

**INSTITUTIONAL DETERMINANTS OF IMPLEMENTATION OF THE  
100 PERCENT TRANSITION POLICY IN PUBLIC SECONDARY  
SCHOOLS IN NYANDARUA CENTRAL SUB COUNTY, KENYA**

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**A Research Project Submitted in Partial Fulfilment of the Requirements for  
the Award of the Degree of Master of Education in Educational Planning.**

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## **DECLARATION**

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

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## **DEDICATION**

This research project is dedicated to the memory of my dad, Augustine Njenga. A strong and gentle soul who taught me to trust in God, believe in hard work and that so much could be done with little. Dad, you never lived to witness my graduation but your belief in my ability to be successful in the academic arena has made this journey possible.

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## TABLE OF CONTENTS

DECLARATION .....	ii
DEDICATION .....	iii
ACKNOWLEDGEMENTS .....	iv
LIST OF TABLES .....	ix
ABBREVIATIONS AND ACCRONYMS .....	xii
ABSTRACT .....	xiii
CHAPTER ONE .....	1
INTRODUCTION .....	1
1.1 Background to the Study .....	1
1.2 Statement of the Problem .....	6
1.3 Purpose of the Study .....	7
1.4 Objectives of the Study .....	8
1.5 Research Questions .....	8
1.7 Limitations of the Study .....	10
1.9 Basic Assumptions .....	11
1.11 Organization of the Study .....	12
CHAPTER TWO .....	14
REVIEW OF RELATED LITERATURE .....	14
2.1 Introduction .....	14
2.2 The Concept of Implementation of the 100 Percent Transition Policy .....	14

2.3 Adequacy of Teaching and Learning Space and Implementation of the 100 Percent Transition Policy .....	16
2.4 Influence of Teaching and Learning Resources on Implementation of the 100 Percent Transition Policy .....	18
2.5 Influence of Sports Facilities and Equipment on the Implementation of ..... 100 Percent Transition Policy.....	20
2.6 Adequacy of Enhanced Sanitation Facilities and Implementation of the 100 Percent Transition Policy .....	21
2.7 Summary Literature Review .....	23
CHAPTER THREE .....	27
RESEARCH METHODOLOGY .....	27
3.1 Introduction.....	27
3.2 Research Design .....	27
3.3 Target Population.....	27
3.4 Sample Size and Sampling Technique.....	28
3.5 Research Instruments .....	29
3.6 Instrument Validity .....	30
3.7 Instrument Reliability .....	31
3.10 Ethical Consideration.....	33
CHAPTER FOUR.....	34
DATA ANALYSIS, PRESENTATION AND INTERPRETATION .....	34
4.1 Introduction.....	34

4.2 Questionnaire Return Rate.....	34
4.3 Demographic Data of Respondents .....	35
4.3.1 Gender of Respondents.....	35
4.3.3 Academic Qualification of Principals and Teachers.....	40
4.3.4 Respondents Working Experience.....	42
4.4 Background Information of Schools Studied.....	43
4.4.1 Distribution of Schools by Category .....	43
4.4.2 Distribution of Schools by Type.....	45
4.5 Adequacy of Teaching and Learning Space and Implementation of the 100 Percent Transition Policy.....	47
4.5.1 Adequacy of Classrooms to Accommodate Students .....	47
4.5.3 Adequacy of School Laboratories.....	51
4.5.4 Adequacy of Libraries in Schools.....	52
4.6: Adequacy of Teaching and Learning Resources and Implementation of the 100 Percent Transition Policy.....	56
4.6.1 Adequacy of Desks and Chairs in Schools.....	56
4.6.2 Adequacy of Textbooks, Exercise books and Revision materials. ....	57
4.6.3 Adequacy of Laboratory Equipment.....	59
4.7 Availability of Games Facilities and Equipment.....	61
4.8 Adequacy of Enhanced Sanitation Facilities .....	67
4.8.1 Availability of Toilets and Latrines.....	68
 CHAPTER 5 .....	 74
SUMMARY, CONCLUSION AND RECOMMENDATIONS.....	74

5.1 Introduction.....	74
Summary of the study .....	74
5.3 Summary of the major findings .....	75
5.3.1 Findings based on the demographic trends of the respondents .....	75
5.3.2 Findings based on research question one.....	77
5.3.2 Findings based on research question two .....	78
5.3.3 Findings based on research question three .....	78
5.3.4 Findings based on research question four.....	78
APPENDICES .....	87
APPENDIX I: LETTER OF INTRODUCTION .....	87
APPENDIX II: QUESTIONNAIRE FOR BOM CHAIRPERSONS.....	88
APPENDIX III: QUESTIONNAIRE FOR PRINCIPALS.....	91
APPENDIX IV: QUESTIONNAIRE FOR TEACHERS.....	96
APPENDIX V: QUESTIONNAIRE FOR STUDENTS .....	100
APPENDIX VI: INTERVIEW SCHEDULE FOR SCDE.....	104
APPENDIX VII: RESEARCH PERMIT .....	105
APPENDIX VIII: RESEARCH AUTHORIZATION .....	106



## LIST OF TABLES

Content	Page
Table 2.1 Conceptual framework.....	25
Table 3.1 Target population and sample size.....	28
Table 4.1 Response rate.....	34
Table 4.2 Distribution BOM and Principals by gender.....	36
Table 4.3 Distribution of form one students by gender.....	38
Table 4.4 Principals and teachers age bracket.....	39
Table 4.5 Students age bracket.....	40
Table 4.6 Professional qualifications of principals and teachers.....	41
Table 4.7 Distribution of schools by category.....	44
Table 4.8 Distribution of schools by type.....	45
Table 4.9 Distribution of schools by number of streams.....	46
Table 4.10 Class size in terms of number of students per class.....	47
Table 4.11 Principals responses on conformity of classrooms.....	49
Table 4.12 Principals responses on number of classrooms.....	50
Table 4.13 Students perception on availability of libraries in schools.....	51
Table 4.14 Principals and BOM responses on adequacy of T/L resources.....	53
Table 4.15 Principals and BOM responses on availability of space for expansion.....	54
Table 4.16 Inadequacy of teaching and learning space and implementation of the 100 percent transition policy .....	54

Table 4.17 Students responses on adequacy of desks and chairs.....	56
Table 4.18 Students responses on adequacy of laboratory apparatus.....	58
Table 4.19 Adequacy of text books, exercise books and revision materials.....	59
Table 4.20 Students responses on distribution of playing fields.....	61
Table 4.21 Students responses on adequacy of balls and nets.....	62
Table 4.22 Students perception on availability of athletics track and space for indoor games.....	63
Table 4.23 Distribution of games facilities and equipment as observed by the researcher.....	65
Table 4.24 Adequacy of sports facilities and equipment and the implementation of the 100 percent transition policy.....	66
Table 4.25 Principals and teachers response on staff and student toilet ratio.....	67
Table 4.26 Students responses on adequacy of sanitation facilities .....	68
Table 4.27 Students responses on whether inadequacy of sanitation facilities interfered with their learning time .....	69
Table 4.28 Students responses on availability of clean water in the school.....	71
Table 4.29 Adequacy of sanitation facilities and implementation of the 100 percent transition policy.....	72

## LIST OF FIGURES

<b>Content</b>	<b>Page</b>
Fig 1.1: Pupil Completion Rate and Primary to Secondary Transition rate.....	5
Figure 1.2: Transition rates in Nyandarua County from 2016 to 2018.....	6
Figure 2.9: Theoretical Framework .....	24
Figure 3.1 Conceptual Framework .....	25
Figure 4.1 Distribution of teachers by gender.....	37
Figure 4.2 Principals and teachers work experience.....	42
Figure 4.3 Class size in terms of number of students.....	48
Figure 4.4 Students responses on availability of libraries in schools.....	57
Figure 4.5 Adequacy of students text books, exercise books and revision materials.....	57
Figure 4.6 Teachers responses on adequacy of sports facilities .....	63
Figure 4.7 Principals and teachers responses on available water sources in the school.....	70

## **ABBREVIATIONS AND ACCRONYMS**

<b>BOM</b>	Board of Management
<b>CDF</b>	Constituency development Fund
<b>EFA</b>	Education for All
<b>FPE</b>	Free Primary Education
<b>FDSE</b>	Free day Secondary Education
<b>GER</b>	Gross Enrolment Rate
<b>GOK</b>	Government of Kenya
<b>MDGs</b>	Millennium Development Goals
<b>MoEST</b>	Ministry of Education, Science and Technology
<b>NACOSTI</b>	National commission for Science, Technology and Innovation
<b>NER</b>	Net Enrolment Ratio
<b>PCR</b>	Pupil completion rate
<b>PSTR</b>	Primary to secondary transition rate
<b>SCDE</b>	Sub County Director of Education
<b>SPSS</b>	Statistical Package for Social Sciences
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organization
<b>UNICEF</b>	United Nations International Children's Fund.
<b>WHO</b>	World Health Organization

## **ABSTRACT**

The purpose of this study was to establish the determinants of implementation of the 100 percent transition policy in public secondary schools in Nyandarua Central sub County. The study was guided by four research objectives. The first objective sought to establish the influence of teaching and learning space on implementation of the 100 percent transition policy. The second objective sought to establish the extent to which teaching and learning resources influence implementation of the 100 percent transition policy. The third objective sought to establish how adequacy of sports facilities and equipment influence implementation of the 100 percent transition policy. The fourth objective sought to determine how enhanced sanitation facilities influence implementation of the 100 percent transition policy. The study used descriptive survey research design. The study was based on education production function theory which was proposed by Mace in 1979. The target population comprised of the sub County Director of Education, all the 34 public secondary school principals, 34 BOM chairpersons, 134 teachers and 1400 students, giving a target population of 1603. Stratified sampling was used to select ten schools which participated in the study. Purposive sampling was used to select all the 10 Principals, all the ten 10 BOM chairpersons and the sub County Director of Education. Simple random sampling was used to select 30% of the class teachers and 10% of the form one students, giving a sample size of 40 teachers and 140 students. The main data collection tools were the interview schedule, questionnaires and an observation guide. The study findings revealed that schools in Nyandarua Central sub County had inadequate teaching and learning space which hindered the smooth implementation of the curriculum. Teaching and learning resources were also found to be inadequate, which affected the teaching and learning processes. The study also established that games facilities and equipment were inadequate where day schools were worst hit. This made it difficult for teachers to contain students during co curricular activities. Inadequacy of sanitation facilities was found to cause wastage of learning time as students spent extra time cuing to access the toilets. The study concluded that adequacy of teaching and learning space, teaching and learning resources, sports facilities and equipment and enhanced sanitation facilities all have a positive influence on the implementation of the 100 percent transition policy. The main recommendation of the study was that the government should promptly allocate more funds for additional infrastructure to public secondary schools. This would ensure that all public schools have adequate teaching and learning space, adequate teaching and learning resources, additional sports facilities and equipment and enhanced sanitation facilities.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background to the Study**

Education is a human right and a powerful driver of a country's economic and social development. It is one of the strongest instruments for ending poverty and improving health, gender equality, peace and stability (World Bank, 2018). Growth, development, and poverty reduction depend on the knowledge and skills that young people acquire and not just the number of years they sit in a classroom (World Bank, 2017). The receipt of a good quality education is one of the most important factors in enabling children to fulfil their potential later in life and reduce poverty (Abadzi, 2009).

The importance of access to education is reflected within the Millennium Development Goals (MDGs) of the commitment to ensure that all children can complete a course of basic education (UN, 2011). In sub Saharan Africa (SSA), Pressure is growing on governments to expand secondary education. This is due to the increasing number of students flowing from expanded primary education and the need to improve the educational levels of the labour force to benefit from a globalizing economy (World Bank, 2006).

Availability of school infrastructure is fundamental for secondary schools to realize the objectives of education (UNESCO, 2006). Quality is at the heart of education, a fundamental determinant of enrolment, retention and achievement. Its expanded definition sets out the desirable characteristics of healthy, motivated learners, Processes with competent teachers who use active

pedagogies, Curricula with relevant content and systems that are well governed and equitable resource allocation (UNESCO, 2005). For learners to be healthy, enhanced and adequate sanitation facilities should put in place to cater for the increased enrolments. Inadequate latrines, toilets, bathrooms and water pose a threat to the health of learners. This has adverse effect on class attendance, motivation and the general well being of the learners. Adequacy of teaching and learning resources enable smooth delivery of content as well as promote the motivation of both the teachers and the students.

Inadequate school infrastructure may cause frustration and resistance while a planned infrastructure is a centre of satisfactory students learning that leads to improved academic outcomes. Improved standard of infrastructure in secondary schools results to remarkable development in the education system as a whole (Muendo, 2014). Inadequate latrines, toilets, bathrooms and water pose a threat to the health of learners (UNICEF, 2008). This has adverse effect on class attendance, motivation and the general well being of the learners.

The world conference on Education for all held in Jomtien, Thailand in 1990 declared education a basic human right (UNESCO, 1990). Guaranteeing the human right to a basic education has therefore no impact unless schooling leads to learning for all children and youth. Learning takes place when students make positive adjustments as they transit from primary to secondary school. Additional public investment may fail to mitigate poverty, unless it improves instructional delivery through the provision of adequate teaching and learning resources (UNESCO, 2016).

According to Hueblar (2011) transition rate in education is defined as the percentage of learners advancing from one level of schooling to the next. McGee, Ward, Gibbons and Harlow (2005) found a strong correlation between the extent to which students experienced difficulty following transition and their likelihood of dropping out from education. A student's transition can be complicated by the social, emotional and physiological changes that can negatively impact on their learning. Poor transitions impact on the wellbeing of students and on their achievement in the future (West, Sweeting and Young 2008). The well being of students and learning must be maintained as they transit from primary to secondary schools.

Implementation of the Government of Kenya's a hundred percent transition policy has recorded a tremendous increase in enrolments across all public secondary schools in Kenya (EMIS, 2019). In his study on challenges faced by head teachers in implementing Free Day Secondary Education program (FDSE), Adan (2011), pointed out that there was a major challenge on adequacy of physical facilities in most schools such as classrooms, toilets, desks, chairs, laboratories and teaching aids, without which learning cannot take place smoothly. The challenge is expected to be greater with the implementation of the 100 percent transition policy in Kenya. Availability of teaching and learning resources enhances the effectiveness of schools in implementing both academic programs and extra curricula activities.

Poor physical infrastructure in secondary schools will continue to adversely affect the contributions of secondary education to the Millennium



Development Goals (Ejionueme, 2007). According to the Global Education Monitoring Report team, US\$39 billion will be needed every year to fill the funding gap and achieve this target in low and lower-middle-income countries (UNESCO, 2015). Several policy options could take countries closer to the target, which include measures to increase classroom construction and improvements in school infrastructure related to water and sanitation.

Increase of enrolments in the secondary sector depends on the increase in pupils completing the last grade of primary education (Lewin, 2005). A strong correlation is seen between the increase in standard 8 enrolments and transition to secondary school. As the enrolment of primary school pupils in the last grade increases, so does the number of pupils entering into the first grade of secondary education. In 2016, secondary schools in the country could only absorb 80% of Kenya Certificate of Primary Education candidates to Form one. This was mainly due to infrastructure shortages as indicated by the Education Sector Report of September 2016.

Chabari, (2010) carried out a study on the challenges of Free Day Secondary Education (FDSE) in public secondary schools in Kangundo District in Kenya. The findings of the study indicated that following the introduction of FDSE policy in 2008, the average number of students increased steadily, leading to overcrowded classrooms. The Government of Kenya continues to invest heavily in the education sector, committing about 6.4% of GDP to the sector. This has ensured efficient provision of basic education with guaranteed

transition and progression of all children from one grade and level of basic education to another.

Financing of education in Kenya is however a partnership of the government of Kenya and donor agencies. Sometimes due to bureaucracies in the processing of the funds, delays are experienced causing panic and outcry among the school stakeholders (Wafula, 2012). This has made it difficult to develop infrastructure in secondary schools, an important aspect of learning.

The physical, human and financial resources invested in schools influence not only the education provided to students but also aspects of teachers and student motivation and consequently the educational outcomes (Ngure, 2012). According to the Ministry of Education (2014), the relative demand for education is highest at secondary level of education and is attributed to the ripple effects from FPE and FDSE.

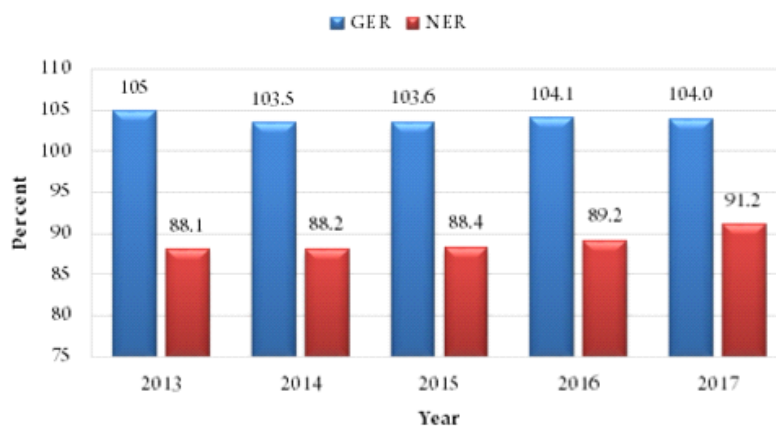
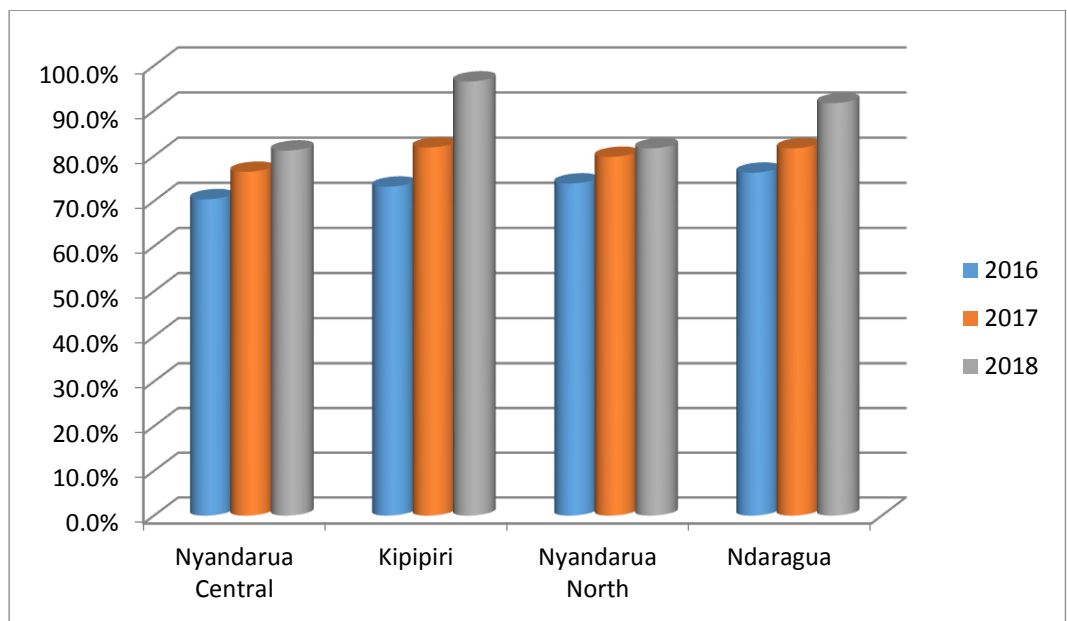


Fig 1.1: Pupil Completion Rate and Primary to Secondary Transition rate (PSTR), 2013-2017

Source: Kenya National Bureau of Statistics 2018 economic survey.

According to the 2018 Kenya economic survey, primary to secondary transition rate (PSTR) rose from 81.3 per cent in 2016 to 83.1 per cent in 2017. With the implementation of the 100 percent transition policy, the transition rates rose to above 97 percent in 2019. Nyandarua is one of the counties that have registered the highest transition rates of above 97 percent in the country (EMIS, 2019).



**Figure 1.2: Transition rates in Nyandarua County from 2016 to 2018**  
(Source: Nyandarua County Education office)

### 1.2 Statement of the Problem

The implementation of the 100 percent transition from primary to secondary school policy is part of global campaign to give all children access to 12 years of continuous learning. According to the republic of Kenya, (2012), MoEST, 2005, the cost of secondary education in Kenya was the main reason for the low transition rate from primary to secondary school. The Government

therefore introduced Free Tuition Secondary Education and Free Day Secondary Education to lower the cost of education and subsequently increase the transition rates from primary to secondary school. This move however did not see the realisation of full transition rate. According to Nyandarua County Integrated Development Plan, only 23 percent of the pupils completing class eight transited to secondary school in 2014, with the rest either joining vocational institutions or dropping out. The drastic increase in form one enrolment in public secondary schools across the country calls for close monitoring to ensure that the student population matches the available infrastructure. Adequacy of teaching and learning space, teaching and learning resources, sanitation facilities as well as sports facilities and equipment brings about a positive influence on implementation of the 100 percent transition policy. Despite the increase in transition rates in Nyandarua County, Nyandarua Central sub County recorded the lowest transition rate of 81.2 percent in 2018 compared to the rest of the sub counties. The sub County also recorded the lowest achievements in both academic achievements. This prompted the researcher to investigate the determinants of implementation of the 100 percent transition policy in Public secondary school in Nyandarua Central sub County.

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

The purpose of the study was to investigate the institutional determinants of 100 percent transition policy implementation in public secondary schools in Nyandarua central sub county.

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

The study was guided by the following objectives;

- i.** To establish the influence of teaching and learning space on implementation of the 100 percent transition policy in public secondary schools.
- ii.** To establish the extent to which teaching and learning resources influence implementation of the 100 percent transition policy in public secondary schools.
- iii.** To establish how adequacy of sports facilities and equipment influence schools.
- iv.** To determine how sanitation facilities influence implementation of the 100 percent transition policy in public secondary schools.

#### **1.5 Research Questions**

The study was guided by the following research questions

- i.** To what extent does teaching and learning space influence implementation of the 100 percent transition policy in public secondary schools in public secondary schools?
- ii.** How do adequacy of sports facilities and equipment influence implementation of the 100 percent transition policy in public secondary schools?
- iii.** To what extent do teaching and learning resources influence implementation of the 100 percent transition policy in public secondary schools?

- iv. How do enhanced sanitation facilities influence implementation of the 100 percent transition policy in public secondary schools?

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

The findings of this study may be of use to education stakeholders in different sectors. First, the educational planners may use it as a guide to allocate funds for expansion of school infrastructure to public schools. Education Policy makers may also use the findings of the study to address educational efficiency and cost effectiveness.

The study findings may possibly be used by the Ministry of Education to assess the impact of funds allocated to public secondary schools for infrastructural development. Findings of the study would also be helpful to the secondary school principals and their respective Board of Management when making decisions regarding development of school infrastructure so that they give priority to those facilities that are least adequate and those that affect the running of the school programs.

The study findings may also be significant to secondary school teachers and students since they may use the results of the study to develop coping mechanisms in areas where resources are scarce, and utilize the available resources efficiently in order to realize smooth implementation of the transition policy. The study findings could also serve as a basis from which other researchers could carry out a similar research in other Counties or carry out further research.

### **1.7 Limitations of the Study**

One of the limitations of this study was that the concept of implementation of the 100 percent transition policy is new in Kenya and therefore sufficient literature was not available for the study. The researcher however identified studies with similar determinants for comprehensive literature review. The other limitation was that it was not possible to control the attitudes of the respondents. The researcher however ensured the respondents that the information given would be treated with confidentiality and used for academic purpose only.

### **1.8 Delimitations of the Study**

The study was delimited to public secondary schools in Nyandarua central sub county. The respondents in this study were the Sub County Director of Education (SCDE), who was the key informant, public secondary schools Board of Management (BOM) chairpersons, public secondary school Principals and teachers, who all play a great role in the implementation of the 100 percent transition policy. The students were also involved since they are the beneficiaries of the transition policy. The study was confined to learning spaces, teaching and learning resources, sanitation facilities and sports facilities and equipment as variables in the study.

## **1.9 Basic Assumptions**

The study was guided by the following assumptions:

- i. That all public secondary schools in Nyandarua central Sub County recorded an increase in form one enrolment compared to the previous years.
- ii. That all public secondary school principals have developed coping mechanisms for implementation of the 100 percent transition policy.
- iii. That provision of adequate teaching and learning space, teaching and learning resources, sports facilities and equipment and enhanced sanitation facilities have significant influence on implementation of the 100 percent transition policy.
- iv. That data available at the sub county education office was reliable and adequate to support the study.

## **1.10 Operational Definition of Significant Terms.**

**Determinants** refers to factors that influence the implementation of the 100 percent transition policy, which are teaching and learning space, teaching and learning resources, sanitation facilities and sports facilities and equipment.

**Enrolment** refers to the act of registering a new student in form one in a secondary school.

**Implementation** refers to how secondary schools are supposed to absorb form one students who complete class eight the previous year.

**Public Secondary Schools** refers to day and boarding schools owned by state government in conjunction with parents.



**Sanitation facilities** refer to facilities which aid in the maintenance of public health and hygiene such as water supply, latrines, toilets, and bathrooms.

**Sports facilities and equipment** refers to facilities used during games and physical exercises lessons in schools such as playing field, athletics track, pitches and equipment used such as balls.

**Teaching and learning resources** refers to materials that aid the teaching and learning processes such as desks and chairs, textbooks, exercise books and laboratory equipment.

**Teaching and Learning space** refers to size of physical facilities within a school where teaching and learning takes place such as classrooms, laboratories and library to accommodate students without congestion.

**100 percent transition policy** refers to directive by the government of Kenya to have all the pupils who complete class eight in primary schools absorbed in secondary schools.

**Transition** Refers to the number of students admitted in form one in a secondary school after completing class eight in primary school in the previous year.

### **1.11 Organization of the Study**

The study was organized into five chapters. Chapter one consisted of the background to the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, limitations of the study, delimitations of the study, basic assumptions of the study and definition of significant terms. Chapter two dealt with the concept of

implementation of the 100 percent transition policy, teaching and learning space and the implementation of the 100 percent transition policy, influence of teaching and learning resources and the implementation of the 100 percent transition policy, influence of adequacy of enhanced sanitation facilities and implementation of the 100 percent transition policy, influence of sports facilities and equipment on implementation of the 100 percent transition policy, summary of literature review, theoretical framework and conceptual framework of the study. Chapter three consisted of research design, target population, sample size and sampling techniques, research instruments, instrument validity, instrument reliability, data collection procedures, data analysis techniques and ethical considerations. Chapter four consisted of data analysis, data presentation and data interpretation. Chapter five consisted of summary, conclusions, recommendations and suggestion for further research.

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

#### **2.1 Introduction**

According to Hart, (1998) literature review is an objective, thorough summary and critical analysis of the relevant available research and non- research literature on the topic being studied. This section reviews literature under the following sub topics; The concept of implementation of the 100 percent transition policy, Teaching and learning space, teaching and learning resources, Sports facilities and equipment and sanitation facilities as determinants of implementation of 100 percent transition policy from primary to secondary school and their influence on teaching and learning process, summary of literature review, theoretical framework and conceptual framework.

#### **2.2 The Concept of Implementation of the 100 Percent Transition Policy**

Implementation is putting new ideas into practice (Fullan, 2001). In this study, implementation refers to the manner in which secondary schools are expected to absorb pupils who complete class eight in the preceding year to form one in the subsequent year. Effects of transition from primary to secondary school have been of particular interest to educationists due to reports that many children in the first year of secondary school regressed in major parts of their education (Galton, 2000).

Universal secondary school enrollment has been achieved nearly in all industrialized countries of western Europe and North America which have

Gross Enrollment Rates (GERs) exceeding 100 percent. Even though free education initiatives improve enrollment, a number of challenges are realized in the process of implementation.

In the United States, challenges in quality of education were registered in stagnant test scores and achievements gaps between the rich and the poor. This led the congress to pass the 'No child left behind act' that sought to commit the nation to provide quality education to every child regardless of background. This open door admission policy led to high enrollments with problems related to discipline (Spelling, 2005).

Findings of a study on factors influencing pupils' transition rate from primary to secondary school in Kitui sub-County indicate that up to 40% of pupils experience interruptions in academic progress during the first couple of months after school transfer (Katiwa, 2016). These interruptions could be as a result of challenges associated with inadequacy of basic infrastructure and teaching and learning resources. These interruptions could interfere with the implementation of the school programs.

In Kenya, a National survey of how schools were coping with the influx of students with the introduction of the 100 percent policy by the government showed that many were struggling with congestion in dormitories, classes, laboratories and dining halls. At the same time, some schools were grossly under enrolled because some parents had an obvious bias for better known, well equipped secondary schools, especially those closer to their homes (Nation Reporter, Feb 2019).

Achievement of 100 percent transition means that most of the students who have been dropping off the education system are now on board. Smooth implementation of the transition policy calls on the government to commit funds for the construction of more teaching and learning spaces, provision of adequate teaching and learning resources, availability of games facilities and equipment and enhanced sanitation facilities. Proper planning in some schools has however resulted to increased enrolments without compromising standards.

### **2.3 Adequacy of Teaching and Learning Space and Implementation of the 100 Percent Transition Policy**

Provision of adequate learning space at all levels including equipment enhances the quality and relevance of imparted skills of learners (Lumuli, 2009). The physical aspects of a school convey nonverbal messages which are welcoming or discouraging, valuing or disrespecting (Strange and Banning, 2014). They cited research that links the physical attractiveness and lighting of a space to the motivation and task performance of those in the space.

Graetz and Goliber (2014) summarized research that links lighting to psychological arousal, overheated spaces to hostility, and density with low student achievement. Scott-Webber (2008) reviewed research on how space makes us feel and related it to knowledge creation, communication and application. Teaching and learning space determine access to secondary education and also transition rate from primary to secondary education (World Bank, 2014). Poor teaching and learning space like classrooms, laboratories

and libraries is a barrier to delivery of education and implementation of education policies (Fillardo & Jeffrey, 2017).

Environments that provide experience, stimulate the senses, encourage the exchange of information, and offer opportunities for rehearsal, feedback, application, and transfer are most likely to support learning. Schools with a well-equipped library, staffed by a full-time certified librarian and appropriate support staff contribute significantly to gains in student learning (Muendo, 2016). A spacious library is conducive for individualized studies since the students can move around and select the materials they require for revision or study without causing disturbance to the other students

Class size is a key factor affecting learning outcomes especially where classes are very large significantly improves learning environments (UNESCO 2016). According to MOEST statistical booklet, (2014), an average class accommodated 40 students in 2014. The size of the classroom, in terms of length and width, should be as specified in the Ministry of Education building specifications i.e. 7.5m x 5.85m or 7.5m x 6.0m. Such classrooms should accommodate a maximum of 30 learners in one-sitter desks or 40 learners in two-sitter desks in line with the provisions of the Ministry of Education circular on Health and Safety Standards in Educational Institutions (2001).The doorways should be adequate for emergency purposes, open outwards and should not be locked from outside at any time when learners are inside.

## **2.4 Influence of Teaching and Learning Resources on Implementation of the 100 Percent Transition Policy**

Teaching and learning resources like textbooks, exercise books , laboratory equipments and teaching aids are important in ensuring a smooth teaching and learning process in schools. In most countries, students still have to share textbooks. On average, 14 students share the same mathematics textbook in Cameroon, 5 in Chad and South Sudan and 4 in Equatorial Guinea. There is on average 1 reading book for 2 students or more in sub Saharan Africa and 1 mathematics textbook for about 3 students (UNESCO, 2016).

Johan (2004) states that education outcomes in schools are closely linked to adequacy and utilization and of teaching and learning resources. Studies by Mbaria (2006) indicated that teaching and learning resources were higher in higher performing schools than in low performing schools and that there is a significant difference in resource availability in the higher performing schools and low performing schools.

Asiago, (2018) carried out a study on administrative factors influencing quality of education in public secondary schools in Kitui, Kisii and Nairobi Counties. The study findings indicated that most institutions are faced with challenges such as lack of adequate facilities like libraries and inadequate instructional materials and these factors tend to have a negative effect on the quality of graduates produced. Textbooks are one of the educational inputs that have the greatest influence on learning achievement.

Orodho, Waweru, Ndichu and Nthinguri (2013) established that the challenges of availability and adequacy of learning resources was found to negatively

affect teacher effectiveness in the use of teaching methods as well as focus on individual learner. This could also interfere with the smooth implementation of the school programs hence poor implementation of the 100 percent transition policy in public secondary schools.

A study by Lockheed and Verspoor (1999) reported that availability of textbooks and other instructional materials had a consistently positive effect on students' achievement. On the other hand, Olembo & Cameroon (1986) indicated that school principals face increasing administrative challenges which include inadequate and badly constructed buildings; shortage of books, reference materials, apparatus and equipment, lack of proper school furniture particularly desks, poor or sometimes non-existent maintenance and repairs, over-crowded classrooms and poor infrastructure among others. Shortage of these resources could interfere with the smooth running of the school programs, hence poor implementation of the 100 percent transition policy.

Javier and Marcella (2011) carried out a study in primary schools in Latin America to investigate whether school infrastructure and resources do matter. The findings were that adequacy of textbooks and revision materials in the library had the highest effect on academic performance. On the other hand, inadequacy of school infrastructure and resources could impact negatively on the process of implementing the 100 percent policy.

A study by the British Columbia Teachers Federation (BCTF, 2012) found that a significant relationship existed between well stocked libraries and students achievements. Well stocked libraries have adequate teaching and learning



resources like revision materials, reference books and text books which help the students to do their individual studies in the library. The study therefore sought to establish the extent to which adequacy of teaching and learning resources influenced the implementation of the 100 percent transition policy in public secondary schools in Nyandarua Central Sub County, Kenya.

### **2.5 Influence of Sports Facilities and Equipment on the Implementation of 100 Percent Transition Policy**

Sibley and Etnier (2003) highlighted that the body and mind are one entity, and that anything that happens to one will affect the other. Physical educators therefore believe that the “whole child” comes to school to be educated and this requires both mental and physical training. Increase in enrolments should correspond to an increase in sports facilities and equipment to ensure that all students are actively involved in physical training.

Abasa (2015) noted that education is incomplete without sports and that children become healthier, friendly and disciplined when they embrace sports. A healthy student is ready to learn and easily retains what is taught. Discipline is an important aspect of the well being of both students and the school community and therefore the activities which contribute towards raising the standards of discipline in a school should be highly supported.

Aweys (2006) argued that illiteracy is not confined to the person who is not able to read and write but must include also the person who fails to adequately exercise. Most schools focus on mental development aspect of students, ignoring aspect concerning physical activities, despite them having a

significant impact upon academic achievement (Jomtien, 1990). Physical activities can support intellectual development in children since a healthy body leads to a healthy mind (Bailey, 2006). With the introduction of the competency based curriculum in both primary and secondary schools in Kenya, there is need to emphasize on adequate provision of sports facilities and equipment in all schools.

Zahida (2012) observed that the modern education system recognizes that a child comes to school for all-round and better development. It aims at the development of the total personality of the child and for that school provides opportunities for experience through provision of necessary sports facilities and equipment. Zill, Nord and Loomis (1995) also observed that participation in co-curricular activities improves an adolescent's chances of avoiding such risky behaviours as dropping out, becoming a teenage parent, engaging in delinquency, smoking, or abusing drugs or alcohol

## **2.6 Adequacy of Enhanced Sanitation Facilities and Implementation of the 100 Percent Transition Policy**

Children have a right to basic facilities such as school toilets, safe drinking water, clean surroundings and basic information on hygiene (UNICEF, 2008). Availability of sanitation facilities improves the learning environment, improves pupils' health, boosts school attendance and achievement and promotes gender equality. Lack of fresh water and sanitation is one of the reasons why pupils, and especially girls in many developing countries, opt out of schools (UNESCO, 2016). The absence of adequate sanitation has a serious impact on health and social development, especially for children.

Investments in improving sanitation accelerate progress towards the Millennium Development Goals and saves lives (UNICEF, 2008). Improving sanitation facilities and promoting hygiene in schools benefits both learning and the health of children. Child-friendly schools that offer private and separate toilets for boys and girls, as well as facilities for hand washing with soap, are better equipped to attract and retain students, especially girls. Where such facilities are not available, girls are often withdrawn from school when they reach puberty (WHO, 2008).

Hand washing facilities in rural schools has not been considered important yet from a preventive health perspective, hand washing is absolutely crucial (UNICEF, 2008). Without hand washing, all investment in fancy latrine construction is a complete waste of time and resources as faecal contamination from hand to mouth, food, friends among others is virtually guaranteed (Waterkayn, 2000).

A study carried out by Muendo (2016) on the influence of school infrastructural environment on performance in Kenya Certificate of Secondary Education in Kibauni division of Machakos County, Kenya established that a safe school must have sanitation facilities built up to the required standards and kept clean with high standards of hygiene.

A study conducted by Jenkinson and Benson (2010) to establish barriers of teaching of physical education in Victoria State schools in Australia found that inadequacy of sports facilities and equipment were the greatest barrier to teaching of physical education in both primary and secondary schools.

Kapeliyang and Lumumba (2017) also found that students who participated in sports and athletics had a positive influence on their talent identification and development. There is therefore need for the school administration to ensure availability of sports facilities and equipment in order to realize a smooth teaching and learning process.

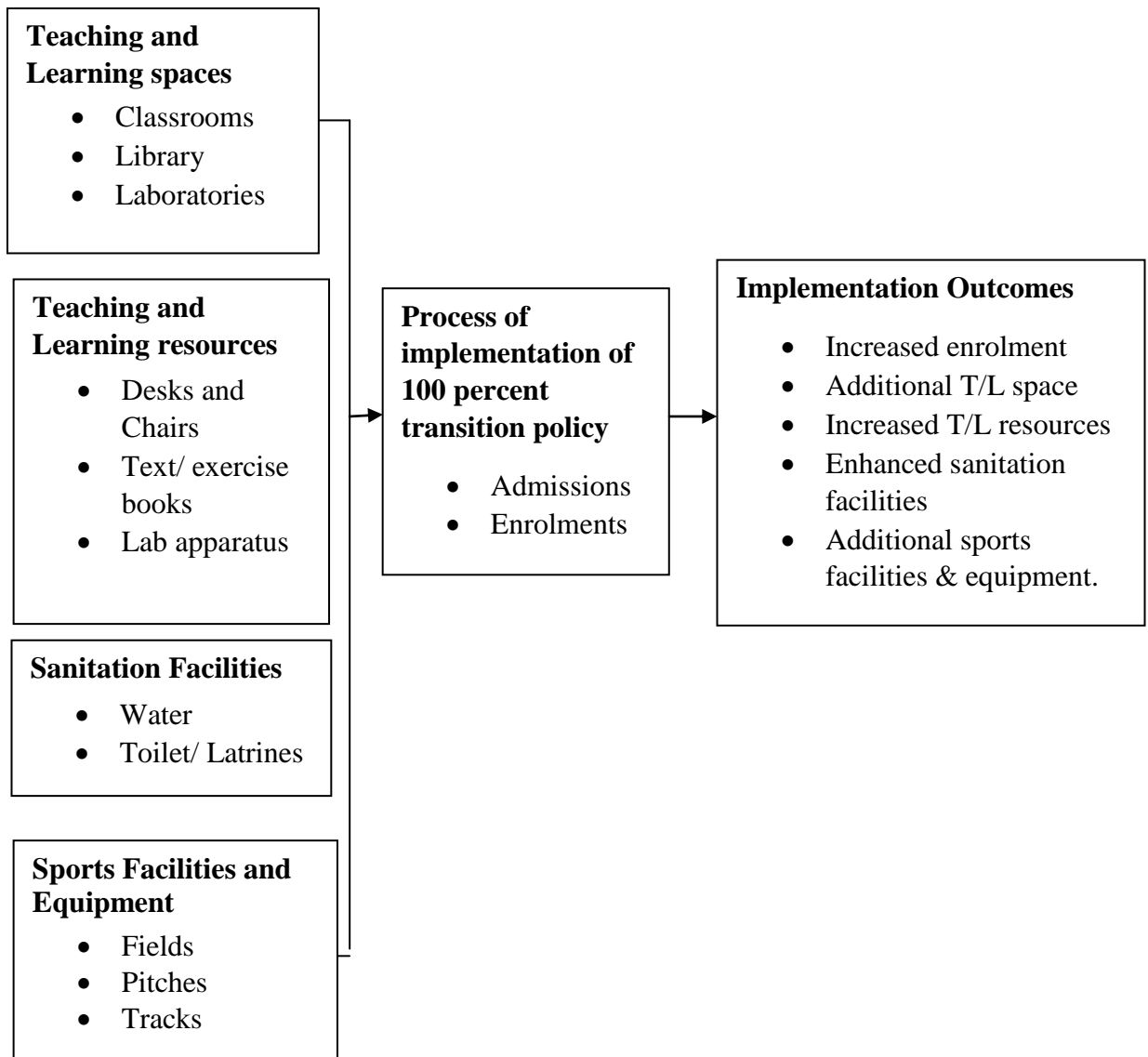
## **2.7 Summary Literature Review**

This section reviewed literature related to implementation of the 100 percent transition policy with focus on teaching and learning space, teaching and learning resources, sanitation facilities and sports facilities & equipment. Limuli (2009), Graetz and Goliber (2014), Muller (2008) and Strange and Banning, (2014) concurred that adequate teaching and learning space motivated students and also promoted high learning outcomes. Mbaria, (2016), Asiago (2018), and Johan (2004) had similar findings that teaching and learning resources promoted a smooth teaching and learning process. On the other hand, Muendo (2016), UNESCO (2016), UNICEF (2008), and WHO (2008) observed that enhanced sanitary facilities promoted learning as well as students health. In their studies, Abasa (2015), Aweys (2016) and Jomtein (1990) found that sports facilities and equipment are necessary for physical development of the students and have significant impact on students' achievement. This study sought to establish how teaching and learning space, teaching and learning resources, sanitation facilities and sports facilities and equipment influence the implementation of the 100 percent transition policy in public secondary schools in Nyandarua Central Sub County, Kenya.

## **2.8 Theoretical Framework**

This study was guided by the education production function theory which was proposed by Mace in 1979. An education production function is an application of the economic concept of a production function to the field of education. In this context, it describes the relationship between various inputs affecting the implementation of both academic and non-academic programs in a secondary school. Some of these inputs include learning spaces, sports facilities and equipment, teaching and learning resources and sanitation facilities, all of which influence the implementation of the 100 percent transition policy. It measures outputs including additional learning spaces, additional accommodation, additional teaching and learning resources and enhanced sanitation facilities. Education is therefore viewed as a productive activity that combines various inputs and transforms them to a set of outputs.

## 2.9 Conceptual Framework of the Study



**Figure 2.1: Conceptual Framework**

The conceptual framework illustrates the determinants of 100 percent transition policy implementation. The independent variables are the adequate learning spaces, teaching and learning resources, sports facilities and equipment and enhanced sanitation facilities as determinants of implementation of 100 percent transition policy, the dependent variable. Teaching and Learning spaces include classrooms, laboratories and library.

Teaching and learning resources include desks, chairs, textbooks, exercise books and Laboratory equipment. Sports facilities and equipment include playing fields, athletics tracks, pitches and balls. Sanitation facilities include water, toilets and pit latrines. For school programs to run smoothly, all the independent variables must be available and adequate. For the 100 percent transition policy to be implemented smoothly, the available teaching and learning space, teaching and learning resources, sports facilities and equipment and enhanced sanitation facilities must match the enrolments and admissions. Increase in enrolments and admissions therefore calls for additional teaching and learning space, additional teaching and learning resources, additional sports facilities and equipment and enhanced sanitation facilities.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter describes the research design adopted for the study. It provides information regarding the target population, sample and sampling procedure, research instruments, instrument validity, instrument reliability, data collection procedures, data analysis techniques and ethical considerations.

#### **3.2 Research Design**

Orodho (2012) defines research design as the scheme, outline or plan that is used to generate answers to research problems. A descriptive survey research design was adopted for this study. According to Orodho (2005), a descriptive survey is a method of collecting information by way of interviewing or the administering of a questionnaire from a selected sample. This design was deemed appropriate for the study because it enabled the researcher to collect, analyze and report information as it existed in the field, without manipulating the variables under study. This design also allowed the researcher to describe the characteristics of a given phenomenon presently in a systematic and accurate manner to allow for drawing conclusion and generalization to the general population.

#### **3.3 Target Population**

According to Creswell (2012) a target population is a group of individuals or entities with some common characteristics that the researcher plans to study with the aim of generalising the findings about the target population. Borg &



Gall (1996) defines target population as all members of real or hypothetical sets of subjects, people, events to which a researcher wishes to generalize the results of the study. The study targeted all the 34 public secondary schools in Nyandarua Central Sub County. The target population was all the 34 public secondary school principals, 134 class teachers, 1,400 form one students, one Sub County Director of Education (SCDE) and all the 34 BOM chairpersons, making a total target population of 1,603.

**Table 3.1: Target Population and Sample Size**

<b>Category</b>	<b>Target Population</b>	<b>Sample size</b>	<b>Percentage</b>
SCDE	1	1	100
BOM Chairpersons	34	10	30
Principals	34	10	30
Class teachers	134	40	30
Form one students	1400	140	10
<b>Total</b>	<b>1,603</b>	<b>201</b>	<b>100</b>

### **3.4 Sample Size and Sampling Technique**

According to Mugenda & Mugenda (2003), a sample size is a small portion of the population, while sampling is a research technique that is used in selecting a given number of subjects from a target population as a representative of that population. The researcher used simple random sampling technique to come up with the sample population that was used in the study. In order to obtain the sample size, the study was guided by Mugenda & Mugenda (2003) who recommended 10% to 30% of the target population as an adequate sample for

a study. According to Orodho and Kombo (2005), sampling is the process of collecting a number of individuals or objects from a population such that the selected group contains elements representative of the characteristics found in the entire group. A list of all the schools was sought from the county education office, from which the researcher used stratified sampling to pick 10 schools which were involved in the study. The SCDE, 10 principals and 10 BOM chairpersons of the 10 schools were purposively selected. 10 percent of students and 30 percent of class teachers was selected using simple random sampling to give 140 form one students and 40 class teachers. This represented a total sample of 201.

### **3.5 Research Instruments**

According to Mugenda and Mugenda (2012), an instrument is a tool that is used to measure a variable. The research instruments used for this study were questionnaires, interview schedule and an observation guide. According to Matula et al., (2018), a questionnaire has the ability to collect a large amount of information in a reasonably quick space of time. Questionnaires were preferred for this study because of the relative ease and cost effectiveness with which they are constructed and administered to large sample. Four sets of questionnaires were administered to the respondents. One set for the principals, a second set for BOM chairpersons, the third set for teachers and the fourth set for students. The questionnaires for principals and BOM chairpersons contained both closed and open-ended questions while questionnaires for students contained closed questions. Part 1 of the questionnaire focused on the background information of the school and the

respondents. Part 2 of the questionnaire covered teaching and learning spaces, games facilities and equipment, teaching and learning resources and sanitation facilities. Interview schedule was used to collect in-depth information from the key informant; the Sub County Director of Education (SCDE). An observation checklist was also used to enable the researcher observe teaching and learning space, sports facilities and equipment and sanitation facilities from their natural setting and produce accurate data, without alteration by secondary sources.

### **3.6 Instrument Validity**

According to Kombo (2004), validity is the quality of measurement procedure that provides respectability and accuracy. Content validity measures the degree of accuracy with which the instrument measures the target variable. It is therefore the accuracy, truthfulness and meaningfulness of the data and all inferences that are made from the data (Mugenda and Mugenda, 2012). In order to validate the instruments, the researcher carried out a pilot study which involved pre-testing in two selected schools in the area of research. Based on the results of the pre-test, the researcher was able to identify the instruments which might have been inappropriate in order to make necessary corrections and also examine responses to determine the level of ambiguity of the questions. Amendments were then made on the instruments to improve quality and validity. The researcher sought advice and guidelines from the supervisor concerning the instruments and they were ascertained to be valid and the researcher administered them in the actual research.

### **3.7 Instrument Reliability**

Reliability enhances dependability, accuracy and adequacy of the instrument through piloting. According to Mugenda and Mugenda (2003), the reliability of data collected may be affected by error due to inaccuracy of data collection instrument or attitude of the respondents. To minimize on these errors and increase reliability, the researcher used test re-test method. According to Mugenda and Mugenda (2012), test- retest is a technique of assessing reliability and it involves administering the same instrument twice to the same group of subjects. Respondents in the pilot schools were issued with the questionnaires prepared for the study. The same was repeated after a period of two weeks. The scores of the two tests were computed and reliability coefficient was calculated using Pearson's product moment correlation coefficient formula. The results yielded a correlation coefficient of 0.78. According to Mugenda and Mugenda (2003), a correlation coefficient of 0.7 to 1 is considered reliable. The instruments in the study could therefore be relied upon.

### **3.8 Data Collection Procedures**

Before data collection, the researcher obtained a research permit and an authorization letter from National Commission of Sciences, Technology and Innovation (NACOSTI). The researcher presented the authorization letter to the County commissioner and the County director of education where further clearance was sought to carry out the study in Nyandarua County. The researcher presented an introductory letter from the University of Nairobi and the authorization letter from the county director of education to the principals

of the sampled schools. The researcher explained the purpose of the study to the principals and sought permission to involve teachers and students in the study and also make observations on the physical facilities in the school. The researcher administered the questionnaires to the respondents and explained how they should be filled, allowing them a period of two weeks to complete filling them. At the end of the two weeks, the researcher went round and collected all the questionnaires.

### **3.9. Data Analysis Techniques**

Data analysis is the process of bringing order to the raw data collected (Best & Kahn, 2006). Both quantitative and qualitative data was obtained using questionnaires and interview schedule. The completed questionnaires from the field were first sorted out for completeness and accuracy. Those which are incomplete were considered spoilt. Qualitative data obtained from personal interviews and open-ended questions were analyzed qualitatively through content analysis and organized into themes and patterns corresponding to the research questions. This helped the researcher to detect and establish various categories in the data which are distinct from each other. Themes and categories were generated using codes assigned manually by the researcher. Quantitative data was analysed by use of descriptive statistics with the aid of Statistical Package for Social Sciences (SPSS) version 21. The analyzed data was presented in frequency tables, charts and graphs.

### **3.10 Ethical Consideration**

According to A.G Mugenda and O.M Mugenda (2012), in research process, ethics focus on the application of ethical standards in the planning of the study, data collection and analysis, dissemination and use of the results. Permission to undertake this research in the public secondary schools was requested from the SCDEs office through a letter explaining the objectives of the study. The researcher sought consent of each respondent and encouraged them to participate voluntarily. The researcher explained the purpose and nature of the research to every participant before engaging them in the study. The researcher also ensured confidentiality of the information given by the respondents, asking them not to write their names on the questionnaires.

## CHAPTER FOUR

### DATA ANALYSIS, PRESENTATION AND INTERPRETATION

#### 4.1 Introduction

This chapter presents data analysis and interpretation of the findings on institutional determinants of implementation of the 100 percent transition policy in public secondary schools in Nyandarua central sub county. Data were collected using questionnaires which were administered to the respondents. Ten (10) questionnaires were administered to 10 principals, 40 questionnaires to teachers and 170 to students. The data collected was analyzed using descriptive statistics with the aid of SPSS software. The researcher made use of frequency tables, charts and graphs to present data.

#### 4.2 Questionnaire Return Rate

The return rate of the questionnaires was analyzed so as to determine whether the findings obtained could be reliable and valid. Data was collected by the researcher from 10 sampled secondary schools in Nyandarua Central Sub-County. The questionnaire return rate was as shown in Table 4.1.

**Table 4.1 Response Rate**

	<b>Questionnaires Administered</b>	<b>Questionnaires filled and returned</b>	<b>%</b>
BOM chairpersons	10	6	60
Principals	10	10	100
Teachers	40	36	90
Students	140	138	98
<b>Total</b>	<b>200</b>	<b>190</b>	<b>95</b>

From the results in table 4.1, 190 out of 200 respondents returned usable instruments for the study. This represents 95 percent response rate. Further, the interview guide and all the observation schedules were filled and used to analyse data, hence a return rate of 100 percent. According to Bailey (2000), a response rate of 50% is adequate, while a response rate greater than 70% is very good. This high return rate became possible because the researcher explained the importance of the study to the respondents hence convincing them to actively participate in the study. The information gathered for purposes of data analysis and generalizations was therefore adequate due to the high return rate.

### **4.3 Demographic Data of Respondents**

Personal information of the respondents was sought. These included their gender, age bracket, highest academic qualification and experience for BOM chairpersons, Principals and Teachers. Students were asked to indicate their age bracket; class and the year they joined form one. This was important to determine whether pupils transited from primary to secondary at the recommended age.

#### **4.3.1 Gender of Respondents**

According to the Kenya national Policy on Gender and development, it is the right of women, men, girls and boys to participate in and benefit equally from the development process where men and women enjoy equal rights, opportunities and a high quality of life (RoK, 2000). Gender for Principals, BOM chairpersons and Teachers was sought determine whether both male and female were equitably represented in the administrative positions as well as



teaching positions. The respondents were therefore asked to indicate their gender with the aim of establishing whether there was gender balance in the distribution of administrative positions. The responses were presented in table 4.2.

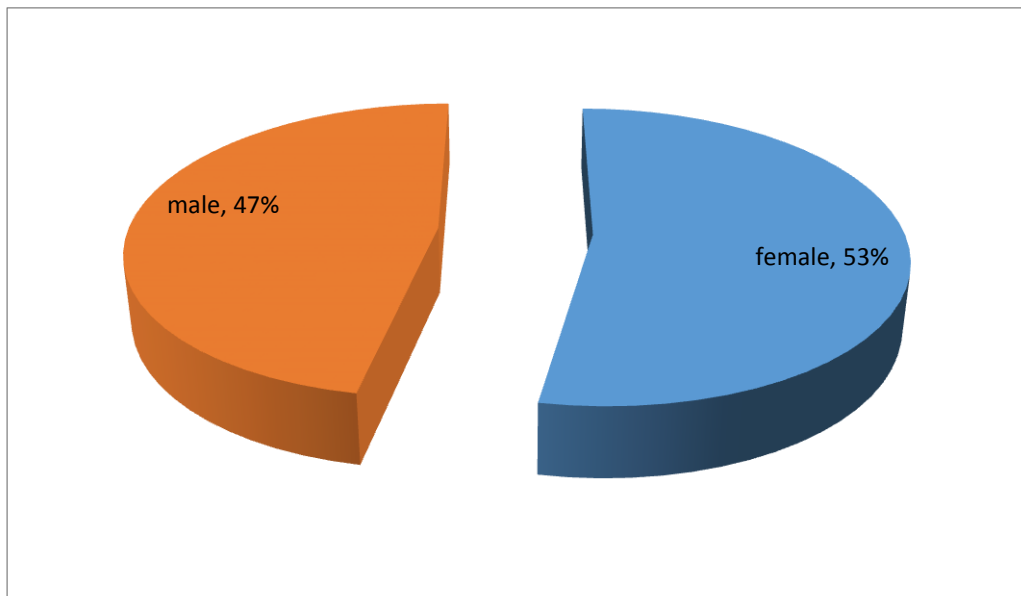
**Table 4.2 Distribution of Principals and BOM chairpersons by gender**

	<b>Principal</b>		<b>BOM</b>	
	<b>F</b>	<b>%</b>	<b>F</b>	<b>%</b>
<b>male</b>	10	100	6	100
<b>Female</b>	0	0	0	0
<b>Total</b>	10	100	6	100

From the results in Table 4.2, all the Board of Management chairpersons are male. Gender of the principal has a positive correlation to that of the BOM Chairperson. Results also indicate that all the 10 Principals are male, representing 100 percent. This shows a great gender disparity in the distribution of both principals and BOM chairpersons in public secondary schools. Female principals are not represented despite the fact that all the 10 schools are either mixed boarding, mixed day or mixed day and boarding hence could be headed by a principal of either gender. The findings agree with that of Jackline, 2009 who noted that more male teachers were in leadership position than female. Kwehu, 2012 also noted that women were under-represented i management positions.

According to Durrah, 2009, female principals were reported to have an affinity for lower social economic status students, to be more engaging with teachers,

and to be more effective at day to day running of the school. Students also perform better and teachers are more involved, collegial, and cooperative with the administration when principals are females (Chen & Addi, 1992). Teachers were also asked to indicate their gender. The results were presented in figure 4.1.



**Figure 4.1: Distribution of Teachers by Gender**

Results in figure 4.1 indicate that 47 percent of the teachers in Nyandarua Central Sub County were male while 53 percent were female. This shows a slightly higher female representation compared to the male. Gender equity is however well addressed in the staffing needs of the schools to enable both boys and girls experience diversity among the teaching staff and more so the girls who are under the leadership of male principals. According to the Ministry of Education Science and Technology (MoEST, 2015), principals should ensure that schools are gender responsive in order to attract and retain

learners, especially girls in schools, hence increasing retention and completion rates. Students were also asked to indicate their gender. The results were presented in Table 4.3.

**Table 4.3 Distribution of form one Students by Gender**

<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Boy	83	60.1
Girl	55	39.9
<b>Total</b>	<b>138</b>	<b>100</b>

From the results in table 4.3, a higher number of boys, 60.1 percent were enrolled in form one compared to 39.9 percent girls in the same year. This shows a gender disparity in the distribution of form one students by gender. The implementation of the 100 percent transition policy by the Government requires that all students are given equal opportunities regardless of their gender to ensure that all pupils who leave class eight in primary school are absorbed in form one in secondary school. This could be due to the fact that all the sampled schools were mixed schools, either day or boarding and under the leadership of a male principal, persuading the parents to take the girls to girls boarding schools. Findings by Sang, Koros and Bosire (2013) indicated that single sex school offer more quality education and has low drop-out rate than mixed school.

### 4.3.2 Distribution of Respondents by Age

The researcher sought to establish the age bracket of the respondents. This was to establish whether age of principals and teachers was influencing the manner in which the process of implementing the 100 percent transition was taking place in public secondary schools. The results were presented in the tables 4.5.

**Table 4.4: Principals and Teachers age bracket**

Age	Principals		Teachers	
	F	%	F	%
Below 30 years	-	-	9	25.0
31 to 40 years	-	-	12	33.3
41 to 50 years	6	60	10	27.8
Over 50 years	4	40	5	13.9
<b>Total</b>	<b>10</b>	<b>100</b>	<b>36</b>	<b>100</b>

From the table 4.4, majority of the principals, 60 percent lie between the ages of 41 to 50 years while 40 percent are of above 50 years of age. This indicates that they are mature enough to handle administrative issues and also overcome challenges that are likely to be encountered in the process of implementing the 100 percent transition policy in public secondary schools. The age of students was also sought to establish whether they were transiting from primary school to secondary school at the right age. The results were presented in Table 4.5

**Table 4.5: Students age bracket**

<b>Age</b>	<b>Frequency</b>	<b>Percentage</b>
13 to 15 years	113	67.6
16 to 19 years	23	28.7
Above 19 years	-	-
<b>Total</b>	<b>136</b>	<b>100</b>

Results in Table 4.5 indicate that 67.6 percent of form one students lie between the ages of 13 to 15 years, which is the right age for form one admission. 28.7 percent of form one students are however between 16 and 19 years old. This could be as a result of repetition in the previous level, primary school. Alternatively, it could be as a result of students dropping out and later getting readmitted. This signifies wastage at primary school level, which could affect planning for secondary school places. The age difference could also interfere with the teaching and learning process since elderly students tend to be in-disciplined in comparison to those of the right age.

#### **4.3.3 Academic Qualification of Principals and Teachers**

The implementation of the 100 percent transition policy requires that both teachers and principals have adequate skills to enable them cope with challenges that may arise during the implementation process. Hanushek (2011) asserted that teacher qualification is the single most variable that determines

learning outcomes. The researcher therefore sought to establish the professional qualification of respondents and presented the findings in the table 4.6.

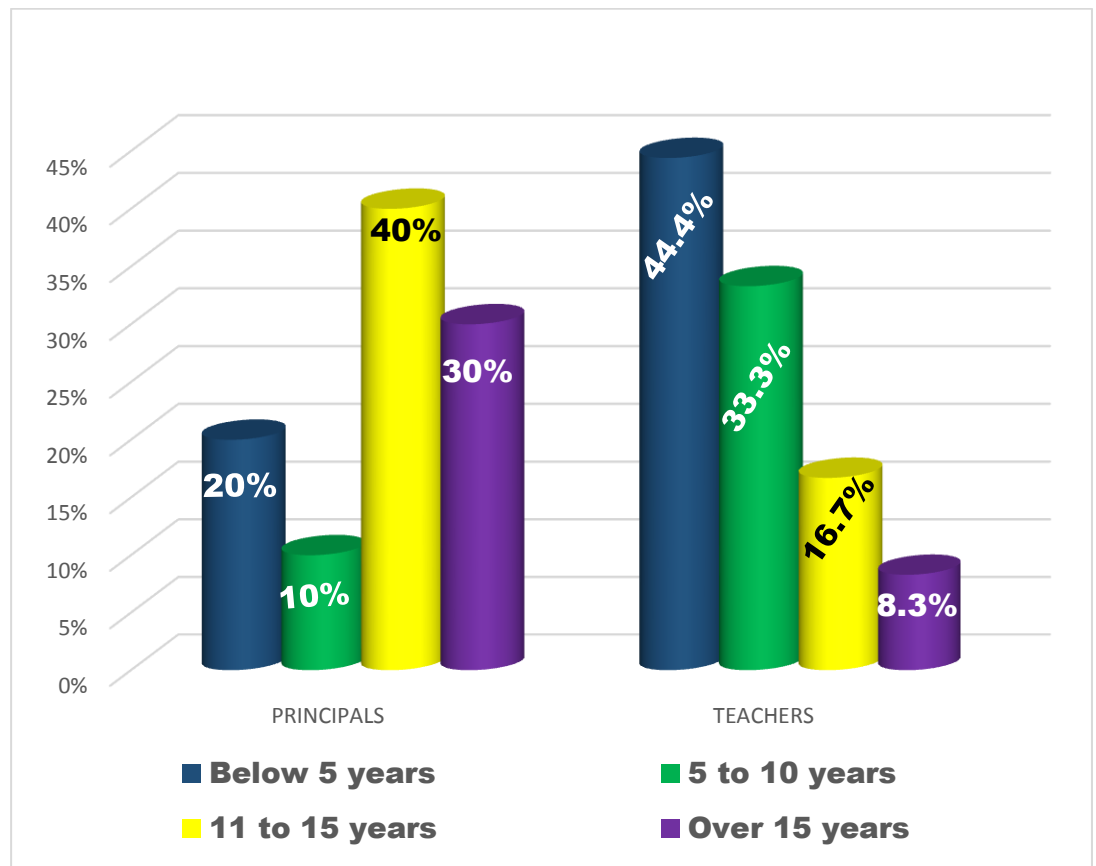
**Table 4.6: Professional Qualification of Principals and Teachers**

<b>Qualification</b>	<b>Principals Frequency</b>	<b>%</b>	<b>Teachers Frequency</b>	<b>%</b>
Masters Degree	1	10	3	8.3
BED	9	90	27	75
Diploma	-	-	6	16.7
<b>Total</b>	<b>10</b>	<b>100</b>	<b>36</b>	<b>100</b>

Results in table 4.6 indicate that only 10 percent of principals and 8.3 percent of teachers hold a Master of Education degree. 90 percent of secondary school principals and 75 percent of teachers are holders of Bachelor of Education Degree while 16 percent of teachers are Diploma holders. This shows that both teachers and principals in Nyandarua Central Sub-County have attained the minimum academic and professional qualification. This indicates that both the principals and teachers are of high quality and can be entrusted with the implementation of the 100 percent transition policy in public secondary schools. This is in agreement with observations made by Kart, 1995 that teachers with high academic qualification are better equipped with technical, human and conceptual skills to perform their duties more efficiently.

#### 4.3.4 Respondents Working Experience

The study sought to find out the duration of service of the principals and teachers. According to Emulti (2004), effective institution managers need not only academic content but also sufficient and lengthy exposure to practical management of institutions. Higher experience as a principal is therefore likely to increase their capability to cope with challenges that may arise in the process of implementing the 100 percent transition policy in secondary schools. Principals and teachers were therefore asked to indicate their working experience. Results were presented in figure 4.2.



**Figure 4.2: Principals and Teachers Working Experience**

Results in figure 4.2 indicate that 70 percent of the principals have more than 10 years experience as compared to 30 percent who have less than 10 years’

experience. This indicates a high percentage of experienced principals who can handle the transition process with ease. Highly experienced principals are also able to guide and mentor their teachers, of whom, 77.7 percent have less than 10 years working experience. Low experience for teachers could be as a result of promotion of the highly experienced teachers to posts of deputy principals as per the regulations of the Teacher Service Commission. This is however not likely to affect the implementation of the transition policy since the principals are responsible for acquisition of the required teaching and learning resources, teaching and learning spaces, games facilities and equipment as well as sanitation facilities in the school. Low experience for principals would mean that every challenge could be very new and therefore the principal would require guidance from higher level of administration and this is likely to have a negative influence on the implementation process.

#### **4.4 Background Information of Schools Studied**

The study sought to determine some background information of the sampled schools. This included; category of school, type of school and number of streams per class.

##### **4.4.1 Distribution of Schools by Category**

The study sought to establish the number of schools by category in Nyandarua Central Sub County. Principals were asked to indicate the category of their schools. This was to determine the proportion of National, Extra County, County and Sub County schools. The results were tabulated as shown in Table 4.7.



**Table 4.7: Distribution of Schools by Category**

<b>School category</b>	<b>Frequency</b>	<b>Percentage</b>
National	1	10
Extra County	1	10
County	2	20
Sub- County	6	60
<b>Total</b>	<b>10</b>	<b>100</b>

From the results in table 4.7, majority of the schools, 60 percent are sub County schools, 20 percent are County schools while only 10 percent accounts for extra County and National schools. Nyandarua County is located in a rural set up and majority of the families are of low economic status. Parents therefore prefer to have their children admitted in sub County schools, majority of which are day schools, since they charge relatively lower fees in line with Free Day Secondary Education (FDSE) fees guidelines. Boarding schools charge extra fees for boarding since the government subsidises tuition fees only, in line with Free Tuition Secondary Education (FTSE). The introduction of Free Day secondary Education has therefore led to the construction of more sub County day schools to cater for students who cannot afford boarding school fees. This is likely to boost admission of form one students, hence a smooth process of implementing the 100 percent transition policy.

#### 4.4.2 Distribution of Schools by Type

The study sought to establish the distribution of the sampled schools by gender and whether they were day or boarding schools. This was done to find out whether equal opportunities existed for both boys and Girls in secondary schools. The results were tabulated in table 4.18.

**Table 4.8: Distribution of Schools by Type**

School type	Frequency	Percentage
Boys Boarding	-	-
Girls Boarding	-	-
Mixed Boarding	3	30
Mixed Day/Boarding	2	20
Mixed Day	5	50
<b>Total</b>	<b>10</b>	<b>100</b>

Results in table 4.8 indicate that 50 percent of the schools are mixed day, 20 percent are mixed day and boarding while 30 percent are mixed boarding. None of the schools in Nyandarua Central Sub-County is either pure boys' school or pure girls' school. This trend in distribution of schools by gender ensures that both boys and girls are offered equal opportunities during form one enrolment. This is however contrary to the results in table 4.5 which indicated that more boys were enrolled in form one compared to girls.

#### 4.4.3 Distribution of Schools by Number of Streams

The population per class determines the number of streams established in a school. When students exceed the number that can be accommodated in a class, more streams are bound to be established. The study sought to establish the capacity of schools and whether the number of streams matched the students' population per class.

**Table 4.9: Distribution of Schools by Number of Streams**

<b>Number of Streams</b>	<b>Frequency</b>	<b>Percentage</b>
1 to 2	7	70
3 to 4	3	30
Above 4	0	0
<b>Total</b>	<b>10</b>	<b>100</b>

Results in table 4.9 indicate that 70 percent of the schools in Nyandarua Central Sub County had one to two streams. This implies that the students' population is small in majority of schools. This could be as a result of low population of secondary school going age children or the high number of Sub County schools to accommodate students. Day schools are also unpopular due to their low academic achievements and therefore well up families who can afford boarding school fees prefer taking their children to better performing

schools, leaving the day school to students who score relatively low marks in class eight and those who come from low income earning families.

#### **4.5 Adequacy of Teaching and Learning Space and Implementation of the 100 Percent Transition Policy.**

The first objective in the study sought to establish the extent to which adequacy of teaching and learning space influence implementation of the 100 percent transition policy in public secondary schools in Nyandarua Central Sub County. The respondents were asked to indicate the level of adequacy of teaching and learning space. This was done to establish whether schools had adequate teaching and learning space to accommodate all students enrolled in the school.

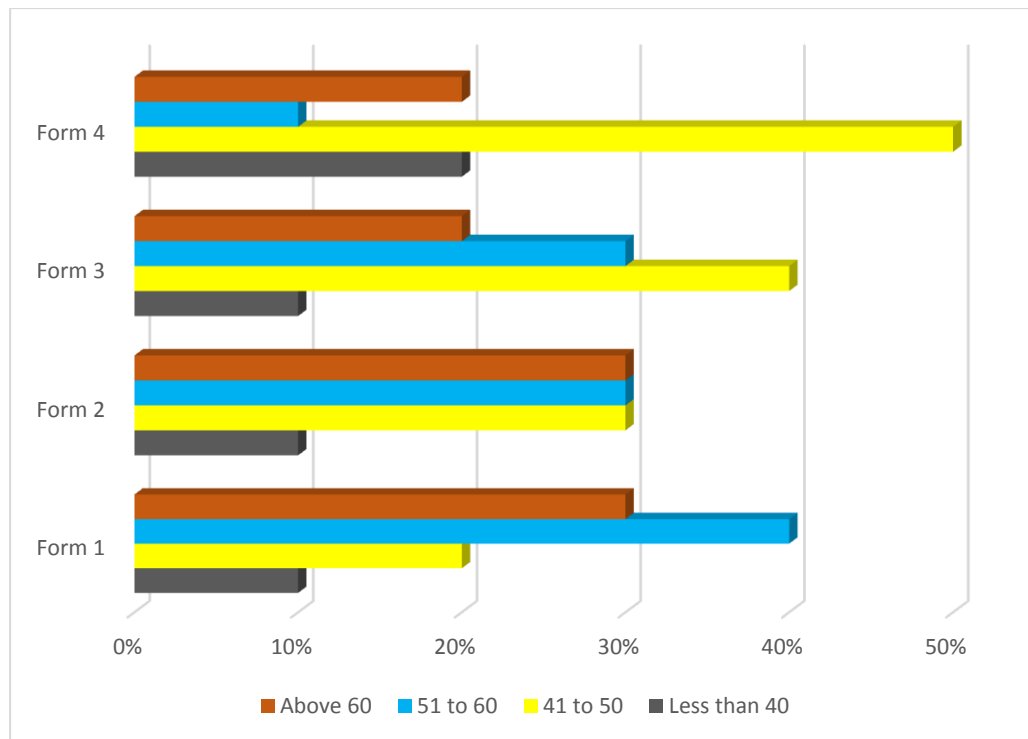
##### **4.5.1 Adequacy of Classrooms to Accommodate Students**

The study sought to find out whether there was increase in form one enrolment in the current year. The principals were asked to indicate the enrolment rates in form one for the current year and that of the previous year. This was meant to establish whether there was increase or decrease in enrolment as a result of introduction of the 100 percent transition policy in public secondary schools. The results were presented in table 4.10

**Table 4.10 Adequacy of Classrooms to Accommodate Students**

<b>Response</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Increase</b>	9	90
<b>Decrease</b>	1	1
<b>Total</b>	10	100

From the results indicated in table 4.10, 90 percent of the sampled public secondary schools recorded an increase in form one enrolment in 2019, compared to form one enrolment in 2018 in the same school. This indicates a higher transition rate from primary to secondary school in 2019. This could have resulted from the adherence to the 100 percent transition policy guidelines that all pupils who complete class eight must be enrolled in a secondary school without discrimination. The availability of mixed schools and day schools is also likely to encourage admission of all pupils, especially those from low economic status families, who might not afford the fees payable in boarding school. The respondents were further asked to indicate the class size in terms of the number of students per class. This was done to find out whether the change in enrolment caused overcrowding or under crowding in the classrooms. The results were presented in the figure 4.3.



**Figure 4.3: Class Size in Terms of Number of Students per Class**

Results in figure 4.3 indicate that only 20 percent of the sampled schools had enrolled less than 40 students per class. According to the Ministry of education guidelines, an average class should have 40 students per stream. On the other hand, 10% of the schools had enrolled between 51 and 60 students while 20 percent had more than 60 students per stream. This indicates that some schools are still struggling with teaching and learning space. This is likely to impact negatively on implementation of the 100 percent transition policy since congestion interfere with the teaching and learning process. This is in agreement with Osei (2006) whose findings indicated that teachers in most countries in sub-Saharan Africa work in multi-grade, overcrowded classrooms (40-80 pupils in a class), mainly due to a considerable increase in student enrolment to primary and secondary education.

**Table 4.11 Principals Response on Conformity of Classrooms to Statutory Regulations**

	<b>Frequency</b>	<b>Percentage</b>
Conformed	7	70
Not Conformed	3	30
<b>Total</b>	<b>10</b>	<b>100</b>

According to the results indicated in the table 4.11, 70 percent of the principals attested that classrooms conformed to stationary regulations in terms of space. Lack of conformity is likely to hinder the smooth implementation of the 100 percent transition policy. According to the ministry of education guidelines, a standard class should comfortably hold 40 students and leave room for movement in between columns and adequate space between the white/black board and the students' desks. To confirm further whether there were adequate classrooms to accommodate students, the respondents were asked to indicate the level of adequacy of classrooms in relation to the total student population. The results were presented in the table 4.12.

**Table 4.12 Principals’ Responses on Number of Classrooms in Relation to Number of Students.**

<b>Response</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Adequate</b>	7	70
<b>Inadequate</b>	3	30
<b>Total</b>	10	100

The results in table 4.12 indicate that classrooms were adequate in majority of the schools in Nyandarua Central Sub County as attested by 70 percent of the principals. 30 percent of the principals however indicated that the number of classrooms were inadequate. The adequacy of classrooms was mainly due to the support given to sub County schools for infrastructural development by the County government through CDF. Nyandarua Central Sub County also has a relatively low population of students, making the classrooms available to be adequate.

#### **4.5.3 Adequacy of School Laboratories**

The study sought to establish the availability and adequacy of laboratories in public secondary schools in Nyandarua Central Sub County. The respondents were asked to indicate the level of adequacy of science and computer laboratories in their schools. The results were presented in table 4.13.



**Table 4.13: Students Responses on Availability of Laboratories in Schools**

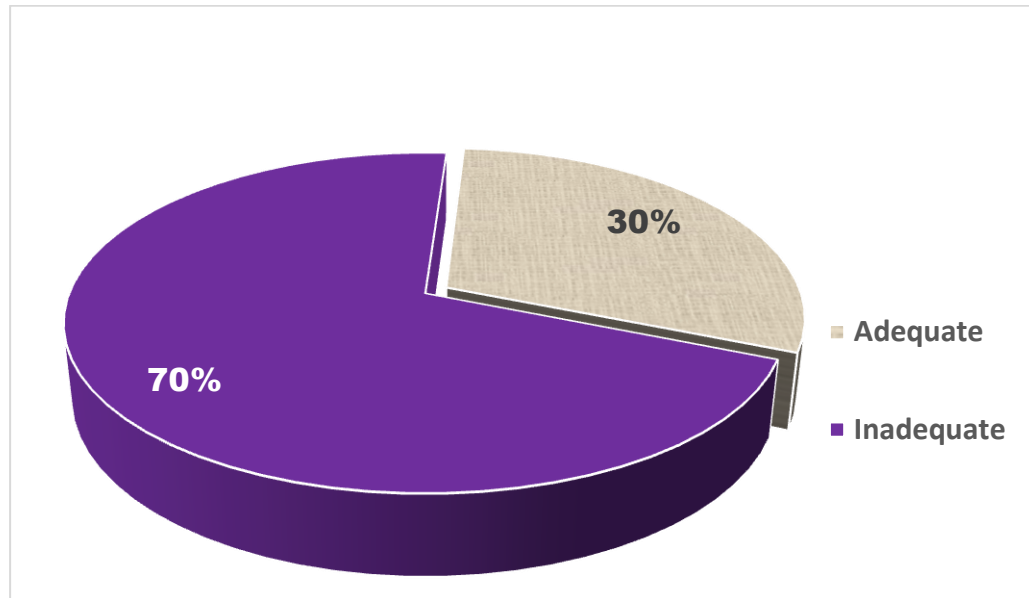
	Science Lab		Computer lab	
	F	%	F	%
Inadequate	<b>96</b>	<b>69.6</b>	<b>121</b>	<b>87.7</b>
Adequate	<b>42</b>	<b>30.4</b>	<b>17</b>	<b>12.3</b>
Total	<b>138</b>	<b>100</b>	<b>138</b>	<b>100</b>

Results in table 4.13 indicate that majority of schools in Nyandarua Central Sub County (69.6%) had inadequate science laboratories. This could be attributed to the fact that most of the schools are supported through CDF and therefore would only construct laboratories when classrooms are enough. The results also indicate that computer laboratories were inadequate as attested by 87.7 percent of the students. Laboratories are essential during science practical lessons, especially with the newly introduced CBC. Inadequacy of science laboratories would deny the students an opportunity to learn practical lessons, hence affecting the performance of students the quality of education in secondary schools. This results to poor implementation of the 100 percent transition policy.

#### **4.5.4 Adequacy of Libraries in Schools.**

The study sought to establish whether schools had operational libraries and whether they were adequate for use by the students. Implementation of the transition policy requires that schools have libraries where students can do their private studies and interact with text books and revision materials. The

respondents were asked to indicate the level of adequacy of libraries in schools. The results were presented in figure 4.4.



**Figure 4.4: Students Responses on Availability of Libraries in Schools**

From figure 4.4, majority of the students indicated that there were inadequate libraries in schools while only 30 percent showed satisfaction in the availability of libraries in the schools. To verify the information provided by the students, principals and BOM chairpersons were further asked to state the adequacy of teaching and learning space in their schools. The responses were presented in table 4.14.

**Table 4.14 Principals and BOM Chairpersons' Responses on Adequacy of Teaching and Learning Space in Schools.**

Responses	Classrooms		Libraries		Science Lab		Comp lab	
	F	%	F	%	F	%	F	%
Adequate	12	75	7	43.8	6	37.5	2	12.5
Inadequate	4	25	9	56.3	10	62.5	14	87.5
<b>Total</b>	<b>16</b>	<b>100</b>	<b>16</b>	<b>100</b>	<b>16</b>	<b>100</b>	<b>16</b>	<b>100</b>

From the results in table 4.14, majority of schools had inadequate teaching and learning space. Computer laboratories were most inadequate, 87.5 percent while 62.5 percent of the respondents indicated that science laboratories were inadequate. Libraries were also inadequate, 56.3 percent. The study however established that classrooms were adequate, 75 percent. This was in agreement with the results obtained from the interview schedule for the sub County director of education which indicated that construction of classrooms in most schools was funded by the government and the constituency development fund in some sub County schools. The study also sought to establish whether space for expansion was available in schools. This was done to ascertain whether lack of infrastructural development sorely depended on lack of sufficient funds or could be as a result of lack of space for expansion. The respondents were asked to indicate whether space for expansion was available in their schools. The results were presented in Table 4.15.

**Table 4.15 Principals and BOM Responses on Availability of Space for Expansion in Schools**

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Yes</b>	<b>11</b>	<b>68.8</b>
<b>No</b>	<b>5</b>	<b>31.2</b>
<b>Total</b>	<b>16</b>	<b>100</b>

Results in table 4.7 indicate that majority of schools had space for expansion as indicated by 68.8 percent of the respondents. This indicates that schools in Nyandarua Central Sub County have sufficient land for expansion but could be faced with shortage of funds to put up infrastructure. With availability of funds, either from the government, non-governmental organizations, well wishers and parents, schools would put up more teaching and learning space.

**Table 4.16: Inadequacy of Teaching and Learning Space and the Level Implementation of the 100 percent Transition Policy**

<b>Level of implementation</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Low</b>	<b>6</b>	<b>60</b>
<b>Moderate</b>	<b>3</b>	<b>30</b>
<b>High</b>	<b>1</b>	<b>10</b>
<b>Total</b>	<b>10</b>	<b>100</b>

Results in table 4.16 indicate that schools that had inadequate teaching and learning space (60%) had low level of implementation of the 100 percent transition policy. Only 10 percent of the schools had adequate teaching and learning resources hence high level of implementation of the transition policy.

#### **4.6: Adequacy of Teaching and Learning Resources and Implementation of the 100 Percent Transition Policy.**

The second objective of this study was to establish the extent to which adequacy of teaching and learning resources influence implementation of the 100 percent transition policy in public secondary schools in Nyandarua Central Sub County. The analysis sought to establish the adequacy of teaching and learning resources in schools and the extent to which teaching and learning resources influence implementation of the 100 percent transition policy.

##### **4.6.1 Adequacy of Desks and Chairs in Schools.**

Every classroom should be fitted with enough desks and chairs for the students. A desk and a chair for each student bring order and make it easy for the teacher to control the class. The study sought to establish the adequacy of desks and chairs in the sampled schools and whether they influence implementation of the 100 percent transition policy in Nyandarua central sub county. The respondents were asked to indicate the level of adequacy of chairs and desks in the classrooms. This was done to establish whether inadequacy of desks and chairs influenced the teaching and learning process. The results were presented in Table 1.17

**Table 4.17: Students Responses on Adequacy of Desks and Chairs in Schools**

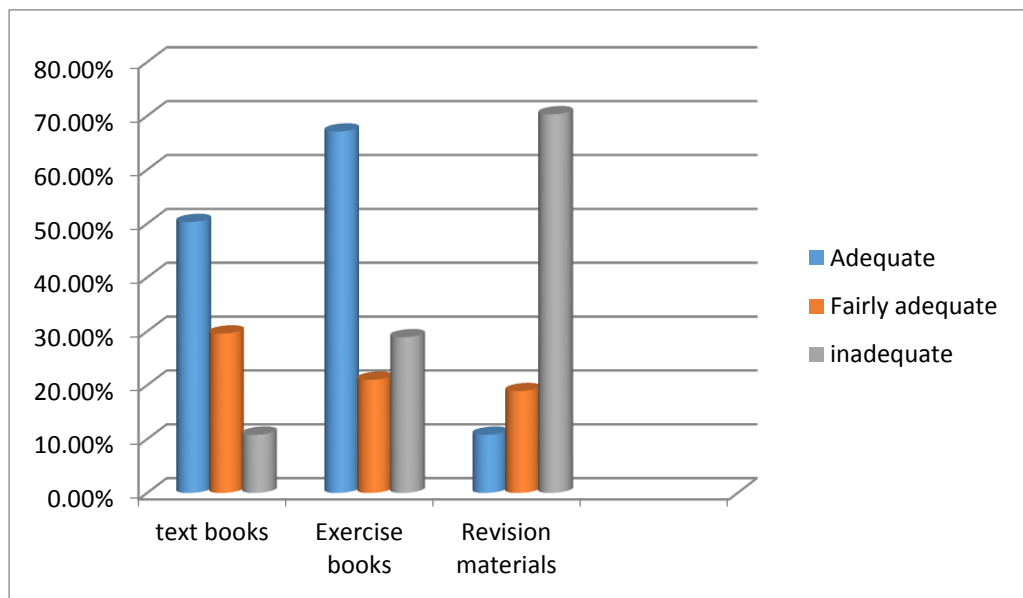
	<b>Frequency</b>	<b>Percentage</b>
Adequate	109	80.0
Fairly adequate	13	9.4
Inadequate	16	11.6
<b>Total</b>	<b>138</b>	<b>100</b>

Results in Table 4.17 indicate that 86.9 percent of the sampled schools had adequate desks and chairs for use by students. This indicates readiness by schools to embrace the 100 percent transition policy. It could also be as a result of under enrolment in some schools as indicated in table 4.13 and table 4.14 where some classrooms had less than 40 students per stream. The findings concur with the results of the interview schedule for the sub County director which indicated that some schools had an over enrolment which could have resulted to inadequacy of desks and chairs, 12.8 percent. Osei (2006) noted that overcrowding; together with other challenges such as lack of school facilities had a negative influence on implementation of academic programs in schools.

#### **4.6.2 Adequacy of Textbooks, Exercise books and Revision materials.**

According to (Verspoor, 2008) essential inputs often are in short supply resulting in increasing shortages of textbooks, instructional materials and supplies, poorly stocked libraries and double or triple shift use of facilities which adversely affect the curriculum supervision and implementation. This

was done to establish whether the available teaching and learning resources matched the number of students enrolled in public secondary schools. The respondents were asked to indicate the level of adequacy of textbooks, exercise books and revision materials allocated to students for use in the classroom. The results were represented in figure 4.5



**Figure 4.5: Adequacy of Students Text books, Exercise books and Revision materials**

From the results in figure 4.5, 50.3 percent of the sampled students' population indicated that text books were adequate while 20.1 percent indicated that text books were inadequate. 67.1 percent indicated that exercise books were adequate while only 12.0 percent of the respondents indicated that exercise books were inadequate. On revision materials, majority of the respondents, 70.3% percent indicated that they were inadequate while only 10.8 indicated that revision materials were adequate. The inadequacy in text books and

revision materials could have resulted from increased students' enrolment as reflected in table 4.13. Lack of these teaching and learning resources poses a very serious challenge in curriculum implementation in schools. These findings concur with that of Obonyo (1987), who noted that instructional materials such as textbooks, revision materials not only enhance communication between the teacher and the learner but also facilitates child-centered learning and learning through discovery.

#### **4.6.3 Adequacy of Laboratory Equipment**

For the experiments to be conducted during a science lesson, the right laboratory apparatus must be used. Inadequacy of laboratory apparatus could affect the teaching and learning process, hence poor implementation of the academic programs. The researcher further sought to establish the adequacy of laboratory apparatus in schools. Respondents were asked to indicate the level of adequacy of laboratory equipment. The results were presented in table 4.8

**Table 4.18: Teachers and Students' Responses on Adequacy of Laboratory Apparatus**

	<b>Teachers</b>		<b>Student</b>	
	<b>F</b>	<b>%</b>	<b>F</b>	<b>%</b>
<b>Adequate</b>	15	37.5	65	47.1
<b>Fairly adequate</b>	11	27.5	36	26.1
<b>Inadequate</b>	14	35.0	37	26.8
<b>Total</b>	40	100	138	100



From the results in table 4.18, 37 percent of teachers and 47.1 percent of students indicated that laboratory apparatus and equipment were adequate. Availability of laboratory apparatus enables teachers to conduct demonstrations during practical lessons and actively involve students in the laboratories. Students can also undertake practical lessons from the classrooms or in the open air in schools where laboratories are not available. This is in agreement with Balogun (1982) who submitted that no effective science education program can exist without equipment for teaching. Adequacy of laboratory apparatus and equipment therefore enabled students in Nyandarua central sub County to actively participate in practical lessons even with the absence of laboratories. The researcher further sought to establish how adequacy of teaching and learning resources influenced the level of implementation of the 100 percent transition policy. Principals were asked to rate the level of implementation in relation to the adequacy of teaching and learning resources in their schools. The results were presented in table 4.19

**Table 4.19: Principals’ Responses on Influence of Adequacy of Teaching and Learning Resources on the Level of implementation of the 100 Percent Transition Policy.**

<b>Adequacy</b>	<b>Level of implementation</b>	<b>Frequency</b>	<b>Percentage</b>
Adequate	High	3	30
Fairly adequate	Moderate	2	20
Inadequate	Low	5	50
<b>Total</b>		<b>10</b>	<b>100</b>

Results in table 4.19 indicate that 50 percent of the schools had inadequate teaching and learning resources hence the level of implementation of the 100 percent transition policy was low. Results also indicate that 20 percent had adequate teaching and learning resources, hence a high level of implementation of the 100 percent transition policy. Adequacy of teaching and learning resources therefore had a positive influence on implementation of the 100 percent transition policy in Nyandarua Central Sub County.

#### **4.7 Availability of Games Facilities and Equipment**

The third objective of the study was to establish the extent to which adequacy of games facilities and equipment influenced implementation of the 100 percent transition policy in public secondary schools in Nyandarua central sub county.

##### **4.7.1 Adequacy of Playing Field and Pitches**

Time is allocated for sports activities and P.E. lessons in every school time table to cater for the physical development of students. Abasa (2015) noted that education is incomplete without sports and that children become healthier, friendly and disciplined when they embrace sports. Playing fields are therefore a basic requirement before establishment of any education institution. The study sought to establish the level of adequacy of playing field and pitches with the intention of finding out whether students were involved in athletics and ball games, and also to establish whether they were active during P.E lessons. The respondents were asked to indicate the level of adequacy of

playing field and pitches in their schools. The results were presented in table 4.20

**Table 4.20: Students Responses on Distribution of Playing Field and Pitches**

	Playing field		Pitches	
	N	%	N	%
Very inadequate	81	58.7	66	47.8
Inadequate	13	9.4	20	14.5
Adequate	48	34.8	13	9.4
Very adequate	9	6.5	7	5.1
<b>Total</b>	<b>138</b>	<b>100</b>	<b>138</b>	<b>100</b>

As presented in table 4.20, the results indicate that majority of schools (58.7%) in Nyandarua Central Sub County had inadequate playing field and inadequate pitches for various ball games (62.3%). School programs are organised such that there is time allocated for physical exercises and games activities to enhance students' physical growth. This requires that schools have adequate space for these activities. Lack of adequate space for sports denies the students an opportunity to develop their potential in co curricular activities and this may result to indiscipline, hindering a smooth teaching and learning process, hence poor implementation of the school programs.

#### 4.7.2 Adequacy of Athletics Track and Space for Indoor Games

The study also sought to establish whether schools in Nyandarua Central Sub County had adequate athletics track and space for indoor games to find out whether students were participating in athletics activities. The respondents were asked to indicate the level of adequacy of athletics track and space for indoor games. The results were presented in table 4.21.

**Table 4.21: Adequacy of athletics track and space for indoor games**

	Athletics track		Indoor games	
	N	%	N	%
Very Inadequate	69	50	59	42.7
Inadequate	20	14.5	32	23.2
Adequate	34	24.6	35	25.4
Very Adequate	15	10.9	12	32.9
<b>Total</b>	<b>138</b>	<b>100</b>	<b>138</b>	<b>100</b>

Table 4.21 indicates that majority of schools in Nyandarua central Sub County do not have adequate athletics track (64.5%). Space for indoor games was also found to be inadequate (65.9%). This is mainly because most schools are Sub County day schools funded through CDF and therefore have to give priority to construction of classrooms before allocating space for indoor games.

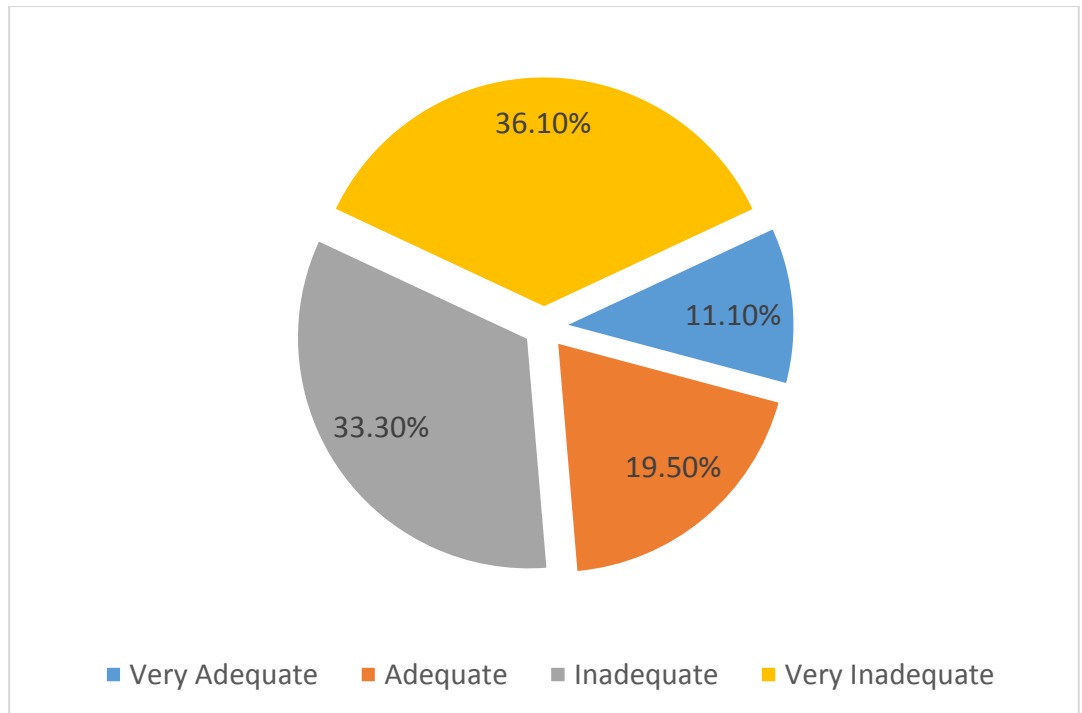
#### 4.73 Adequacy of Balls and Nets

The study also sought to establish whether schools had adequacy of the most basic equipments, balls and nets for use by students during PE lessons as well as during games activities. Their availability ensures that students are well engaged when out of the classroom to curb indiscipline. The respondents were asked to indicate the level of adequacy of balls and nets in their schools.

**Table 4.22 Students' Responses on Adequacy of Balls and Nets**

	<b>Frequency</b>	<b>Percentage</b>
Adequate	77	55.8
Fairly adequate	23	16.7
inadequate	38	27.5
<b>Total</b>	<b>138</b>	<b>100</b>

Results from table 4.22, majority of the students, 55.8 percent indicated that balls, nets and hockey sticks were adequate. This shows a mismatch between the availability of sports ground and adequacy of sports equipment. Physical activities can support intellectual development in children since a healthy body leads to a healthy mind (Bailey, 2006). The study further sought the responses of teachers on adequacy of sports facilities and equipment since they are the people who interact with the students on daily basis during games and P.E. lessons. The results were presented in figure 4.6.



**Figure 4.6: Teachers' Response on Availability of Sports Facilities and Equipment.**

Results in figure 4.6 indicate that majority of respondents, 69.4 percent indicated that sports facilities and equipment were either very inadequate or inadequate. Only 30.6 percent indicated that they had adequate sports facilities and equipment. Results from table 4.25 indicate that space for indoor games was most inadequate, 90 percent. This could be due to the fact that most of the sampled schools were newly established sub County day schools, whose priority was construction of teaching and learning space in preparation for higher enrolments in future. Sports facilities and equipment are necessary in schools since they take care of the physical well-being of the students. To supplement responses from the principals, teachers and students on availability of sports facilities and equipment, the researcher used an observation guide to

collect data and rate the adequacy of sports facilities and equipment in schools. The researcher combined the responses inadequate and very inadequate while adequate and very adequate were put together. The results were presented in Table 4.23

**Table 4.23 Distribution of Games Facilities and Equipment as observed by the Researcher**

Facilities	Responses	Frequency	Percentage
<b>Playing field</b>	Inadequate	3	30
	Adequate	7	70
	Total	10	100
<b>Pitches and balls</b>	Inadequate	4	40
	Adequate	6	60
	Total	10	100
<b>Athletics track</b>	Inadequate	7	70
	Adequate	3	30
	Total	10	100
<b>Space for indoor Games</b>	Inadequate	9	90
	Adequate	1	10
<b>Total</b>		<b>10</b>	<b>100</b>

Results in table 4.23 show the level of adequacy of sports facilities and equipment as observed by the researcher. The results are in agreement with those of the respondents which indicated that all the sports facilities were inadequate in all public secondary schools in Nyandarua Central Sub County. Sports equipment was also inadequate with the exemption of balls and nets. This shows that majority of schools have greater value for ball games in comparison with athletics activities. The researcher further sought to establish

whether inadequacy of sports facilities and equipment influenced the implementation of the 100 percent transition policy. The results were presented in table 4.24

**Table 4.24: Sports Facilities and Equipment and the Implementation of the 100 Percent Transition Policy**

Level of implementation	Frequency	Percentage
Low( Inadequate )	<b>4</b>	<b>40</b>
Moderate	<b>3</b>	<b>30</b>
High (Adequate)	<b>3</b>	<b>30</b>
Total	<b>10</b>	<b>100</b>

Results in table 4.24 indicate that majority of schools (40%) in Nyandarua Central Sub County had adequate sports facilities and equipment. 30 percent had moderate while an equal proportion of 30 percent had inadequate sports facilities and equipment. Schools with adequate facilities and equipment had a high level of implementation of the 100 percent transition policy while those with inadequate facilities had a low level of implementation.

#### **4.8 Adequacy of Enhanced Sanitation Facilities**

The fourth objective of the study was to establish the extent to which availability and adequacy of enhanced sanitation facilities influence implementation of the 100 percent transition policy in public secondary schools in Nyandarua central sub county.



#### 4.8.1 Availability of Toilets and Latrines

Availability of sanitation facilities improves learning. Improving sanitation facilities and promoting hygiene in schools benefits both learning and the health of children. Inadequacy of toilets affects the learning program since students are forced to spend much time cuing for the facility. Respondents were asked to indicate the student toilet ratio and the staff toilet ratio in the school. This was done to establish whether toilets were adequate for both the staff and the students. The results were presented in table 4.25

**Table 4.25 Principals and Teachers’ Response on Staff and Student Toilet ratio.**

1:	Staff		Boys		Girls	
	F	%	F	%	F	%
1 - 10	32	69.6	-	0	-	0
11-20	8	17.4	4	8.7	12	26.1
21-30	6	13.0	3	6.5	31	67.4
31-40	-	0	28	60	2	4.3
Above 4	-	0	11	23.9	1	2.2
<b>Total</b>	<b>46</b>	<b>100</b>	<b>46</b>	<b>100</b>	<b>46</b>	<b>100</b>

Results in table 4.25, majority of principals and teachers indicated that staff toilets were adequate (69.6%) with a staff toilet ratio of 1: 1-10. Boys’ toilets were found to be inadequate (60%) with a boy toilet ratio of 1: 31-40. Girls’

toilets were found to be fairly adequate with 26.1% indicating a ratio of 1: 11-20 and another 67.4% indicating a ratio of 1: 21-30. This could be as a result of relatively low enrolment of girls in comparison with enrolment of boys. Respondents were further asked to indicate the adequacy of sanitation facilities in schools. Respondents were further asked to indicate the adequacy of sanitation facilities in schools. The results were presented in table 4.26

**Table 4.26 Students Response on Adequacy of Sanitation Facilities in Schools**

Statement	Agree		Disagree	
	F	%	F	%
Boys and girls toilets are separate	121	87.7	17	12.3
Toilets in the school are adequate	46	33.3	92	66.7
Water and soap for hand washing is available	47	34.1	91	65.9
<b>Total</b>	<b>138</b>	<b>100</b>	<b>138</b>	<b>100</b>

Results in table 4.26 indicate that majority of schools, 66.7 percent had inadequate toilets and latrines while 33.3 percent indicated that the toilets and latrines were adequate. Majority of the respondents (87.7%) indicated that schools had separate toilets for boys and girls. The results further indicated that majority of schools, 65.9% had inadequate water for hand washing after visiting the toilet while 34.1 percent had adequate hand washing facilities.

Inadequate water for hand washing poses a threat to the health of students. This could lead to absenteeism which is likely to interfere with the teaching hence poor implementation of the school programs. Respondents were further asked to indicate whether inadequacy of sanitation facilities interfered with their learning time. Results were presented in table 4.27

**Table 4.27 Students Responses on whether inadequacy of sanitation facilities interfered with their learning time.**

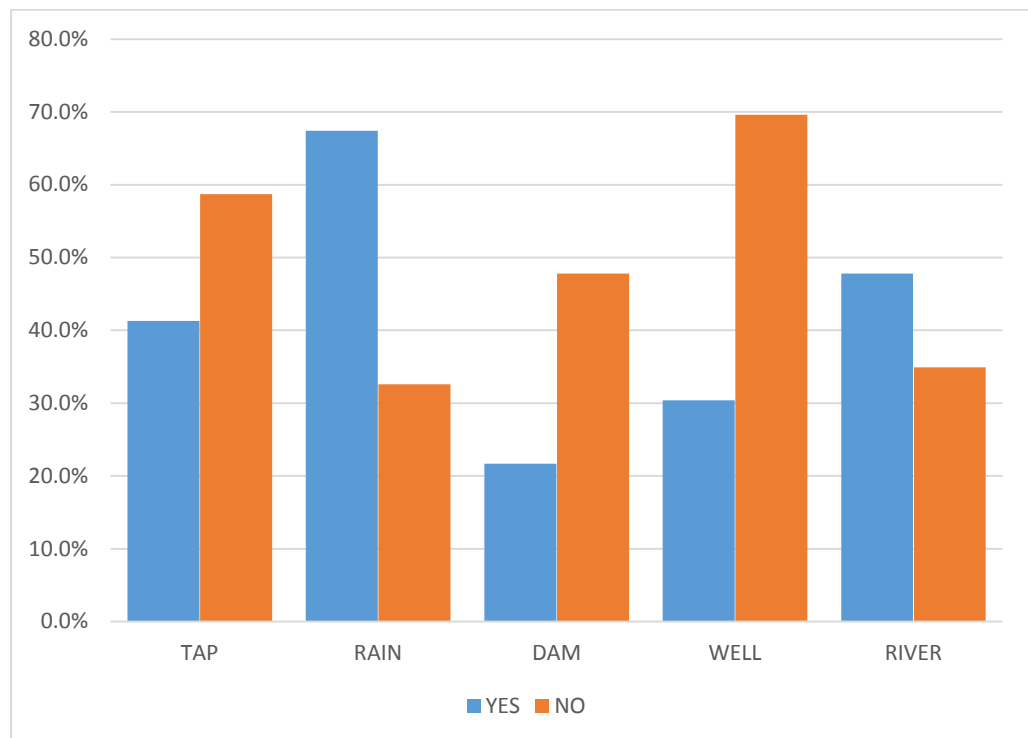
<b>Response</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Agree</b>	121	87.7
<b>Disagree</b>	17	12.3
<b>Total</b>	138	100

Results in Table 4.27 indicates that majority of students agreed to the fact that inadequacy of sanitation facilities interfered with their learning time. This could be as a result of time spent as the students wait to access the facility during break time. Loss of learning time leads to poor implementation of academic programs.

#### 4.8.2 Availability of Clean Water in Schools.

The study sought to establish the adequacy of clean water in the schools. The respondents were asked to list the various sources of water and also indicate whether water for hand washing was available within the sanitation facility.

The results were presented in figure 4.7



**Figure 4.7: Principals and Teachers Responses on Available Water Sources in Schools**

From the results in figure 4.7, the study established that schools in Nyandarua Central Sub County used different sources of water. 67.4 percent of the respondents indicated that their schools used rain water which is mainly collected in reservoir tanks during the rainy season. 47.8 percent of the respondents indicated that their schools used water from the river, 30.4 percent used water from wells while 41 percent used tap water. Clean water is

therefore not adequate in majority of schools and this could threaten the health of students especially those in boarding schools. Students were also asked to indicate the level of adequacy of clean water in their schools. The results were presented in Table 4.28.

**Table 4.28: Students’ Response on Adequacy of clean water in the school.**

	<b>Frequency</b>	<b>Percentage</b>
Adequate	92	66.7
Inadequate	46	33.3
<b>Total</b>	<b>138</b>	<b>100</b>

Results in table 4.28 indicate that majority of students, 66.7 percent faced challenges in getting adequate clean water in the school while 33.3 percent indicated that water was adequate. This is evident from the fact that most schools were using seasonal sources of water like rain, dams, wells and rivers. Water from these sources is untreated and hence a potential threat to the health of the students. A section of the schools, (41%) were however using tap water. The results therefore indicate that there was inadequate clean water in public secondary schools in Nyandarua Central Sub County. This is in agreement with UNICEF (2008) that hand washing facilities in rural schools has not been considered important yet from a preventive health perspective, hand washing is absolutely crucial. The researcher further sought to establish how inadequacy of sanitation facilities influenced the influenced the

implementation of the 100 percent transition policy. The results were presented in table 4.29

**Table 4.29: Adequacy of Sanitation Facilities and Implementation of the 100 Percent Transition Policy**

<b>Level of implementation</b>	<b>Frequency</b>	<b>Percentage</b>
Low	3	30
Moderate	5	50
High	2	20
<b>Total</b>	<b>10</b>	<b>100</b>

Results in table 4.29 indicate that 30 percent of the schools had inadequate sanitation facilities and this resulted to low level of implementation of the 100 percent transition policy in Nyandarua Central sub County. On the other hand, 50 percent had moderate while 20 percent had adequate sanitation facilities. Schools which had adequate sanitation facilities had a high level of implementation of the 100 percent transition policy.

## **CHAPTER 5**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents the summary of the study, the conclusion and the recommendations based on the findings of the study.

#### **Summary of the study**

The purpose of this study was to investigate the institutional determinants of implementation of the 100 percent transition policy in public secondary schools in Nyandarua Central Sub County, Kenya. The study was guided by four objectives. The first one was to establish the influence of teaching and learning space on implementation of the 100 percent transition policy in public secondary schools. The other one was to establish the extent to which teaching and learning resources influence implementation of the 100 percent transition policy in public secondary schools. The third one was to establish how adequacy of sports facilities and equipment influence implementation of the 100 percent transition policy in public secondary schools. The last one was to determine how sanitation facilities influence implementation of the 100 percent transition policy in public secondary schools.

The literature review focused on the concept of implementation of the 100 percent transition policy, Teaching and learning space, teaching and learning resources, games facilities and equipment, sanitation facilities and their influence on implementation of the transition policy. The study heavily relied on the education production function theory which was proposed by Mace

in 1979. The theory describes the relationship between various inputs affecting the implementation of both academic and non-academic programs in secondary schools. The study used descriptive research design and data obtained was mainly quantitative in nature although some qualitative data was collected from an interview schedule with the sub County director of education and also from open ended questions from the principals and teachers questionnaires. Data was analyzed using descriptive statistics, mainly frequencies and percentages. Presentation of data was done using tables.

### **5.3 Summary of the major findings**

The 100 percent transition policy was aimed at ensuring that all the pupils who completed class eight were absorbed in form one in secondary schools. The implementation process therefore calls for increased teaching and learning space, teaching and learning resources, games facilities and equipment as well as enhanced sanitation facilities to match the high enrolment. The findings of the study were based on the demographic trends as well as four research questions.

#### **5.3.1 Findings based on the demographic trends of the respondents**

Through data analysis, the study established that all the principals and BOM chairpersons in the sampled schools were male, (100%). This was an indicator that there is very high gender parity in administrative positions in public secondary schools in Nyandarua Central sub County. The study however revealed that the number of female teachers was higher, (53%) compared to that of male teachers, (47%). This was an indicator that there is a good



representation of the female students by female teachers in public secondary schools. The study further established that more boys (60.1%) were admitted in form one compared to the number of girls admitted in form one the same year (39.9%).

On ages of the respondents, data collected established that most of the principals were aged between 41 and 50 years (60%) while 40% were over 50 years of age. None of the principals in the sampled schools was aged below 40 years. Majority of teachers were aged below 30 years, indicating a team of young and energetic teachers who are capable of implementing the curriculum with ease. On the other hand, majority of the form one students were between the ages of 13 to 15 years. This indicates pupils in class eight transited to secondary school at the right age. Some students were however between 16 and 19 years of age.

On academic qualification principals, majority were BED holders at 90 percent, 10 percent were holders of Masters Degree while none was a Diploma holder. Likewise, most of the teachers, 75 percent were BED holders, 8.3% had Masters Degree while 16.7 percent were Diploma holders.

Data from the study also established that 20 percent of the sampled principals had an experience of less than five years, majority having served as principals for 11 to 15 years (40%). Majority of teachers (44%) had a teaching experience of five years and below while 33 percent had taught for a period of five to 10 years. Minority of the teachers had teaching experience of over 15 years in Nyandarua Central Sub County.

About the type of schools studied, data collected showed that all the sampled schools in Nyandarua Central Sub County were mixed schools, 30 percent being mixed boarding, 20 percent mixed day and boarding while 50 percent were mixed day. On school category, the study established that majority (70%) of the sampled schools were sub County schools, 20% were County schools while only 10 percent were National schools. The study further established that majority of the schools in Nyandarua Central Sub County (70%) had either one or two streams, 30 percent had three to four streams while none had more than four streams per class.

### **5.3.2 Findings based on research question one**

To what extent does teaching and learning space influences implementation of the 100 percent transition policy in public secondary schools?

From the descriptive results of the study, majority of the schools (90%) recorded an increase in form one admission in 2019 compared to 2018, indicating a rise in the transition rate from primary to secondary schools. The study further established that majority of form one classes (40%) had more than 50 students while 30% had above 60 students per class. The percentage of classes that had more than 50 students lowered in form two and while form four had the least at 30 percent. This shows that the form one class was most overcrowded. On conformity of the classrooms to statutory regulations, the study found out that majority (70%) conformed while 30 percent did not. On adequacy of teaching and learning space, the study established that majority of the schools had inadequate science and computer laboratories at 37.7% and

79.8% respectively. Libraries were also found to be inadequate in majority of schools (70%). The study however established that classrooms were adequate (75%) , with only 25 percent of the schools having inadequate classrooms.

### **5.3.2 Findings based on research question two**

To what extent do teaching and learning resources influence implementation of the 100 percent transition policy in public secondary schools?

Findings from the data collected indicated that majority of schools had adequate desks and chairs for students, 86.9 Percent. Text books and exercise books were also found to be adequate, 70.2 percent and 85 percent respectively. Revision materials were however found to be inadequate in majority of schools. On laboratory equipment, findings from the study indicated that most of the schools had adequate laboratory equipment.

### **5.3.3 Findings based on research question three**

How do adequacy of sports facilities and equipment influence implementation of the 100 percent transition policy in public secondary schools? The study established that sports facilities and equipment were inadequate in majority of schools in Nyandarua Central Sub County. Playground and pitches for various ball games were inadequate, 70 percent Athletics tracks and space for indoor games were also inadequate at 64.5 percent and 71.1 percent respectively. Balls and nets were found to be adequate in majority of schools.

### **5.3.4 Findings based on research question four**

How do enhanced sanitation facilities influence implementation of the 100 percent transition policy in public secondary schools? Findings based on

research question four indicated that schools in Nyandarua Central Sub County had separate toilets for boys and girls as well as for male and female staff. The toilets were however inadequate (66.7%). Water for hand washing was not adequate 69.5 percent. The study also established that clean water was not adequate in majority of schools. (59.4%) The major sources of water were dams, rain, wells and rivers. Only 41.3 percent of the respondents indicated that the schools had tap water supply.

#### **5.4 Conclusions of the study**

The study established that public secondary schools in Nyandarua Central sub County do not have adequate teaching and learning space. Such teaching and learning space includes classrooms, laboratories and libraries. This has resulted in overcrowding mostly in form one classes due to increase in form one enrolments. Overcrowded classrooms are not conducive for the teaching and learning process. The study therefore concluded that adequacy of teaching and learning space has a positive influence on the teaching and learning process, hence implementation of the 100 percent transition policy. Schools with inadequate teaching and learning space faced serious challenges in running of the school programs which had a negative influence on implementation of the 100 percent transition policy.

The study also established that teaching and learning resources were adequate in majority of schools. Adequacy of teaching and learning resources ensures the smooth running of the school programs. Adequacy of teaching and learning resources therefore positively influences the process of implementing the 100

percent transition policy while inadequacy of teaching and learning resources influences the implementation process negatively.

The study further established that games facilities and equipment were inadequate in public secondary schools. Inadequacy of games facilities negatively influenced the smooth running of co-curricular activities hence poor process of implementing the 100 percent transition policy. Adequacy of games facilities and equipment influences the implementation process positively.

The study also found that schools which had inadequate sanitation facilities had prolonged break time which affected the time programmed for lessons. The study concluded that inadequacy of sanitation facilities affected the teaching and learning processes negatively while availability of adequate sanitation facilities affected the teaching and learning process positively. Adequacy of sanitation facilities influences the implementation of the 100 percent transition policy.

### **5.5 Recommendations of the study.**

- The study established that teaching and learning space was inadequate in majority of schools. Students were overcrowded in classrooms, libraries and laboratories due to high enrolments witnessed with the introduction of the governments' 100 percent transition policy. This hindered the smooth running of the school programs hence a negative influence on the process of implementing the 100 percent transition policy. The study therefore recommends that the government should provide enough funds in time for building additional classrooms,

laboratories and libraries in all public secondary schools to match the increasing enrolment.

- The study also established that majority of schools had inadequate sports facilities and equipment. The study recommends that the school principals should budget for sports equipment annually to ensure adequate supply of the equipment to the students during games and P.E lessons. Teachers should also be sensitised on the importance of involving students in sports activities.
- Findings from the study also indicated that schools in Nyandarua Central Sub County had inadequacy of clean water and enhanced sanitation facilities. The study recommends that the Board of Management and Parents Association of secondary schools should come up with ways of engaging the parents and the community for purposes of acquiring water storage tanks where water can be tapped and treated before consumption. Water points for hand washing should also be established within the sanitation blocks.

### **5.5 Suggestions for further research**

- i. The researcher suggests that there is need to carry out a similar study in other Sub Counties in Nyandarua County. The results of the various studies may complement each other to come up with a comprehensive report on institutional factors influencing the implementation of the transition policy in Nyandarua County.

- ii. The researcher also suggests that a similar study should be carried out in other Counties in the Country.
- iii. The researcher also suggests that a study be carried out on the influence of the governments' 100 percent transition policy on quality of education in public secondary schools in Nyandarua Central Sub County and other parts of the country.

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## **APPENDICES**

### **APPENDIX I: LETTER OF INTRODUCTION**

Margaret Muthoni Njenga

University of Nairobi

Department of Education Administration and Planning

University of Nairobi

P.O. BOX 30197-00100

Nairobi.

Date \_\_\_\_\_

The Principal,

\_\_\_\_\_ Secondary school

Dear Sir/ Madam

**RE: PERMISSION TO CONDUCT RESEARCH IN YOUR SCHOOL**

I am a student pursuing Masters Degree in Educational Planning at the University of Nairobi. I intend to undertake a research on determinants of the 100 percent transition policy implementation in Nyandarua central sub county. Your school was one of those sampled for the study. I am kindly requesting you to allow your teachers and students to participate in the study. The information obtained will be treated with confidentiality and used for academic purposes only.

Your cooperation will be highly appreciated.

Yours Faithfully,

Muthoni Njenga.

**APPENDIX II: QUESTIONNAIRE FOR BOM CHAIRPERSONS**

Instructions: Kindly do not indicate your name or that of your school on the questionnaire. Respond to the questions by putting a tick inside the bracket against the appropriate answer.

**SECTION A: Background information.**

1. Kindly indicate your gender. Male ( ) Female ( )
2. Indicate your age bracket. Below 40 years ( ) 40-50 years ( )  
over 50 years ( )
3. What is your highest academic qualification? M.Ed ( ) B.Ed ( )  
) Diploma ( ) any other (Kindly specify) .....
4. How long have you served as a BOM chairperson? Below 5 years  
( ) 5-10 years ( ) 10-15 years ( ) Over 15 years ( )
5. How long have you served in the current station? Below 5 years ( )  
) 5-10 years ( ) 10-15 ( ) Over 15 years ( )

**SECTION B: Availability of teaching and learning space.**

6. Indicate the appropriate situation of teaching and learning space in your school.

Key: Very adequate (5) Adequate (4) Not sure (3) Inadequate (2) Very inadequate (1)

<b>Teaching and Learning Spaces</b>	1	2	3	4	5
classrooms					

Library					
Science laboratories					
Computer laboratory					

**SECTION C: Adequacy of teaching and learning resources**

7. Kindly indicate the level of adequacy of teaching and learning resources in your school by putting a tick in the appropriate box.

Key: Very adequate (5) Adequate (4) Not sure (3) Inadequate (2)  
Very inadequate (1)

Teaching and Learning resources	1	2	3	4	5
Desks and chairs					
Text books					
Exercise books					
Laboratory equipment					
Revision materials					

**SECTION D: Availability of Games facilities and equipment**

8. Please indicate the level of adequacy of games facilities and equipment using the key indicated: Very adequate (5) Adequate (4) Not sure (3)  
Inadequate (2) Very inadequate (1)

Sports facilities and equipment	1	2	3	4	5
Playing field					
Pitches					
Athletics track					
Balls and nets					

**SECTION E: Adequacy of enhanced sanitation facilities**

8. How would you rate the adequacy of sanitation facilities in your school?

Adequate ( ) Inadequate ( ) Not sure ( )

9. Were there additional sanitation facilities put up in preparation for 2019 form one intake? Yes ( ) No ( )

If yes, kindly specify.....

a) Is water for hand washing available within the sanitation block?

a) Yes ( ) b. No ( )

Thank you for participating.





9. Kindly indicate the number of streams per class

Class	Form 1	Form 2	Form 3	Form 4
Number of streams				

10. Please indicate form one enrolments for 2018 and 2019 in the table below.

	Form 1 2018	Form 1 2019
Enrolment		

11. What has contributed to the change in enrolment indicated above if any?

.....

12. What measures have you put in place to deal with the change in enrolment indicated above.....

**SECTION B: Availability of teaching and learning space**

13. Kindly indicate the class size in terms of the number of students per class

	Less than 40	40-50	51-60	Above 60
Form 1				
Form 2				
Form 3				
Form 4				

14. Was any additional learning space put up in preparation for the 2019 enrolment? Kindly specify if any.

.....

15. Indicate whether the following classrooms have conformed to statutory regulations in terms of space /dimensions?

	Conformed	Not conformed
Form 1		
Form 2		
Form 3		
Form 4		

15. Indicate the appropriate situation of teaching and learning space in your school .Very adequate (5) Adequate (4) Not sure (3) Inadequate (2) Very inadequate (1)

<b>Teaching and Learning Space</b>	1	2	3	4	5
classrooms					
Library					
Science laboratories					
Computer laboratory					

### SECTION C: Adequacy of teaching and learning resources

16. Put a tick to indicate the level of adequacy of teaching and learning resources listed below. Key: Very adequate (5) Adequate (4) Not sure (3) Inadequate (2) Very inadequate (1)

Teaching and Learning resources	1	2	3	4	5
Desks and chairs					
Text books					
Exercise books					
Laboratory equipment					
Revision materials					

### SECTION D: Availability of Games facilities and equipment

17. Please indicate the level of adequacy of games facilities and equipment using the key indicated: Very adequate (5) Adequate (4) Not sure (3) Inadequate (2) Very inadequate (1)

Sports facilities and equipment	1	2	3	4	5
Playing field					
Pitches					
Athletics track					
Space for indoor games					
Balls and nets					

(b) Does the school have space for expansion of sports facilities?

Yes ( ) No ( )

If No, explain.....

**SECTION E: Adequacy of enhanced sanitation facilities**

9. Indicate the total population of staff and students in this school.

	Staff	Boys	Girls	Total
Population				

10. Indicate the total number of toilets/ Latrines in the school

	Staff	Boys	Girls	LWD	Total
No of toilets					

11. Use a tick to indicate whether your school uses the following sources of water-:

	Tap	River	Dam	Well	Rain	Other(specify)
Yes						
No						

12. Did your school put up any additional toilets/ Latrines in preparation for 2019 enrolment? .....

**APPENDIX IV: QUESTIONNAIRE FOR TEACHERS**

Instructions: Kindly do not indicate your name or that of your school on the questionnaire. Respond to the questions by putting a tick inside the bracket against the appropriate answer.

**SECTION A: Background information**

- 1. What is your gender? Male ( ) Female ( )
- 2. Indicate your age bracket. Below 40 years ( ) 40-50 years ( )  
over 50 years ( )
- 3. What is your highest academic qualification? M.Ed ( ) B.Ed ( )  
Diploma ( ) any other (Kindly specify) .....
- 4. How long have you served as a teacher? Below 5 years ( ) 5-10  
years ( ) 10-15 years ( ) Over 15 years ( )
- 5. How long have you served in the current station? Below 5 years ( )  
5-10 years ( ) 10-15 ( ) Over 15 years ( )
- 6. Kindly indicate the number of streams per class in the school.

Class	Form 1	Form 2	Form 3	Form 4
Number of streams				

**SECTION B: Availability of teaching and learning spaces**

- 7. Kindly indicate the class size in terms of the number of students per class in the table below.

	Less than 40	40-50	51-60	Above 60
Form 1				
Form 2				
Form3				
Form 4				

8. To what extent have the following classrooms conformed to statutory regulations in terms of space /Dimensions? NB: If the classroom has conformed, then it means there is no congestion in the classroom.

	Conformed	Not conformed
Form 1		
Form 2		
Form 3		
Form 4		

9. Indicate the appropriate situation of teaching and learning space in your school.

Very adequate (5) Adequate (4) Not sure (3) Inadequate (2) Very inadequate (1)

<b>Teaching and Learning Space</b>	1	2	3	4	5
classrooms					
Library					
Science laboratories					
Computer laboratory					

**SECTION C: Adequacy of teaching and learning resources**

10. Put a tick to indicate the level of adequacy of teaching and learning resources listed below. Key: Very adequate (5) Adequate (4) Not sure (3) Inadequate (2) Very inadequate (1)

Teaching and Learning resources	1	2	3	4	5
Desks and chairs					
Text books					
Exercise books					
Laboratory equipment					
Revision materials					

**SECTION D: Availability of Games facilities and equipment**

11. Please indicate the level of adequacy of games facilities and equipment using the key indicated: Very adequate (5) Adequate (4) Not sure (3) Inadequate (2) Very inadequate (1)

Sports facilities and equipment	1	2	3	4	5
Playing field					
Pitches					
Athletics track					
Space for indoor games					
Balls and nets					

**SECTION E: Adequacy of enhanced sanitation facility**

12. Indicate the level of adequacy of staff toilets in your school.

Adequate ( ) Fairly adequate ( ) Inadequate ( )

13. Use a tick to indicate whether your school uses the following sources of water-:

	Tap	Rain	Dam	Well	River	Other(specify)
Yes						
No						

13. Is water for hand washing available within the sanitation block?

b) Yes ( ) b. No ( )

Thank you for participating.



## APPENDIX V: QUESTIONNAIRE FOR STUDENTS

### SECTION A: Student's profile

Kindly answer the questions by putting a tick in the appropriate box. Do not write your name on the questionnaire.

1. What is your gender Boy ( ) Girl ( )
2. Indicate your age 12-15 years ( ) 15-19 years ( ) above 19 years ( )
3. You are in which class? Form 1 ( ) Form 2 ( ) Form3 ( ) Form 4 ( )
4. Which year did you join form one? 2019 ( ) 2018 ( ) 2017 ( ) 2016 ( )

### SECTION B: Teaching and learning spaces

5. Complete the table by indicating the extent to which each of the statements applies in your school. Put a tick in the appropriate box as provided in the key.

Key: Strongly Agree (5) Agree (4) Not sure (3) Disagree (2) strongly disagree (1)

Teaching and learning spaces	1	2	3	4	5
Our class is has a conducive learning environment, free from congestion					
There is enough space for the teacher to move around and look at our individual work					
There is adequate space for us to read in the library during the library lesson and preps.					
The science laboratory has enough space for us to conduct experiments during the practical lessons					
We often visit the computer laboratory where we learn computer basic skills.					

**SECTION C: Availability of teaching and learning resources. Key:**

Strongly Agree (5) Agree (4) Not sure (3) Disagree (2) strongly disagree

(1)

Teaching and learning resources	1	2	3	4	5
Every student in class has his/her own desk and chair					
Each student is provided with his/her own textbook for use in class for each subject					
Laboratory apparatus and chemicals are adequate for use in the lab during the practical lessons					
Exercise books are always available for each subject					
Revision materials are always available both in class and in the library					

**SECTION D: Availability of sports facilities and equipment**

7. Put a tick in the appropriate box in the table below. The key will guide you in providing the most appropriate answer. Key: Strongly Agree (5) Agree (4) Not sure (3) Disagree (2) Strongly disagree (1)

Availability of sports facilities and equipment	1	2	3	4	5
There is enough space in the field for doing exercises during PE lessons.					
Pitches are available in the school for the					

various ball games e.g. netball, football, volley ball					
There is an athletics track in the school field.					
The school has enough balls for use during games and PE lessons.					
Every student has an equal opportunity to take part in sports activities in the school					

**SECTION E: Adequacy of enhanced sanitation facilities**

14. . Put a tick in the appropriate box in the table below as provided in the key.

Key: Strongly Agree (5) Agree (4) Not sure (3) Disagree (2)

Strongly disagree (1)

Availability of enhanced sanitation facilities	1	2	3	4	5
Our school has separate toilets/ latrines for boy and girls					
Our school has adequate toilets for boys					
Our school has adequate toilets for girls					
Water is available for hand washing after visiting the toilet					

10. Use a tick to indicate whether your school uses the following sources of water-:

	Tap	Rain	Dam	Well	River	Other(specify)
Yes						
No						

Thank You for participating.

## **APPENDIX VI: INTERVIEW SCHEDULE FOR SCDE**

Thank you for taking part in this interview. The purpose of this interview is to collect data on determinants of the 100 percent transition policy implementation in Kenya. I wish to assure you that the responses you give will be treated confidentially and used for academic purposes only.

Kindly respond to these questions.

1. What is your designation in the sub county?
2. How long have you worked with the Ministry of Education?
3. How about your tenure in Nyandarua central sub county?
4. How does the transition rate from primary to secondary in your sub county in 2018 compare to that of 2019?
5. In which areas were schools in your sub county ready to embrace the 100 percent transition?
6. What structures were put in place to ensure that all pupils who completed class eight last year joined form one?
7. What are the challenges facing secondary schools in the implementation of the transition policy? How has the Ministry of Education addressed the challenge
8. What mechanisms have the school administrators devised to cope with the high enrolments?
9. Is there any reported case of form one dropout in 2019? Briefly explain.

Thank you for participating.

## **APPENDIX VII: RESEARCH PERMIT**

## **APPENDIX VIII: RESEARCH AUTHORIZATION**