondents; 13 principals and 105 teachers and 381 students. The researcher employed self-administered questionnaires, observation checklist and interviews to gather data for the study. There were questionnaires for principals, classroom teachers and those for students. All of the school-based factors cited above affect internal efficiency in mixed public secondary schools. Despite government's policy of zero repetition, all schools were found to have students' grade to grade promotion policy. All schools visited were found to be using exams for promotions. Ninety point zero percent of the students responded that rules put by schools on student grade to grade affect their wellbeing and stay in school and seventy seven point one percent of the teachers believed that forced repetition leads to dropping out of students from schools.

The shortage of teaching and learning material resources in the sub county was found to be acute. One hundred percent of the teachers involved in the study averred that teaching and learning resources affect student retention and performance in schools which in turn affect drop out and retention of student in classes. Sixty one point nine percent said they did not have enough books for classwork. Fifty nine point two percent indicated that there are not enough revision materials for preparing students for exams. Concerning laboratory chemicals and equipment, seventy one point two percent indicated that these chemicals and equipment were not enough for practical lessons.

On time management policy, all the teachers admitted having time table for lessons, although their conformity to ministry's guideline could not be ascertained. Majority of the teachers (74.6 percent) confirmed that their schools have got the daily programs which reinforce student well-being in schools. Co-curricular activities also form part of the daily programs but some students admitted that teachers are not keen to undertake games outside the sports competition calendar.

Weekly remedial lessons were found to be favored in boarding school and 29.7 percent of the teachers admitted handling them in a week. On the other hand, missed lessons were not being recovered at 58.5 percent.

School physical facilities were established to have an influence on internal efficiency in mixed public secondary schools by all the students who participated in the study affirming their importance. Sixty three point zero percent of the students who participated in the study establishing that the library services in their schools are inadequate. Fifteen point eight saying they don't have science laboratories in their schools and 44.9 percent saying they don't have adequate laboratories. On playing fields 55.9 percent did not have adequate fields and pitches with 5.3 percent of the schools lacking playing fields completely. Twenty point seven percent of the students who participated in the research noted that their schools do not have electricity and 36.8 percent saying that they don't have access to clean water. Forty nine point one percent of the students confirmed they have inadequate classroom for learning purposes. A further 42.3 percent indicated their catering unit is inadequate in their schools.

Forty point two percent of the students who participated in study said that toilets were inadequate with 5.0 percent of the students affirming they are not there.

Concerning the accessibility of schools in Nyatike Sub- County, 69.2 percent of the teachers who participated in the study said that schools are not accessible due to the poor state of the roads. It was established by the study that 25.4 percent of the schools in Nyatike do not have access to electricity, clean water and teachers' houses. Concerning information on equipped computer laboratories, 60.2 percent disagreed on their availability. On departmental offices very few schools were found to be having them to adequate level. This was established by the study as only 13.6 percent of the teachers who were quizzed agreed that their schools have enough departmental offices. Concerning issue of handling exams, 23.7 percent of the teachers did rate their exams production as very poor. When a question on number of laboratories within a school set up was posed to teachers, 30.5 percent indicated they had no laboratories in their schools. Eighty four point eight percent said that there is no dining hall in their schools.

The research question one sought to determine the extent to which students' grade to grade promotion policy in schools influence internal efficiency in mixed public secondary schools in Nyatike Sub County. Research question two sought to determine the extent to which the teaching and learning resources' influence the internal efficiency in mixed public secondary schools. Research question three sought to establish the influence of time management policy on the internal efficiency in mixed public secondary schools and research question four sought to establish the influence of school's physical infrastructure on the internal efficiency in mixed public secondary schools

Literature review was focused on the concept of internal efficiency in learning institutions, measurement of internal efficiency in learning institutions. How school based factors such as students' grade to grade promotion policy, teaching and learning resources, time management policy and school physical facilities influence dropout rate, repetition rate, completion and pass rate.

5.3 Conclusion

In view of the study findings, the researcher concluded that:

- Students' grade to grade promotion policy influences internal efficiency in mixed public secondary schools. This affects students' dropout, students' repetition, performances in examinations and the completion rate.
- The provision of teaching and learning resources influences to a greater extent the internal efficiency in mixed public secondary schools.
- Time management policy in schools influences internal efficiency in mixed public secondary schools since it determines how teaching and learning process is executed.
- The provision of adequate school physical facilities influences internal efficiency in mixed public secondary schools as indicated by dropout rates among students in mixed public secondary schools within Nyatike Sub County.
- Internal efficiency is a broad concept influenced by many school-based factors with no single factor leading to its attainment.

Dropout, repetition, poor performance and truancy in schools affirm the effect of perceived inefficiency in mixed public secondary schools. The lack of internal efficiency leads to low levels of participation in education leading to weaker productivity in the economy, poor health among citizenry, low purchasing power and hence low economic growth. The study established that some students are still repeating despite the government policy on repetition, whereby no student is expected to repeat any class. All the education stakeholders should ensure the schools are fountains of knowledge to train future professionals without having stringent policies that discourage upward mobility of learners, avail adequate teaching and learning resources, efficient management of time by school administrators and classroom teachers and adequate physical facilities to enhance on the school's efficiency in the provision of secondary education.

5.4 Recommendations

Based on the findings of the study, the following recommendations are suggested in order to enhance internal efficiency in mixed public secondary schools to improve participation and completion of studies by the students.

- (i) There is need to ensure that schools discourage policies advocating for repetition and encourage policies on promotion of learners from one grade to another. This will ensure that the students are given a chance to learn irrespective of their performance.
- (ii) All education stakeholders should strive to avail the teaching and learning resources such as exercise books, textbooks, pieces of chalk and revision materials for quality teaching and learning. The government capitation should reach schools on time.

- (iii) The schools should plan for their time well, manage it effectively in teaching and plan for all activities treating them as all important for the benefit of the student. All this should be done to make an all-round student.
- (iv) There should be adequate supply of school physical facilities such as enough classrooms science laboratories, computer laboratories, school halls, good access roads, clean water supply, electricity supply, enough toilets.

5.5 Suggestions for further studies

- (i) A study on other school based factors not considered in the study on internal efficiency in public secondary schools.
- (ii) A study on external factors on internal efficiency in public secondary schools
- (iii) The extent of government funding on internal efficiency in public secondary schools.

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APPENDICES

APPENDIX I: LETTER OF INTRODUCTION

Fredrick Otieno Ouma,
Department of Educational
Administration and Planning,
University of Nairobi,
P. O. Box 92, KIKUYU.

The principal,
..... Secondary School,
Nyatike Sub County

Dear Sir/Madam,

RE: RESEARCH PROJECT

I am a post graduate student of the Department of Educational Administration and Planning, University of Nairobi. I am currently carrying out research on **“Influence of school based factors on internal efficiency in mixed public secondary schools in Nyatike Sub County, Kenya.”** The questionnaires are designed for this research only and some of the respondents are within your school like teachers, students and your office. All the respondents will be treated in confidence.

Thanks for your cooperation.

Yours faithfully,
Fredrick Otieno Ouma

APPENDIX II: PRINCIPALS' QUESTIONNAIRE

Answer all the questions by filling in the blanks or ticking (✓) where necessary. All your responses are meant for research purposes only

Part 1: Demographic background information

1. (a) What is your gender? M () F ()

(b) How many staff members do you have?

Male..... Female.....

2. What is the total enrolment in your school?

Form I.....

Form II.....

Form III.....

Form IV.....

3. For how long have you been the principal of this school... years?

4. How can you rate the trend of students' participation in academics for the last 3 years?

Poor () average () Good () Excellent ()

Part 2: Influence of school based factors on internal efficiency

3. Do you have a strategic plan for the school Yes () No () If yes is it being implemented and what challenges do you encounter in its implementation?

.....

4. Indicate the rate at which the following factors influence the retention and participation of students. Give your opinion by ticking the most appropriate column in the table below

	Items	Strongly agree	Agree	undecided	disagree	Strongly disagree
4.1	Student Grade to grade promotion policy (i)Frequent repetition					
	(ii)Promotion equated to passing exams (iii)Learner accountable for his success					
4.2	(iv)Transparent promotion process School time management policy (i)Availability of teaching timetable					
	(ii)Presence of daily routines roster (iii)Availability of weekly remedial timetable					
4.3	(iv)Availability of time to recover missed lessons Teaching and learning resources (i)availability of text books (ii)Revision materials (iii)Chemicals for					

4.4	<p>practicals and laboratory equipment. (iv)professional working tools e.g. schemes of work, teaching notes (v)To what extent do you agree availability of learning resources affect student retention and performance</p> <p>School physical infrastructure</p> <p>(i)Is the school accessible (good road network)?</p>					
	<p>(ii)Is the school supplied with the following electricity, clean water, and teacher houses?</p>					
	<p>(iii)Does the school have an equipped computer laboratory? (iv)Are there sufficient departmental offices in your school? (v)Rate the school examination production (vi) Are there adequate laboratories for each science subject?</p>					
	<p>(vii)Availability of dining hall (viii)Availability of playing ground</p>					

APPENDIX III: CLASS TEACHERS' QUESTIONNAIRE

Answer all the questions by filling in blank spaces or ticking (√) where necessary. All your responses are meant for research purposes only. Do not write your name.

Part 1: Demographic background information

1. What is your gender?.....
2. Have you received professional training Yes () No ()
3. How many years have you been teaching in this school?

Influence of school based factors on internal efficiency (retention and completion rates of students)

4. Please indicate by putting an —Xll the rate at which you agree the following factors influence retention and completion rates of students.

S.N	Items	Strongly agree	Agree	Undecided	disagree	Strongly disagree
4.1	Student Grade to grade promotion policy (i)Frequent repetition					
	(ii)Promotion equated to passing exams					
	(iii)Learner accountable for his success					
4.2	(iv)Transparent promotion process School time management policy					
	(i)Availability of teaching timetable					
	(ii)Presence of daily routines roster					
	(iii)Availability of weekly remedial timetable					
4.3	(iv)Availability of time to recover missed lessons Teaching and learning resources					
	(i)availability of text books					
	(ii)Revision materials					
	(iii)Chemicals for practicals and laboratory					

	equipment. (iv)professional working tools e.g. schemes of work, teaching notes					
	(v)To what extent do you agree availability of learning resources affect student retention and performance					
4.4	School physical infrastructure (i)Is the school accessible (good road network)?					
	(ii)Is the school supplied with the following electricity, clean water, and teacher houses?					
	(iii)Does the school have an equipped computer laboratory? (iv)Are there departmental offices in your school?					

APPENDIX IV: STUDENTS' QUESTIONNAIRE

Kindly, tick in the boxes of your choice in the corresponding parts of the questionnaire. This study is purely for academic purpose and therefore all answers will be kept strictly confidential. Please do not write your name or the name of your school anywhere on this paper.

1. What is your age (in years)?

17 – 19 []

20 – 25 []

Above 25 []

2. What is your gender?

Male [] Female []

3. How many are you in your class this year (2017)? _____

4. How many were you when you joined form one in the year 2014/2015? _____

5. How many of your classmates in form four/three joined you after form one?

6. (i) How many of your classmates have repeated any class since you

Joined form one? _____

(ii) Do you think the following factors affect student dropout and repetition of classes in your school?

(a) Rules on students grade to grade promotion

Yes [] No []

Explain

(b) Teaching and learning resources

Yes [] No []

Explain

(c) School physical facilities

Yes [] No []

Explain

7. Do you think how school manages its time affect the retention of students and their performance?

Yes [] No []

Explain your answer

8. Tick appropriately against each of the following facility whether the facility is available in your school or not.

i) School library services: adequate [] inadequate [] unavailable []

ii) Computer laboratory: adequate [] inadequate [] unavailable []

iii) Science laboratory: adequate [] inadequate [] unavailable []

iv) Playing fields/ pitches: adequate [] inadequate [] unavailable []

v) Electricity supply: adequate [] inadequate [] unavailable []

vi) Clean Water supply: adequate [] inadequate [] unavailable []

vii) Catering/ kitchen department: adequate [] inadequate [] unavailable []

viii) Toilets and latrines: adequate [] inadequate [] unavailable []

ix) Classrooms: adequate [] inadequate [] unavailable []

9. Accessibility of the school: adequate [] inadequate []

10. How many of your classmates whom you started with in form one have dropped out from school up to date?

0 – 9 [] 10 – 19 [] 20 – 29 [] 30 - 39 [] 40 – 49 [] 50 – 59 [] 60 – 69 [] 70 – 79 [] 80 – 89 [] 90 – 99 []

11. In your own opinion, how do you think every student should be retained to complete the studies in your school?

APPENDIX V: OBSERVATION CHECKLIST

The following list of items to be used by the researcher to comment on their condition in each of the sampled schools.

1. Accessibility and location of the school. Good [] Bad []

2. Status of the science laboratories. Good [] Fair [] Bad []

3. Number of toilets for:

(i) Teaching staff -

(ii) Girls -

(iii) Boys –

(iv) Support staff

4. Status of the toilets for:

(i) Teaching staff -

(ii) Boys -

(iii) Girls -

(iv) Support staff

5. Number of departmental offices. _____

6. Number of pitches/ playing fields. _____

7. Staffroom for teachers.

Status: Congested [] spacious [] unavailable []

8. A school's bus/van? _____

9. School library _____

10. School dining/assembly hall _____

11. Availability of teaching time table _____

APPENDIX VI: INTERVIEW SCHEDULE FOR STUDENTS

1. Which year did you join the school?

2. (a) Do you at times miss lessons?

 (b) When missed are they normally covered?

- 3(a) How frequent do participate in games?

 (b) Do teachers take students for games and P.E. lessons?

- 4 (a) What could be the causes of students drop out?

 (b) How can we remedy the situation?

- 5(a) What could be the causes of students repeating a class?

 (b) What are the remedies to students' repetition of a class?

APPENDIX VII: RESEARCH AUTHORIZATION LETTER



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471.
2241349.3310571.2219420
Fax: +254-20-318245.318249
Email: dg@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/17/18559/17655**

Date: **18th July, 2017**

Fredrick Otieno Ouma
University of Nairobi
P.O. Box 30197-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *“Influence of school based factors on internal efficiency in mixed public secondary school in Nyatike Sub-County Kenya,”* I am pleased to inform you that you have been authorized to undertake research in **Migori County** for the period ending **18th July, 2018.**

You are advised to report to **the County Commissioner and the County Director of Education, Migori County** 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
Migori County.

The County Director of Education
Migori County.



MINISTRY OF EDUCATION
State Department of Education

Telephone: (059) 20420
Fax: 05920420
When replying please
quote

COUNTY DIRECTOR OF EDUCATION,
MIGORI COUNTY
P.O. Box 466-40400
SUNA – MIGORI

REF: MIG/CDE/ADMN./I/VOL.III/ 141

DATE: 16th June, 2017

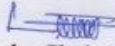
Fredrick Otieno Ouma
University of Nairobi
P.O. Box 92-00902
KIKUYU

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *"influence of School Based Factors on Internal Efficiency in Mixed Public Secondary Schools in Nyatike Sub-County"*. I am pleased to inform you that you have been authorized to undertake research in Migori County for a period ending 31st August, 2017.

On completion of the research, you are expected to submit one hard copy and a soft copy of the research report/Thesis to this office.

Thank you.


Luka Chebet
County Director of Education
MIGORI COUNTY

COUNTY DIRECTOR OF EDUCATION
MIGORI
P. O. Box 466,
SUNA - MIGORI.

APPENDIX VIII: RESEARCH PERMIT

THIS IS TO CERTIFY THAT:

MR. FREDRICK OTIENO OUMA
of UNIVERSITY OF NAIROBI, 62-40402
MIGORI, has been permitted to conduct
research in Migori County

Permit No : NACOSTI/P/17/18559/17655

Date Of Issue : 18th July,2017

Fee Received :Ksh 1000

on the topic: INFLUENCE OF SCHOOL
BASED FACTORS ON INTERNAL
EFFICIENT IN MIXED PUBLIC SECONDARY
SCHOOL IN NYATIKE SUB-COUNTY
KENYA

for the period ending:
18th July,2018

.....
Applicant's
Signature



[Signature]
Director General
National Commission for Science,
Technology & Innovation