

**DETERMINANTS OF SUSTAINABILITY OF MOTHER TONGUE BASED
MULTILINGUAL EDUCATION PROGRAMS IN TANA RIVER COUNTY, KENYA.**

BY

REHEMA BONA ABIYO

**A research project report submitted in partial fulfilment of the requirements for
the award of the degree of Master of Arts in Project Planning and Management
of the University of Nairobi**

2017

DECLARATION

This research project report is my own original work and has not been presented for examination or any award in any other university or institution.

Signature:

Date:

Name: Rehema Bona Abiyo

Registration Number: L50/85399/2016

This research project report has been submitted for examination with my approval as the University of Nairobi Supervisor.

Signature:

Date:

Mr. Johnbosco Kisimbii

Lecturer; Open, Distance and eLearning Centre

University of Nairobi

DEDICATION

This work is dedicated to the children of Tana River whose education is dependent on policy makers, managers and implementers. Their innocence gives me the inspiration to speak on their behalf.

ACKNOWLEDGEMENTS

I would like to extend my gratitude to the University of Nairobi for having offered this course in Malindi and to open a branch where I could easily access it from Tana River County. Acknowledgment is made to the following persons for their invaluable support and ideas throughout this work. I must acknowledge my supervisor Mr. Johnbosco Kisimbii for the dedicated supervision. Thank you for your time and patience, your clear and straight forward comments and your coaching all the way through. I really appreciate it!

My appreciation goes to my lecturers Mr. Stephen Fanaka, my initial supervisor who has been a source of inspiration and encouragement to complete this task. And Mr. Tsuma Baruwa for taking us through the research methods course in details, thank you Sir, for your training! I acknowledge my workmates at BTL whom we are implementing MTBMLE programs together in Kwale and Tana River for their support. I am specifically grateful to Mr. Annan Shari who has been my mentor throughout the years and contributed valuable ideas to this topic.

Also, I acknowledge the Tana Delta teachers, my friends Zaka Dele, Lawi Mwakaole and Malika Anwari, my mother Agnes Maneno and my siblings Ibrahim Morowa and Said Hiribae for their support and endurance during my studies. Lastly to everyone who contributed toward the success of this work, words cannot express my gratitude for your sacrifice.

TABLE OF CONTENT

DECLARATION	ii
DEDICATION	iii
ACKNOWLEDGEMENTS	iv
TABLE OF CONTENT	v
LIST OF TABLES	viii
LIST OF FIGURES	x
ABBREVIATIONS AND ACCRONYMS	xi
ABSTRACT	xii
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background of the Study.....	1
1.2 Statement of the problem.....	4
1.3 Purpose of the Study.....	5
1.4 Objective of the Study.....	5
1.5 Research Questions.....	6
1.6 Hypothesis of the Study.....	6
1.7 Significance of the Study.....	7
1.8 Basic Assumption of the Study.....	8
1.9 Delimitations of the Study.....	8
1.10 Limitations of the Study.....	8
1.11 Definition of significant terms used in the Study.....	9
1.12 Organization of the Study.....	9
CHAPTER TWO	11
LITERATURE REVIEW	11
2.1 Introduction.....	11
2.2 The concept of Mother Tongue Based Multilingual Education.....	11
2.3 Sustainability of Mother Tongue Based Multilingual Education.....	12
2.3.1 Language in Education Policies and Mother Tongue Based Multilingual Education programs.....	13
2.3.2 Material resources and Mother Tongue Based Multilingual Education programs.....	15
2.3.3 Human resource and Mother Tongue Based Multilingual Education programs.....	17

2.3.4	Stakeholders' involvement and Mother Tongue Based Multilingual Education programs.	19
2.4	Theoretical Framework	21
2.5	Conceptual Framework	22
2.6	Summary of Chapter	23
CHAPTER THREE		24
RESEARCH METHODOLOGIES		24
3.1	Introduction	24
3.2	Research Design	24
3.3	Target population	24
3.4	Sampling size and Sampling Procedure	25
3.5	Data Collection instruments	25
3.5.1	Pilot Study	26
3.5.2	Validity of the instruments	26
3.5.3	Reliability of the instruments.....	26
3.6	Data Collection Procedure.....	27
3.7	Data Analysis	27
3.8	Ethical Considerations.....	27
3.9	Operational Definition of Variables	28
CHAPTER FOUR		29
DATA ANALYSIS PRESENTATION AND INTERPRETATION		29
4.1	Introduction	29
4.2	Questionnaire Return Rate	29
4.3	Demographic characteristics of the respondents	30
4.3.1	Demographic characteristics of Teachers/Implementers	30
4.3.2	Demographic characteristics of Pupils/Beneficiaries	31
4.3.3	Demographic characteristics Board of Management/ Parents	32
4.4	Language in Education Policy significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.	32
4.5	Availability of material resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.	37
4.6	Availability of human resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.	43

4.7 Involvement of stakeholders significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.....	48
CHAPTER FIVE.....	54
SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS	54
5.1 Introduction	54
5.2 Summary of findings	54
5.3 Discussions.....	56
5.4 Conclusions	58
5.5 Recommendations	58
5.6 Areas for Further Research.....	59
REFERENCES	60
APPENDIX I: Letter of Transmittal	66
APPENDIX II: Questionnaire Survey Instrument for Teachers	67
APPENDIX III: Questionnaire Survey Instrument for Head teachers and County Education Officials	71
APPENDIX IV: Interview Schedule for Children	75
APPENDIX V: Focused Group Discussions guide.....	76

LIST OF TABLES

Table 3.1: Respondents of Data Collection	25
Table 3.2: Operation of Definition of Variables	28
Table 4.1: Summary of the response rate of the respondents	29
Table 4.2: Socio-demographic characteristics of Respondents of teachers/implementers based on Age and education level	30
Table 4.3: Socio-demographic characteristics of Respondents of teachers/implementers based on Marital status	31
Table 4.4 Socio-demographic characteristics of Pupils' Respondents based on Age, Sex and Primary Level of respondents.....	31
Table 4.5: Socio-demographic characteristics of Pupils' Respondents based on class repetition..	32
Table 4.6: Socio-demographic characteristics of Respondents of BOM/ Parents	32
Table 4.7: Likert scale rating of the Language in Education Policy significantly influences the sustainability on Mother Tongue Based Multilingual Education project	33
Table 4.8: Chi-square test in the results on the Language in Education Policy significantly influences the sustainability on Mother Tongue Based Multilingual Education programs in Tana River County.....	34
Table 4.9: Frequency table of the Language in Education Policy significantly influences the sustainability on Mother Tongue Based Multilingual Education programs in Tana River County...	35
Table 4.10: Pupils' response on whether they learn Mother Tongue in school	37
Table 4.11: Pupils' response preference on method of instruction	37
Table 4.12: Likert scale rating of the availability of material resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs	38
Table 4.13: Chi-square test in the results on the availability of material resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs in Tana River County.....	39
Table 4.14: Frequency table of the availability of material resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs	40
Table 4.15: Pupils' response on availability of MTE resources in schools	42
Table 4.16: Pupils' response on why they read MTE books	42
Table 4.17: Likert scale rating of the availability of human resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs	43
Table 4.18: Chi-square test in the results on the availability of human resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs in Tana River County.....	44
Table 4.19: Frequency table on the availability of human resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs in Tana River County.....	46
Table 4.20: Pupils' response on whether they learn Mother Tongue in school.....	48
Table 4.21: Likert scale rating of the involvement of stakeholders significantly influences the sustainability on Mother Tongue Based Multilingual Education programs	48
Table 4.22: Chi-square test in the results on the involvement of stakeholders significantly influences the sustainability on Mother Tongue Based Multilingual Education programs in Tana River County	49
Table 4.23: Pupils' response on parental involvement on children learning	50

Table 4.24: Pupils' respondents on what language do their parents to use in helping them with homework	51
Table 4.25: Frequency table on the involvement of stakeholders significantly influences the sustainability on Mother Tongue Based Multilingual Education programs in Tana River County.....	52

LIST OF FIGURES

Figure 1: Conceptual Framework	21
--------------------------------------	----

.

ABBREVIATIONS AND ACCRONYMS

ADEA	Association for Development of Education in Africa
BE	Bilingual Education
BTL	Bible Translation and Literacy
ECDE	Early Childhood Development Education
BOMs	Board of Management
EFA	Education for All
FGDs	Focused Group Discussions
GOK	Government of Kenya
ILO	International Labor Organization
KIE	Kenya Institute of Education
KICD	Kenya Institute of Curriculum Development
L1	First Language
L2	Second Language
LCA	Language of the Catchment Area
LiEP	Language in Education Policy
LoI	Language of Instruction
SDGs	Sustainable Development Goals
MLE	Multilingual Education
MOE	Ministry of Education
MoEST	Ministry of Education science and Technology
MoI	Medium of Instruction
MT	Mother Tongue
MTBMLE	Mother Tongue Based Multilingual Education
NPA	New Primary Approach
NGO	Non-Governmental organization
SACMEQ	Southern and Eastern Africa Consortium for Monitoring and Evaluation
TKK	Tujifunze Kusoma Kikwetu
UNESCO	United Nations Education Scientific and Cultural Organization
UIL	UNESCO Institute of Lifelong
UN	United Nations

ABSTRACT

One of the challenges facing the execution of the Language in Education Policy in Kenya has been its sustainability, yet the policy has been in existence since 1976. The LiEP has been seen to be an answer to the matters of quality yet its implementation levels have been significantly low. The main purpose of this study is to investigate the factors influencing effective sustainability of Mother Tongue Based Multilingual Education programs which are guided by this policy. The researcher is guided by the following objectives: First, to establish how Language in Education Policy influences the effective sustainability of Mother Tongue Based Multilingual Education programs. Secondly, to examine how the availability of material resources influences the effective sustainability of Mother Tongue Based Multilingual Education programs. Thirdly, to assess how the availability of resources influences the effective sustainability of Mother Tongue Based Multilingual Education programs. And lastly, to determine the influence of stakeholders in the programs for the effective sustainability of Mother Tongue Based Multilingual Education programs. The research study targets a population of 1,444 and employ mixed methods of research. Multi-method designs are generally intended to complement one information source with another, or triangulate on an issues by utilizing different data sources to approach a research problem from a different points of view. Data was gathered using questionnaires, interview and Focused Group Discussions. The supervisors validated the questionnaires. To enhance reliability of the instruments, pilot study was conducted. Quantitative data was analysed by means of various statistics as well as measures of central tendency and dispersion. Frequency and percentages statistics were used. Chi square was also used to test the hypotheses. Confidentiality of the information that respondents provided was upheld. The response rate was 76%. From the findings, it evidence that the alternative hypothesis which stated that there is significant relationship between Language in Education Policy and sustainability of Mother Tongue Based Multilingual Education programs was accepted. This means that there is high collaboration between Language in Education Policy and multilingual education. The study revealed that there is significant relationship between availability of material resources and sustainability of Mother Tongue Based Multilingual Education programs. The alternative hypothesis for this was accepted. However, there is need for more publishers to publish books written in mother tongue to ensure effective sustainability. The study has also revealed that the alternative hypothesis that there is significant relationship between availability of human resources and sustainability of Mother Tongue Based Multilingual Education programs. However, there is need for the teachers to have institutionalized training on MTE while in teacher's college for effective implementation of MTBMLE programming. Lastly, the alternative hypothesis that stated that there is significant relationship between involvement of stakeholders and sustainability of Mother Tongue Based Multilingual Education programs was accepted. This means that community has to actively participate in the MTE programs and take ownership of the programs. The study revealed that parents are actively involved in the learning process of their children.

Key words: Sustainability; Mother Tongue; Multilingual Education; Bilingual Education; Language in Education Policy; Language of Instruction; Medium of Instruction; Material resources; Human resources; Stakeholders.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

In every corner of the world, young children are learning languages at home that differ from the dominant language used in their broader social world. These children arrive at school with a precious resource: their mother tongue well known as the Mother Tongue (MT) or the first language (L1). Typically, when minority and indigenous language children begin pre-school or primary school, they must learn the language used for instruction in schools to fit in socially and succeed academically. Most of the times, these learners receive education exclusively in the second language (L2). It is quite obvious that these official language programs do not support the children of the minority language to develop competence in L1. Furthermore, the language policies that inform these programs diminish the knowledge and cultural backgrounds associated with minority children's L1. Persistence school drop-outs and poor academic performances among the minority children are rooted from the Language in education Policies (LiEP) (UNESCO, 2000). However, there are many initiatives in many parts of the world to provide formal support for the minority children to continue developing competence in L1 and self-confidence as pupils, while also learning other additional languages.

The United Nations Universal Declaration on Human Rights (1948) on the other hand, affirms the right to education without any discrimination. Article 2 of this vital document creates the basic principle against discrimination on the grounds of languages. Article 5 of the 1960 Convention and Recommendation against Discrimination in Education precisely recognizes the right of national minorities to conduct their educational activities including the teaching in their own mother tongues (MT). More recently, a number of other UN declaration and conventions supports the rights of minorities, including indigenous people to have instruction or learn in L1 or their heritage language. Some of these documents include: Religious and Linguistic Minorities (1992, Article 4); 1990 International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families (Article 45); the United Nations Declaration on the Rights of Persons belonging to National or Ethnic, Religious and Linguistic Minorities (1992, Article 4); the 1989 Convention on the Rights of the Child and the 2007 United Nations Declaration on the Rights of Indigenous Peoples. All these efforts demonstrated, to serve the basic needs for all, require more than a recommitment to basic education as now exists. Looking closely at these declarations what is

needed therefore is an expanded vision that surpasses resource levels, institutional structures, curricula and conventional delivery systems while building on the best practices (Cummings, 1995).

From 2003 -2006, The Association for the Development of Education in Africa (ADEA) and the UNESCO Institute of Lifelong learning (UIL) examined a range of approaches to Mother Tongue and Bilingual Education in Subsaharan Africa. Extensive Report for ADEA and UNESCO in 2006 (Alidou et al. 2006) concluded, most effective way of guaranteeing African children quality education and of achieving sustainable development was to provide strong models of bilingual education gathered by UNESCO, 2007. Biihmann and Trudell (2008) again points to the benefits of Mother Tongue Based Multilingual Education (MTBMLE). More effective in enhancing learners outcome and academic achievements than their monolingual second language counterparts initiatives depends on community support and empowerment.

As part of a five year plan to investigate education in Africa, Alamin Mazrui challenged scholars to research into the Western and Northern Diaspora on successful practices in education with foreground the systematic use of the mother tongue/local language alongside an international language of wider communication and possibly third language of regional or national significance. Authors from different parts of the world engage with earlier study (Heugh et al, 2007) of Medium of instruction in Ethiopia where bi/multilingual models of Education are implemented through different regional models (from subtractive to very late-exit transition). Ethiopia thus offers an authentic 'laboratory' case study of a well sustained bilingual and multilingual education at an international level.

According to (UNESCO, 2013), MTBMLE requires the use of mother tongue as a medium of instruction on the classroom; however, this does not mean restriction of the use of national language or international languages. Rather, the use of MTBMLE is all about preparing the learner in the proper way to learn the other languages. When the learner learns from the known to the unknown, it builds a strong foundation for a smooth transition into the other national language as well international languages in due course. MTBMLE is not all about using it as a language of instruction, changing of the language of the textbooks and tests. It is about preparing the learner to think critically and in wider social skills that is necessary in a swiftly changing world. Also, it is about helping the learner to direct their own ways of meaningful learning in a challenging and dynamic learning environment (UNESCO, 2013).

A statement of UNICEF (1999) equally acknowledged the importance of using mother tongue instruction: There are several researches that shows that learners learn to read and acquire other academic skills when they are taught with the language they understand better. Their acquisition of other languages is also quicker than those who were initially taught using an unfamiliar language (UNICEF, 1999). The benefits of MTB-MLE include: more children have access to education (Benson, 2004; Smits, Huisman and Kruijff, 2008); improved academic skills (Cummins, 2000); stronger classroom participation (Benson, 2000; Dutcher, 1995); parent participation in children's learning is increased (Cummins, 2000; Dutcher, 1995; D'Emilio, 1995); and improved academic performance of the girl child (Benson, 2005; Hovens, 2002). Mother Tongue Education in Kenyan context is closely related to the definition of Mother Tongue Based Multilingual Education. It is described as a formal or non-formal education in which the children's mother tongue and a second or third language are used in the classroom. In this case, the education system is also inclusive of the diversity of languages within the school context. Further, it is an early exit model which transitions the children from mother tongue medium of instructions in lower primary level into the official language in this case English before they join class four.

Deliberations about which language to use as a MoI and the treatments of children's mother tongue in the education system demonstrate the exercise of power, the creation of marginalization and the unfulfilled promise of children's rights. Stroud (2002) upholds that linguistic marginalization of the persons of the minority language groups and their socio-economic and political marginalization go hand in hand and that one is as a result of the other. Social, political and technical considerations often contradict in policy makers' decision on curriculum, schooling and language medium. Having been met at crossroads on which languages should be used for instruction in schools; Kenya enacted a bill in the famous Constitution of Kenya 2010. In the current constitution of Kenya (2010), the Bill of rights highlights education as a human right for all Kenyans. Thus Kiswahili language assumed status as a national and official language. This development is crucial with regard to the implementation of Mother Tongue Based Multilingual Education (MTB/MLE) program. Furthermore, the Language in Education Policy (LiEP) in Kenya emphasizes on mother tongues and Swahili in rural and urban centers respectively. It promotes the inclusion of pupils' mother tongues (MTs) as languages of instruction (LOI) in the early years of school and as a subject. In more urban areas, they will also be familiar with Swahili since this is used among mixed languages groups while English is a third language learned at school (KIE, 2002). Despite the government of Kenya enacting a policy on Mother Tongue Education, its implementation is still

wanting in many parts of the country especially among diverse and yes minority indigenous communities like in Tana River County thus affecting its sustenance.

1.2 Statement of the problem

Sustainable development is an approach to achieving a balance between social, economic, and ecological needs that has not been meaningfully integrated into all aspects of the use in development. To complete the unfinished Education for All (EFA) goals, Target 4 of the 2030 Agenda for Sustainable Development has been established to realize “inclusive and equitable quality education and stimulate lifelong learning prospects for all.” These Sustainable Development Goals (SDGs) will need to deal with all forms of exclusion and marginalization, disproportions, and inequalities in participation, access, and learning outcomes. However, in many cases, language in education policies misses the mark in taking into account the intrinsic linguistic diversity in schools and society. In most cases, they prevent ethnolinguistic minority learners from accessing quality education. This disparity is evidenced by the fact that an estimated 2.3 billion people, nearly 40 percent of the world’s population, are deprived of access to education in their own language (UNESCO, 2015).

Multilingual education aims at improving learning and developing confidence and self-esteem, which are among the most powerful engines of development. Successful MLE programs involve support from a variety of agencies from the national to the county level, government departments, universities, teachers, colleges and research institutes, international and local organizations, local school, donor agencies, and the minority communities themselves. This form of multi-agency collaboration is an important feature of programs that are sustainable over time in diverse settings (Mahidol University, 2016).

In Kenya, we have seen that some minority languages are being assimilated by the majority group languages. For instance in Tana Delta, the Mwina community is being assimilated by the Pokomo language which is the majority community. It is good to note that without using the indigenous languages to our children, the minority group languages may come to extinct. It is therefore important to use mother tongue as a medium of instruction in schools in order to conserve the languages for the future generation.

In Coast region parts of Kenya, various Multilingual Education programmes were established but the biggest problem is the lack of evidence on the effectiveness and sustainability of such programs.

A study of these factors that influence the sustainability of multilingual education programs should help programs initiators, funders and educationist learn from programs that are currently ongoing and assist them to modify the parts of the program that are not working well. This study provides information to other communities who want to plan their programs. Furthermore, a study of this nature has not been ventured into yet, therefore this study will give evidence of success in existing programs to encourage communities and people in power to support similar endeavors.

1.3 Purpose of the Study

The purpose of this study was to investigate the determinants that influence the sustainability of Mother Tongue Based Multilingual Education programs among communities in Tana River County Kenya.

1.4 Objective of the Study

The study was based on the following objectives:

- i. To establish how the Language in Education Policy influences the sustainability of Mother Tongue Based Multilingual Education programs among communities in Tana River, County Kenya.
- ii. To examine how the availability of material resources influences the sustainability of Mother Tongue Based Multilingual Education programs among communities in Tana River, County Kenya.
- iii. To assess how the availability of human resources influences the sustainability of Mother Tongue Based Multilingual Education programs among communities in Tana River, County Kenya.
- iv. To determine the influence of stakeholders in the program for the sustainability of Mother Tongue Based Multilingual Education programs among communities in Tana River, County Kenya.

1.5 Research Questions

The study was based on the following research questions:

- i. To what extent does the Language in Education Policy influences the sustainability of Mother Tongue Based Multilingual Education programs among communities in Tana River, County Kenya?
- ii. To what extent does the availability of material resources influences the sustainability of Mother Tongue Based Multilingual Education programs among communities in Tana River, County Kenya?
- iii. To what extent does the availability of human resources influences the sustainability of Mother Tongue Based Multilingual Education programs among communities in Tana River, County Kenya?
- iv. To what extent does the stakeholders' involvement influences the sustainability of Mother Tongue Based Multilingual Education programs among communities in Tana River, County Kenya?

1.6 Hypothesis of the Study

This Study was guided by the following alternative and null hypotheses to be tested at the 95% level of significance:

- i. **H_0 :** The Language in Education Policy does not influence the sustainability on Mother Tongue Based Multilingual Education programs.
 H_1 : The Language in Education Policy significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.
- ii. **H_0 :** The availability of material resources does not influence the sustainability on Mother Tongue Based Multilingual Education programs.
 H_1 : The availability of material resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.
- iii. **H_0 :** The availability of human resources does not influence the sustainability on Mother Tongue Based Multilingual Education programs.
 H_1 : The availability of human resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.

iv. *H₀*: The support by the education stakeholders for Mother Tongue Based Multilingual Education programs does not influence the sustainability on mother tongue based multilingual programs.

H₁: The support by the education stakeholders for Mother Tongue Based Multilingual Education programs significantly influences the sustainability on mother tongue based multilingual programs.

1.7 Significance of the Study

There is evidence based on research in numerous countries in the world that effective implementation and sustainability of a well-defined Language in Education Policy and well planned programs through bi-lingual or Mother Tongue Based Multilingual Education is an interpretation to the critical subject of quality learning outcomes (UNESCO, 2010, DFID, 2005). Therefore, the findings of this Study will help in dissemination of information with regard to the implementation and sustainability of Mother Tongue Based Multilingual Education programs for any interested non-governmental organizations in Tana River County or other regions with similar context.

This study of significance to county government, education officials, the primary stakeholders of education, communities, NGOs and to all people who are interested in the knowledge of effective programming for sustainability of MTBMLE programs. This study was significant to help in the conservation of languages for the future generation. Also, the researcher herself expanded her knowledge on the dynamics of program implementation and this informed her on the recommendations she made at the end of the study. Ultimately, this study added to the university library, a resourceful piece of information and findings on the factors that influence the effective sustainability of MTBMLE programs among communities in the Tana River County or similar contexts.

Lastly, this study is very useful to the government of Kenya especially the Ministry of Education because it is an investigation of the degree to which there is unity between policy enactment and policy implementation. This study will therefore contribute to the body of knowledge that is a reference material in relation to the Education for All (EFA) goals of Sustainable Development Goals (SDGs) of Vision 2030.

1.8 Basic Assumption of the Study

The study assumed that Language in Education Policy, availability of study material resources, availability of material resources and support from the stakeholders influences the sustainability of Mother Tongue Based Multilingual Education programs among communities in Tana River County Kenya. From the findings, this assumption was confirmed given that the study found a significance relationship between Language in Education Policy, availability of study material resources, availability of material resources and support from the stakeholders and Mother Tongue Based Multilingual Education programs.

It is also assumed that the responses given are a true reflective of the study objectives that the research intends to achieve.

1.9 Delimitations of the Study

The study was carried out in Tana River County and confined itself in Tana Delta Sub-County. The study focused on the determinants of sustainability of Mother Tongue Based Multilingual Education, which also considered only four factors which include; Language in Education Policy, availability of material resources, availability of human resources and the participation of stakeholders in the programs.

The rationale of choosing Tana River County as the area of study was because Bible Translation and Literacy (BTL) in partnership with the government of Finland had begun assisting the Ministry of Education in implementing the Language in Education Policy. Furthermore, the researcher herself was directly involved in the implementation of that program, therefore, there are high possibilities that she may have received funding to facilitate the study variables that would have been useful to the organization.

1.10 Limitations of the Study

Time was a key limitation to the study, to address this, the researcher sought for leave from work to conduct the study.

Language was also a challenge to some of the respondents; the researcher had to engage some local enumerators who are conversant with their local language to enable effectiveness communication.

1.11 Definition of significant terms used in the Study

Bilingual Education (BE): an education system where the children receive educational instruction in two languages, one of them being the mother tongue of the children in the school.

Language in Education Policy (LiEP): the policy that guides the usage of languages in school either as a medium or language of instruction or as a subject.

Language of Instruction (LoI): the language used by a teacher to teach the curriculum of an education system. This term is used synonymously with the school language and the medium of instruction.

Policy implementation: the adopting of basic policy decision and put into effect.

Medium of Instruction (MoI): It is the language that the teacher uses to teach educational content or the language. Through the use of this language, it exposes the learners to the opportunities to communicate in it and therefore develop their control over it.

Mother Tongue (MT): the first language a child is exposed to or the language of the catchment area of the school.

Multilingual Education (MLE): an education system where the children receive educational instruction in mother tongue and at least one other language that are used as language of teaching in school.

Stakeholders: any person, social group, organization or society at large who can affect or be affected by the actions or outcome of a program.

Sustainability: It is the ability of projects to maintain their services, operations and benefits after their exit.

1.12 Organization of the Study

The study report is organized into five chapters. Chapter one covers introduction of the study; background of the study; statement of the problem; purpose and objectives of the study; research questions; significance of the study; basic assumptions of the study; delimitation of the study; limitation of the study; and the definition of the significant terms used in the study. Chapter two gives a literature review on the different variables that influences the sustainability of Mother

Tongue Based Multilingual Education. These variables include the concept of Mother Tongue Based Multilingual Education, the sustainability of mother tongue, language in education policies and Mother Tongue Based Multilingual Education, material resources and Mother Tongue Based Multilingual Education, human resources and Mother Tongue Based Multilingual Education, stakeholders' involvement and Mother Tongue Based Multilingual Education, theoretical framework, conceptual framework and a summary of the literature review. Chapter three is the research methodology to be used in the study. It covers the research design adopted for the study, target population, sample size and sample procedure, data collection instruments, pilot study, validity and reliability of the instruments, data collection procedures and data analysis techniques, ethical consideration and operation definition of variables. Chapter four is data presentation, analysis and presentation. The data presentation and analysis is also done based on thematic areas derived from the objectives. Finally, chapter five gives summary of all the findings, discussion of the findings, conclusion of the researcher's findings and recommendations. It also gives suggestions for areas of further study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews contributions by other scholars in the field of Mother Tongue Based Multilingual Education. To be able to carry out a thorough study of determinants of the sustainability of multilingual education programs among the communities in Tana River County, it was crucial to provide credible literature review on the subject. In this study, the researcher consulted a number of articles, books and journals that deal with project planning and management, language and education management. The chapter has outlined the independent variables which includes; Language in Education Policy, the availability of human and material resources and the stakeholders influence towards the effective sustainability of Mother Tongue Based Multilingual Education programs among communities in Tana River County Kenya. In brief, the chapter contains the review of literature on the variables under investigation, conceptual and theoretical framework of the study.

2.2 The concept of Mother Tongue Based Multilingual Education

The concept of Mother Tongue Based Multilingual Education is the use of students' native language and two or more additional languages as the Languages of Instruction (LoI) in school, according to (Malone, 2007). In other perspectives, the term is used to refer to Bilingual Education (BE) across numerous language groups; each community using their own indigenous language together with the official school language for instruction. She added that in some countries in South Asia, MTBMLE comprises of four languages; the students' mother tongue or first language, the national language, a regional language, and an international language.

Generally, at the age children start schooling, they have commenced attaining self-confidence in their capacity to communicate in their mother tongue in a meaningful way. The children have developed the basic knowledge and experience through observation and interaction with fellow children as well as adults in the environment they live in. The language, knowledge and experience the child acquired from the community, forms the basic foundation that is required in the classroom for their learning. Malone, (2007) asserts that there are two challenges facing the children from ethno-linguistic communities. First, some do not have access to education at all. Those who have access to education, their knowledge, language and experience are treated as a disadvantage since

they do not speak the official language of the education system. Their language has no place in school instead the learning resources and the LoI is a language that they are not familiar with hence they do not understand. Their learning and their problem solving skills, their experiences on how things work in their own social setting and culture does not serve them since the school setting is that of dominant civilisation (Malone, 2007)

In 1948, the United Nations Universal Declaration on Human Rights declared the right to education without discrimination. The same document in article 2, precisely talked about discrimination on the grounds of language. A half a decade later, UNESCO (1953) cited a report expounded on this by suggesting that Mother Tongue Education (MTE) serves multiple functions: It is obvious that the best medium of instruction for teaching a child is through his/her mother tongue. Psychologically, it helps the learner to understand and express himself, since it is the system of meaningful signs that works in his mind. Sociologically, it is a way of identifying himself with the community that he belongs to. Educationally, he learns and understands faster than being taught using a language that he is not familiar with (UNESCO, 1953).

2.3 Sustainability of Mother Tongue Based Multilingual Education

Sustainability is the ability of projects to maintain their services, operations and benefits after their exit, the beneficiaries should be able to get value of them. The term sustainability integrates social, environmental and economic responsibilities (Mwendwa et al., 2009). Sustainability should create equilibrium between social, economic and environmental aspects of the project life cycle. The main principles of sustainability that can be a guideline in the implementation of sustainability concept in project management include the following; harmonizing social, environmental and economic pillars which should all be incorporated and satisfied throughout the project (OECD, 2008).

The importance of sustaining Mother Tongue Based Multilingual Education programs is crucial since the availability of the material resources will help in cultural and language conservation for future generations. It also helps in language development process. When the teachers are fully knowledgeable about multilingual education they will be able to well implement the Language in Education Policies well hence both the teachers and the pupils will appreciate their own culture and respect other cultures too.

2.3.1 Language in Education Policies and Mother Tongue Based Multilingual Education programs

Policies are set of deliberate system of principles and guidelines that are formulated and enforced by the leading body of an organization or a government so as to direct and set boundaries in its actions in quest of long-term goals. Policies are useful in the implementation management of various systems, applications and networks for national development. Language policy is what a state does officially through the legislation to determine how languages in that government are used, to promote language skills that are necessary to meet national priorities, or to create the rights of persons or groups to utilise and uphold languages. Bonaya, (2012) asserts that, the education language policy is the development through which principles, goals and contents of a language policy can be appreciated in practices of education. In language in education, there exist supportive policies and non-supportive policies that determine the efficiency of programming and implementation.

Several studies have been done on the issue of Education policies and MTBMLE practices (Arther, 1997; Muthwii, 2004; Ejieh, 2004; Gfeller and Robinson, 1998; Rollnick and Rutherford, 1996 and Hornberger, 2001). For example, in Hornberger's (2001) conclusion, she opposed that the one-language one-nation belief of language policy and national identity is not anymore the only existing policy worldwide. Typically, Language in Education Policy emphasizes on issues around pedagogy and language rights of socio-linguistics which has political perceptions. (Powel, 2002; Kioko and Muthwii, 2001; Jones, 2007 and Musau, 2003) state that strong and sustained MTBMLE programs requires supportive policies that uphold, recognize and give legal position to minority ethnic languages and the speakers of those mother tongue languages. They continued that MTBMLE should be part of formal and non-formal education systems.

Mbaatha (2009) asserts that language is an important tool for dissemination of knowledge. The implementation of language education policies in schools is crucial hence children understand better when they are taught with a language they are familiar with. This was done through constant observation study (Dutcher, 1995; Thomas and Collier, 1997; Walter, 2003; Patrinos and Velez, 1996). A key goal of education is to also help the learner to learn L2 after first facilitating with L1 that they already know. First language learning facilitates the learning of second learning. There is convincing evidence provided by Cummins (2000) and others of the principle of interdependence

that the first language helps in learning the second language. This is because a person learns to read and write once and the same principle is used to learn other languages. Therefore the learner has to learn the first language well. In late-exit bilingual model, the second language is gradually introduced in the early grades while the child continues learning in the language they speak at home. According to the World Bank report, (2005), teachers use more effective and active teaching methods on children that understand the language being used. Cognitive development is promoted by supporting mastery of the first language hence needed to make learning of secondary language easy. A good example in Brazil, literacy acquisition had been linked to first language teaching. Several studies has proven that the use of the children's mother tongue has succeeded in raising the level of acquiring the literacy of Portuguese language which is their official language and local language In addition, it has raised the academic performance in various academic subjects (World Bank, 2005).

In general, a solution to the issue of quality learning outcome has been researched in several countries in the world and evidence has shown that implementation of a well-planned Language in Education Policy through bi-lingual or mother tongue based multi-language is the key to quality education (UNESCO, 2010; Save the children-SC-UK, 2007; DFID,2005). This is evidently true especially for minority or small language community. For example, the primary reading program (bilingual education approach) in Zambia improved writing and reading scores on average by 585% and English improving by 360% (SC-UK, 2007; UNESCO, 2005; DFID, 2005). Other research on how LiEP improves quality has been documented in Brazil (Chacoff, 1989), Guatemala (USAID, 2000), Mali (Bender, 2005) and Papua New Guinea among other countries (SC-UK, 2007). This is mainly because children, who learn using mother tongue will first, be more active and engaged in the learning process, secondly, disseminate the new concept quickly, thirdly, will understand the lesson better and develop their self-confidence among other benefits.

The Constitution of Kenya (Republic of Kenya, 2010), gives individuals operating within the jurisdiction of the Kenyan government the right to speak their languages but, by implication, limits the use of such languages to non-official domains, which are the preserve of the mentioned official languages, i.e. Kiswahili and English. However, Kenya's Language in Education Policy (LiEP), as stated in the Sessional Paper No. 14 of 2012 (Republic of Kenya, 2012), spells out arrangements for languages to share space in educational settings as follows: The National and the County Education Boards shall emphasis on the use of the official languages that is Kiswahili and English both in

school and out of school as stipulated in the constitution of Kenya (2010). However, the language of the catchment area or Mother Tongue shall be used as a medium of instruction in Early Childhood Development Education (ECDE) and in the lower primary level children (0-8 years).

It is important to note that paramount studies have been conducted in regard to language in policy in Kenya has focused on three key areas: language rights (Okombo, 2009; Ogechi, 2003); Language, education in minority context (SX-UK, 2007) and Use of indigenous languages in education (Kioko et al, 2001; UNESCO, 1953; Okombo, 2001). In Kenya, there are two major policies that exist and support the Language in Education Policy. First is the Mother Tongue Education policy that was legislated in paper and proclaimed by the government. After independence, the teaching of mother tongue in schools was embedded into education policy through the National Committee on Educational Objectives and Policies report dubbed “Gachathi Commission”. The commission suggested the use of the language of the catchment area as a medium of instruction for the first three years of schooling and the teaching of mother tongue as a subject. Second is the constitution of Kenya which regards the significance of indigenous languages. This policy forms one of the grounds examination on the on the determinants of sustainability of Mother Tongue Based Multilingual Education on Tana River County.

2.3.2 Material resources and Mother Tongue Based Multilingual Education programs.

In program management, material resources are necessary to carry out the program tasks effectively. These resources include facilities, equipment, funding or anything or anything that would be needed for the completion of program activities. The key resources that are needed for the effective programming of MTBMLE include curriculum, materials, teachers and funding, infrastructures in schools and teachers training institutions among others. Education and curriculum are extremely important in human development (Graham, 2009). Ketele (2004) describes education as a process that promotes learning and harmonious development of the child.

In line with Mother Tongue Based Multilingual Education, Malone and Malone, (2012) suggest that for the success of a program, it ought to be flexible so as to meet the needs of the minority communities to build the knowledge and experiences that the learners bring to school from home when they begin schooling. A curriculum should enable the learners develop a solid foundation in multilingual in their mother tongue and a quality bridge to transit to the second language and to

foster continuity of use of both L1 and L2 throughout the primary education. Most importantly, the curriculum should be contextualised to the people's expectations and experiences (Dutcher, 2004). This is supported by a handbook and curricula revised in 2002 published for all mother tongues. The Kenyan curriculum guidelines provides for MTBMLE and MT in the sense that English is learnt throughout primary education and medium of instruction for other subject from class four to eight. Whereas MT is taught as a subject from standard one to three as well as used a medium of instruction from class one to three (KIE, 2002). The Kenya Institute of Curriculum Development (KICD) formerly known as the Kenya Institute of Education (KIE) has the mandate to develop the curriculum. KIE had begun producing books in various languages Kiswahili included since 1967 for primary school use. During the same year, Kiswahili alongside MT was enacted as a LoI for Adult Education (Gorman, 1974). In 1968, the famous Tujifunze Kusoma Kikwetu (TKK) - (Let's learn in our mother tongue) series were introduced in 15 different mother tongues.

Material resources and material development process is another important factor that promotes the reading culture (Edwards, 2008; Alidou et al., 2006; Bloch, 2005). This process is guided by the curriculum. For a curriculum to have a successful MTBMLE programs the teaching and learning materials should be based on accepted and recognised theories of reading acquisition, theories of language acquisition and theories of learning. Besides, the materials should be based on types of development that are essential successful MTBMLE programs. These developments include: First is the language development; this helps the child to be fluent in oral and written in L1 and L2 and gain confidence to communicate and learn in both languages. Second is academic development; children attain education competencies, are successful and confident learners. Thirdly is the socio-cultural development; this is where the learners become proud of their cultural heritage and citizens of their state (Malone, 2012).

It is worth noting that, despite all that, there are challenges faced in the material development process of MTBMLE. According to the World Bank report, (2006) quality and quantity are the major problems facing the production of materials in local languages. This is because publishing of textbooks is expensive such that pupils do not have enough books even in the national language. This is brought about by the fact that it is difficult to make profit on books publishing. In addition to that, the cost of publishing books increases fast as the child transit to the next level because the books become lengthier and more complicated. Chakava, (1992) estimated that nearly 90% of Kenya's book business comes from school textbooks, most of which are in English and Kiswahili while mother tongue has the depressing minority books.

Chiatoh, (2011) asserts that the government has not prioritised the funding of minority language activities thus leaving the responsibility to NGOs which cannot be totally relied upon since their continuity is short termed. On the other hand the community has always had the attitude that matters concerning education or educational programs are the responsibility of the government. To keep the production of the books at a low cost several developing countries produce the MTBMLE materials locally. The local NGO that are interested in retaining local language give minimal training to teachers. These teachers can develop teaching resources often with the help of the local communities who may give free or low cost resources. Chiatoh, (2011). In regard to this, a local NGO in Kenya Bible Translation and Literacy has been facilitating the development of MT materials with the help of the teachers whom they have trained to develop materials following the requirements of the KICD guidelines. They have developed MTE materials among the Pokomo, Giriyama, Digo, Duruma, Orma, Tharaka and Sabaot communities among others. In our study, we will evaluate how material resources will influence the sustainability of mother tongues based multilingual education in Tana River County.

2.3.3 Human resource and Mother Tongue Based Multilingual Education programs.

Human resources are vital factor for the effective implementation of multilingual education (Varghese, 2004). Human resources can be separated into two main components which are; school leadership and administration and teachers. The school leaderships need to acquire important skills and qualities so as to lead the multilingual programs effectively. The head teacher must be the instructional leader who must have knowledge about the curriculum approaches. The school head should also have knowledge of the language teaching methods and be able to deliver the approaches to the multilingual education teachers. The school principals should be visionary leaders who are able to develop multilingual program and models for the schools, should be able to formulate school mission and vision and develop a strategic plan (Shaw, 2003 and Baker, 2006). (Montecel and Cortez, 2002) added that school head teachers should be effective managers and administrators as they motivate, inspire, support and communicate well with their staff. The principals also play a big role in identifying, securing and mobilizing human resources, financial resources and material resources.

The other significant component of human resource is the teachers and their development in the profession. (Haworth et al, 2004) clearly pointed out that literature does not determine the

significance of teachers in the development of children's multilingualism. This was explained further by (Krashen's, 1981) theory which says that the process of natural acquisition of a language helps to gain fluency of that language rather than learning through consciousness. (Lennberg, 1967) asserted that it is very important to engage the pupils in play-based activities so as they can easily develop language in the natural environment (Chomsky, 1965) According to Tabatadze, (2015), the teacher is the only qualified person who can form a natural setting and play-based activities for the learners. Therefore teacher's training and preparation is very important in MTBMLE transformation. Verghese, (2004) argued that the highly debated and politicized nature of bilingual education, works as determining aspect in the creation of the roles of professions of bilingual teachers. Simultaneously, societal forces shaped by local context, influences the specialized roles of bilingual teachers and their individual life and experience (Verghese, 2004).

On a different note, teachers and institutionalization of MTBMLE induction, is very effective to Mother Tongue Education programming (Republic of Kenya, 2004; Banda, 2000; Malone and Malone, 2012; Graham, 2009 and UNESCO/OECD, 2005). Malone and Malone, (2012) affirms that the success of MTBMLE programs primarily depends a lot on the teachers in the classrooms. Therefore, in order for Mother Tongue Education teachers to help their learners succeed in education, the teacher should comprehend and follow precise pedagogical theories, principles and philosophies of learning essential to the execution of MTBMLE (Graham, 2009). There are two options available in such training; pre-service and in-service teacher training. It is unfortunate to note that pre-service teachers training institutions in many countries including Kenya, operate in difficult circumstances that they don't use mother tongue to provide instruction to the students in the formal education system. This has led many teachers to use English as the medium of instruction (Bonaya, 2012). However, in the case of the MTBMLE programs in Tana River County, the teachers are provided with regular in-service trainings by the organisation implementing the programs. The training is not only to the teachers but rather to the head teachers and some education officials who are also trained to become Trainers of Trainers in order to sustain the programs even after the end of the funding.

During the teachers training course, the teachers learn how to deliver the curriculum content in a way that allows the learner who speaks and understand the school language to grow to their expected grade level standards (Graham, 2009). Unfortunately, the assumption in teachers that education program that uses the official language that the learners have the level of language

fluency to learn in the specified official language. This assumption is not correct in many multilingual contexts in that children from non-dominant language perform poorly in formal education systems. Malone, (2010) has suggested including the following mechanisms in pre-service MTBMLE teacher training. These are: MTBMLE student background knowledge and skills; Trainee's language development; Theories and good practices relating to L1 development; Theories and exemplary practices relating to acquisition of L2; Theories and good practices relating to using L1 and L2 as languages of instruction for curriculum and instructional materials among others.

Teachers become conversant with the MTBMLE instructional materials and curriculum through effective training. It builds their confidence in planning classroom activities and using the material resources. Malone (2010) recommends that planning for the training of the MLE teachers starts by identifying the attitude, knowledge and skills that the MTBMLE teachers will require to be effective in the classrooms. Secondly, understanding the challenges faced by the children who do not know the school language when they commence their education. The teachers' trainers can provide good teaching models for the teachers to use in their classroom when they are committed in making the course a "learner centered" (Malone, 2011). Our study will evaluate how teachers training influence the implementation and sustainability of Mother Tongue Based Multilingual Education in Tana River County.

2.3.4 Stakeholders' involvement and Mother Tongue Based Multilingual Education programs.

Sustainability and relevance of programs beyond donor funding could be the greatest challenge in relation to MTBMLE. Many governments have been lukewarm in the involvement in the support or implementation of MLE programs (World Bank, 2005). According to Malone, effective MLE programming requires support from the stakeholders. Stakeholders are all the people who are directly or indirectly involved in the program and have particular interest in the program. For programs to succeed all the stakeholders need to be involved and support them, they need to encourage each other and share vision about the program in the community as well as building goals for the programs (Malone, 2010).

Perna and Swail, (2000) affirm that parents should be involved in these educational programs since they are one of the stakeholders in the education programme. Parents can greatly influence the

political situation for bilingual education, and so without their involvement and readiness, ethnic minority students can also be involved the programme successfully. (Tabatadze, 2008). For quality assurance in MTBMLE programmes parents should be involved in designing and implementation of the programme. This way there is going to be a decrease in social capital as well as be of help to the ethnic minority for success in education and future life (Perna and Titus 2005). The involvement of parents in multilingual education programmes is a promising approach to addressing the problem of non-achievement of ethnic minority students due to lack of the official language proficiency (Tabatadze, 2008).

All discussed challenges in Mother Tongue Education and literacy planning in minority language context indicates that community have no option but accept, take ownership of the programme so as to promote self-sufficiency on the basis of the continuity of the programme. The community should be the main stakeholder in terms of policy management and planning with the inter-community support ownership in development planning and educational promotion in particular. The main aspect of long term running of the project is the community to emphasise that there is necessary for the community to be self-reliant and self-driven in development which has to be encourage in all spheres of development. Trudell, (2010) explains that it is assured that the perspectives of the community elites are strongly influential on education and language policy and practice, from the native community to the boardroom and beyond. When influential people speak out, they can change their community. This proves that top-bottom approach in advocacy for the stakeholders' participation is crucial for successful MTBMLE. However, these stakeholders need to be managed well.

In a World Bank report, (2006) it says that in literacy and Mother Tongue Education promotion, they face the challenge of attitude. The communities' attitude towards programmes in its language tells whether they consider as an external property or owned by the community. In Mexico for example, they believe that the language of success is Spanish and that the local language which is Triquis should not be used by primary school teachers because the children already speak it at home (Juarez and Montesinos, 1988). This shows that the locals have a negative attitude towards their language and think that it is inferior. This makes parents think that education offered in local language is inferior. Parents want their children to acquire knowledge of national language so as not to be cut off from opportunities in international social and economic activities. To minimise on parental resistance on the use of MT as a language of instruction, campaigns should be conducted to

inform the parents on the benefits of the program in areas where the programmes were a success. In Mexico parents from Tarahumara feared that the education offered in Tarahumara Region in the state of Chihuahua was of low standards compared to the one conducted Spanish. After the presenting of a three controlled study on the above, the parental support Tarahumara education increased drastically (Nunez, 1994). Tadadjeu et al. (2001) consider that local ownership is brought about by the empowerment of local response.

2.4 Theoretical Framework

This study is guided by two theories, firstly, the Susan and Dennis Malone's theory of basic components of Bilingual Education/Multilingual Education programs. This theory will guide in the investigation to ascertain the effective implementation and sustainability of the MTBMLE program in Tana River County. Secondly, the Sen's capability approaches theory that will be used to note and recommend possible interventions in schools.

The theories of change based on Sen's capability approach emphasizes that well-being of people is determined by the level of capacities to achieve what they would like to achieve (Sen, 2001). The ability to read and understand is one of the basic capabilities on which other people are built. The more one is able to read and understand, the wider and greater their real choices of life are. Giddens's theory of structuration also suggest that change comes from personal choices to change their pattern of behaviours that comes after reflecting on observed alternative behavioural patterns (Giddens, 1984).

2.5 Conceptual Framework

Independent variables

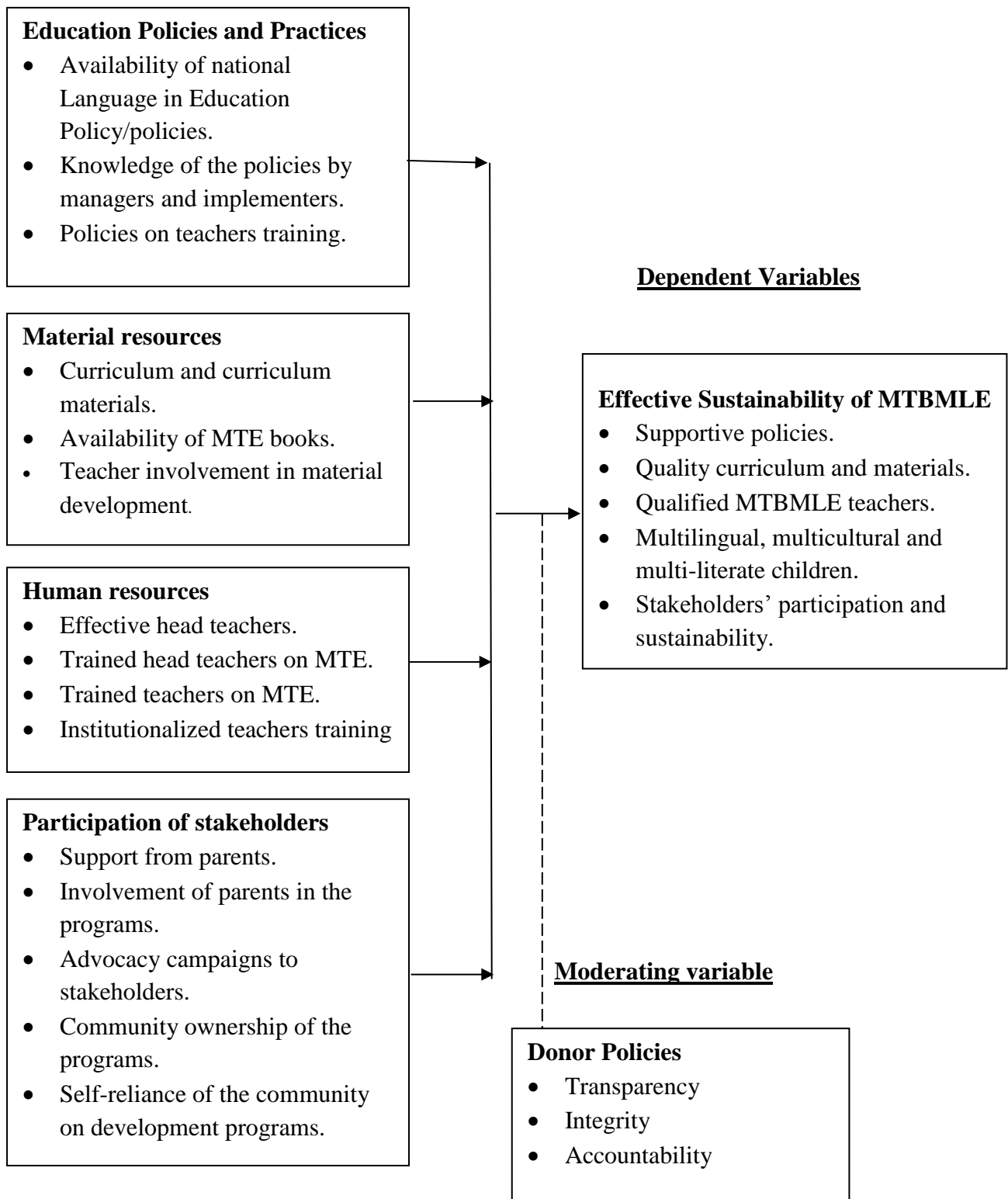


Figure 1: A conceptual framework.

In the conceptual framework illustrated in Figure 1, the determinants of sustainability of Mother Tongue Based Multilingual Education among communities on Tana River County are outlined. The framework assumes that the above mentioned aspects directly influence the effective implementation and sustainability of the Language in Education Policy. However, there are other extraneous factors like politics geographical and unforeseen factors which could be a challenge in implementation hence effective sustainability.

2.6 Summary of Chapter

The enactment of the education language policy in Kenya may have had more of political and ethnic factor than a well understood educational approach. This chapter reviewed scholarly approaches on these policies. Discussion from different scholars evaluated the implementation of these policies on different point of views. The literature review also looked at how the availability of human and material resources helps in the success of MTBMLE that will lead to effective sustainability too. The literature review also examined the critical roles of the stakeholders to foster successful programs especially MTBMLE programs. From the literature review, the author acknowledges and appreciates the efforts made by previous researchers who investigated in the factors influencing sustainable mother tongue based multilingual programs.

CHAPTER THREE

RESEARCH METHODOLOGIES

3.1 Introduction

This study was designed to examine the factors for effective implementation of MTBMLE programs in Tana River County with specific emphasis on lower primary classes one to three. This chapter includes the research methodology that was used to perform the study. The chapter also includes a brief description of the research design, the target population, the sample size, and sampling procedures, data collection instruments, ethical consideration, validity and reliability of the research instruments, methods of data analysis, and presentations.

3.2 Research Design

There have been a number of researches done in the field of MTBMLE (Benson, 2000; Ninyi, 1993; Hoven 2002). Their designs sorted to investigate the benefits of Mother Tongue over foreign languages. The research design that was adopted in this study is descriptive in nature. According to (Mugenda and Mugenda, 1999) in descriptive survey, data is collected from a sample population to answer questions concerning the current status of that population in the study and to determine and report the findings. This research employed multi-method of research designs to triangulate on issues by using different data collection sources to approach a research problem at different angles.

3.3 Target population

The research was conducted in Tana River County. The area is highly dominated by the Bantus (upper Pokomos, lower Pokomos and the Ilwana) and the Cushite (the Wardeis and Ormas). The economic activities of these two ethnic groups historically were extensive farming along the river and fishing for the Bantus and cattle keeping for the Cushites. The target population of this study was 1,444. The population targeted included primary school pupils, teachers, and head-teachers, sub-county education officials and school board of managements and parents. The schools that are actively implementing the MTBMLE are 10 schools which comprise 1,200 pupils, 30 lower primary teachers, 10 head teachers, 194 Board of Management and parents, and 10 sub-county education officials.

3.4 Sampling size and Sampling Procedure

A sample size is a small group acquired from an accessible population while sampling is the process of selecting individuals for a study in a way that they represent the large population from which they are selected from (Mugenda and Mugenda, 1999).

In this study, a simple sample size of 5 schools from the total population size of 10 schools was involved in the study. A table that determined sample size by (Krejcie et al, 1970) was used to sample the 5 schools selected with a confidence level of 95% and a marginal error of 5%. The study used a simple random sampling table to determine the schools to be involved.

Table 3.1: respondents for data collection

Respondents	Population size	Sample size	Percentage
Pupils	1200	106	8.83
Class teachers	30	15	50
Head teachers	10	5	50
Education officials	10	4	40
Board of Management and Parents	194	172	98
Total	N=1444	N=302	

Source: Sub-County Education office (2017)

Table 3.1 shows the sample sizes of categories of different populations studied. This sampling design was adopted based on manageable timeframe and the cost implications of the study (Cochran, 1997 and Mugenda and Mugenda 1999). Non probability purposive sampling was used to determine key informants to be involved in the study.

3.5 Data Collection instruments

Before selecting a research tool, one must consider the purpose and the type of research to be conducted, it could be either quantitative or qualitative or both combined. This research relied on primary data which was collected from respondents through administering of structured questionnaires, interviews and Focused Group Discussion tools. The questionnaires contained close-ended questions and a five point Likert scale. They were administered to the respondents on assumption that the respondents had a basic formal education hence were able to read, interpret and

answer the questions correctly and truthfully. The questionnaires were administered to the head teachers, lower primary teachers and education officials. The interview schedule was administered to randomly select primary class 1, 2 and 3 children while the FGDs guides were administered to the parents and the BOMs.

3.5.1 Pilot Study

According to Mugenda and Mugenda (2003) pilot testing is the process of subjecting the research instruments into provisional testing so as to determine whether they are reliable in giving the intended data in a given study area. Pilot study of the instrument was undertaken one week to the actual study so as to be able to revise and refine the instruments. The pilot study was therefore conducted in one school within the area which was not among the target population. 5 teachers were identified and the questionnaires were piloted, 10 pupils were also interviewed. These were the technicalities of the instruments; some of the statements in the questionnaires were ambiguous and the researcher revised them. On the interview schedule for the children, the researcher also found out that the questions were too many and some were very technical for the pupils to answer, therefore the questions were revised to suit the level of the hence to ensure reliability of the tools.

3.5.2 Validity of the instruments

Validity is the extent to which a measurement is meaningful and corresponds accurately to what it claims to measure. It is crucial for a test to be valid in order for the results to be applied accurately and be interpreted. (Mugenda and Mugenda, 2003) asserts that in order to achieve the degree of validity, the data collection instruments to be used, are to be formulated in such a way that it would provide answers to the objectives of the study stated. The questionnaires and interview schedule for this study were designed, developed and subjected to thorough appraisal and discussion with classmates, supervisors and other experts both in research and in the field of research management. Their propositions were used to make necessary corrections and implementations to ensure that the items of the tools elicit the desired and valid responses.

3.5.3 Reliability of the instruments

Reliability is the extent to which research instrument gives consistence results after repeated trials (Mugenda and Mugenda, 1999). The researcher implemented survey administration procedures for supporting answers received in response to questionnaires, and data corroboration and correction procedures, especially for the questionnaires and survey interviews. The research tools ensured: that

the authenticity of the source, the credibility, representativeness and meaning. It may also form part of a triangulation process in which the researcher uses intersecting portions of different schemes (Denzin, 2000). Additional measures that were taken to guarantee reliability was pre-test the data collection instruments to ensure that the questions were understood in the same way by all the respondents. Furthermore, Spearman's Ranks correlation method was used to generate a coefficient. The tool was determined to be reliable since the coefficient of 0.702 was achieved.

3.6 Data Collection Procedure

The researcher sought for permission from the University of Nairobi to conduct data collection in the community. She also sought permission from the Sub-county Director of Education before proceeding to the schools. The researcher booked appointments with the respondents prior to the visits in order to meet 100% of the target population. The questionnaires were administered to the teachers, head-teachers, and the sub-county education officials. The survey interviews were administered to a sample of lower primary pupils from the schools. The process of conducting the Focused Group Discussion was done in the five schools where the BOMs and parents participated.

3.7 Data Analysis

Data with completed questionnaires were analyzed, and those which incomplete were treated as no response. Data from the questionnaires was coded, tabulated and entered in Statistical Package for Social Science (SPSS). This is computer software for windows program to enable analysis. The questionnaires in this study were obtained and analyzed by percentages and frequencies of the response to key elements in the instruments. The information was then presented in forms of tables. Chi-square was used to test hypothesis.

3.8 Ethical Considerations

The researcher maintained ethics to protect the participants' dignity. She sought for their consent before administering the research tools and assured them of their confidentiality during the whole process. The researcher also treated the respondents with respect and ensured that the process of drawing information did not disrupt their social statuses.

3.9 Operational Definition of Variables

Table 3.2: Operational definition of variables

Independent Variables	Indicator	Measure	Data collection method	Scale	Analysis
Language in Education policies	supportive national and local Language in Education Policy for MTBMLE	-Availability of national LiEP. -Knowledge of the policies by implementers. -Supportive MTBMLE internal policy in schools	Questionnaire Interview Focused group discussion	Nominal Ordinal	Descriptive: Measure of central tendency inferential: Chi-square
Material resources	Availability of curricula and resources for MTBMLE	-Availability of curriculum guide from KICD. -Availability of resources in schools -Funds allocated to MTBMLE.	Questionnaire Interview Focused group discussion	Nominal Ordinal	Descriptive: Measure of central tendency inferential: Chi-square
Human resources	Availability of teachers for MTBMLE	-Number of trained teachers in MT. -Training schedule for teacher.	Questionnaire Interview Focused group discussion	Nominal Ordinal	Descriptive: Measure of central tendency inferential: Chi-square
Stakeholders' participation	Attitude of stakeholders towards MTBMLE	-Participation in children's learning -Community involvement. -Gender representation	Questionnaire Interview Focused group discussion	Nominal Ordinal	Descriptive: Measure of central tendency inferential: Chi-square
Dependent Variable					
Effective sustainability of MTBMLE	Multilingual, multicultural and multi-literate children	-Choice of language(s) to read L1, L2 or L3 -Good reading scores	Questionnaire Interview Focused group discussion	Nominal Ordinal	Descriptive: Measure of central tendency inferential: Chi-square

CHAPTER FOUR

DATA ANALYSIS PRESENTATION AND INTERPRETATION

4.1 Introduction

The study focused on the determinants of sustainability of Mother Tongue Based Multilingual Education programs in Tana River County Kenya. The data was collected through questionnaires, interviews and Focused Group Discussions that were guided by the objectives and the operational variables found in chapter one and three respectively.

4.2 Questionnaire Return Rate

Questionnaires that were distributed to the different categories of respondents that included teachers, head teachers and education officials were all filled and no questionnaires were returned. Nevertheless, the researcher was not able to reach the expected number of the parents and the Board of Management for the FGDs; however she managed to reach 58% of the participants. The interviews questions were administered to a group of class one, two and three pupils. The findings of the response rate are represented in table 4.1 below.

4.1: Summary of the response rate of the respondents

Target group	Population size	Sample size	Response	Percentage
Pupils	1200	106	106	100
Teachers	30	15	15	100
Head teachers	10	5	5	100
Education officials	10	4	4	100
Board of Management and Parents	194	172	100	58
Total	N=1444	N=302	N=230	

From the findings in the table 4.1, the respondents' rate was 76%, according to Mugenda and Mugenda, (2003), any response that is above 50% is considered researchable and acceptable hence this study is valid.

4.3 Demographic characteristics of the respondents

The establishment of demographic data of respondents was guided by the following item; age brackets, gender, marital status and education level in Tana River County, Kenya. The study wanted to capture the average education level of respondents, age as well as gender.

4.3.1 Demographic characteristics of Teachers/Implementers

The table 4.2 captured the demographic characteristics of the teachers/implementers. This was because teachers play a critical role in the implementation of Mother Tongue Based Multilingual Education, understanding their demographic information would assist in understanding the type of teachers and their influence.

Table 4.2: Socio-demographic characteristics of Respondents of teachers/implementers based on Age and education level

Socio-demographic information	Category	Frequency	Percentage
Age of respondents	21-30	2	8.33
	31-40	4	16.67
	41-50	9	37.5
	51-60	9	37.5
Level of education	Doctorate	0	0
	Masters	2	8.33
	Bachelors	3	12.5
	Diploma	6	25
	Teacher certificate	13	54.17
Gender of respondents	Male	7	29.17
	Female	17	70.83

Table 4.2 shows that the most of the respondents were above the age of 40 as per the results. The study also revealed that the majority of the respondents had gone through Teacher Certificate with a numerical of 13 representing 54.17% of the respondents. The majority of the respondents were female which represents 70.83%

Table 4.3: Socio-demographic characteristics of Respondents of teachers/implementers based on marital status

Socio-demographic information	Category	Frequency	Percentage
Marital status	Single	2	8.33
	Divorced	0	0
	Widowed	3	12.5
	Separated	3	12.5
	Married	16	66.67

Table 4.3 indicates that majority of the respondents were married which is represented at 66.67%

4.3.2 Demographic characteristics of Pupils/Beneficiaries

The establishment of demographic data of beneficiaries/pupils was guided by the following items; age bracket and gender of the pupils' respondents. This was based on the assumption that MTBMLE aids in the increased performance of education. The study wanted to capture the average age group level of respondents as well as their gender as presented in table 4.4.

Table 4.4 Socio-demographic characteristics of Pupils' Respondents based on Age, Sex and class level of respondents.

Socio-demographic information	Category	Frequency	Percentage
Age of respondents	Below 7	26	24.53
	8	21	19.81
	9	31	29.25
	10	13	12.26
	Above 10	15	14.15
Sex of respondents	Male	51	48.11
	Female	55	51.89
Primary level	Class 1	36	33.96
	Class 2	37	34.91
	Class 3	33	31.13

According to table 4.4 the dominant age group was 9 representing 29.25% of respondents in this category. The study unveiled that majority of the respondents were female 51.89% with a numerical

value of 55. Table also indicates that majority of the pupils' respondents were class 1 and class 2 which represents 33.96% and 34.91% and numerical value of 36 and 37 respectively.

Table 4.5 Socio-demographic characteristics of Pupils' Respondents based on class repetition.

Socio-demographic information	Category	Frequency	Percentage
Repetition	Yes	10	9.43
	No	96	90.56

According to table 4.5, it indicated that majority of the respondents 90.56% have not repeated the same class with a numerical of 96.

4.3.3 Demographic characteristics Board of Management/ Parents

The table 4.6 captured the demographic characteristics of the Board of Management/Parents. This was because parents and the BOMs play a critical role in the implementation of Mother Tongue Based Multilingual Education, understanding their demographic information would assist in understanding the type of parents and their influence in the MTE programs.

Table 4.6: Socio-demographic characteristics of Respondents of Board of Management/Parents

Socio-demographic information	Category	Frequency	Percentage
Sex of respondents	Female	65	65
	Male	35	35

According to table 4.6, it is indicated that majority of the participants were female at 65%.

4.4 Language in Education Policy significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.

The first objective of the study was to determine how the Language in Education Policy influences the sustainability of Mother Tongue Based Multilingual Education programs. It was hypothesized that:

H₁: There is significant relationship between Language in Education Policy and sustainability of Mother Tongue Based Multilingual Education programs.

H₀: There is no significant relationship between Language in Education Policy and sustainability of Mother Tongue Based Multilingual Education programs.

Table 4.7: Likert scale rating of the Language in Education Policy significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.

Statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
The Kenyan Language in Education Policy asserts that language of the catchment area should be used as a medium of instruction from pre-primary to primary 1-3.	14	7	1	1	1
A well planned Language in Education Policy through Mother Tongue Based Multilingual Education (MTB-MLE) is the key to quality education.	13	9	1	1	0
Language is an important tool for dissemination of information.	17	7	0	0	0
Teachers use more effective and active teaching methods on children that understand the language being used.	14	7	3	0	0
The learning of first language (L1) facilitates the learning of a second language (L2).	15	8	1	0	0
Funding for continuous policy research on language in education leads to sustainability of MTE programs	13	9	2	0	0

Findings from 4.6 indicate that the majority of the respondents strongly agree with the statements that, there is collaboration between the Language in Education Policy and mother tongue multilingual education. That Language in Education Policy significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.

Table 4.8: Chi-square test in the results on the Language in Education Policy significantly influences the sustainability on Mother Tongue Based Multilingual Education programs in Tana River County.

O/N	O	E	O-E	(O-E) ²	(O-E) ² /E
1	14	14.3	-0.3	0.09	0.006293706
2	7	7.83	-0.83	0.6889	0.08798212
3	1	1.33	-0.33	0.1089	0.081879699
4	1	0.33	0.67	0.4489	1.36030303
5	1	0.17	0.83	0.6889	4.052352941
6	13	14.3	-1.3	1.69	0.118181818
7	9	7.83	1.17	1.3689	0.174827586
8	1	1.33	-0.33	0.1089	0.081879699
9	1	0.33	0.67	0.4489	1.36030303
10	0	0.17	-0.17	0.0289	0.17
11	17	14.3	2.7	7.29	0.50979021
12	7	7.83	-0.83	0.6889	0.08798212
13	0	1.33	-1.33	1.7689	1.33
14	0	0.33	-0.33	0.1089	0.33
15	0	0.17	-0.17	0.0289	0.17
16	14	14.3	-0.3	0.09	0.006293706
17	7	7.83	-0.83	0.6889	0.08798212
18	3	1.33	1.67	2.7889	2.096917293
19	0	0.33	-0.33	0.1089	0.33
20	0	0.17	-0.17	0.0289	0.17
21	15	14.3	0.7	0.49	0.034265734
22	8	7.83	0.17	0.0289	0.003690932
23	1	1.33	-0.33	0.1089	0.081879699
24	0	0.33	-0.33	0.1089	0.33
25	0	0.17	-0.17	0.0289	0.17
26	13	14.3	-1.3	1.69	0.118181818
27	9	7.83	1.17	1.3689	0.174827586
28	2	1.33	0.67	0.4489	0.337518797

29	0	0.33	-0.33	0.1089	0.33
30	0	0.17	-0.17	0.0289	0.17
Total					14.36333365

Degree of freedom at 0.05

Level of significant is 20 = 31.410

Chi-square results = 14.36333365

14.36333365 is less than critical value 31.410. Therefore we reject the null hypothesis and accept the alternative hypothesis that Language in Education Policy significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.

Table 4.9: Frequency table of the Language in Education Policy significantly influences the sustainability on Mother Tongue Based Multilingual Education programs in Tana River County.

Variables	Description	Frequency	Percentage
The Kenyan Language in Education Policy asserts that language of the catchment area should be used as a medium of instruction from pre-primary to primary 1-3.	Strongly Agree	14	58.33
	Agree	7	29.17
	Undecided	1	4.17
	Disagree	1	4.17
	Strongly Disagree	1	4.17
	Total	N=24	100
A well planned Language in Education Policy through Mother Tongue Based Multilingual Education (MTB-MLE) is the key to quality education.	Strongly Agree	13	54.17
	Agree	9	37.5
	Undecided	1	4.17
	Disagree	1	4.17
	Strongly Disagree	0	0
	Total	N=24	100
Language is an important tool for dissemination of information.	Strongly Agree	17	70.83
	Agree	7	29.17
	Undecided	0	0
	Disagree	0	0

	Strongly Disagree	0	0
	Total	N=24	100
Teachers use more effective and active teaching methods on children that understand the language being used.	Strongly Agree	14	58.33
	Agree	7	29.17
	Undecided	3	12.5
	Disagree	0	0
	Strongly Disagree	0	0
	Total	N=24	100
The learning of first language (L1) facilitates the learning of a second language (L2).	Strongly Agree	15	62.5
	Agree	8	33.33
	Undecided	1	4.17
	Disagree	0	0
	Strongly Disagree	0	0
	Total	N=24	100
Funding for continuous policy research on language in education leads to sustainability of MTE programs	Strongly Agree	13	54.17
	Agree	9	37.5
	Undecided	2	8.33
	Disagree	0	0
	Strongly Disagree	0	0
	Total	N=24	100

Findings from table 4.9 indicates that the statement which states that the Kenyan Language in Education Policy asserts that language of the catchment area should be used as a medium of instruction from pre-primary to primary 1-3. The majorities of the respondents strongly agreed with the statement and constitutes 58.33%. Very few of the respondents disagreed with the statements and constitute 4.17%. The statement which states a well-planned Language in Education Policy through Mother Tongue Based Multilingual Education is the key to quality education; the majorities of the respondents strongly agreed with it and constitute 54.17%. Very few of the respondents disagreed and constitute 4.17%. Language is an important tool for dissemination of information statement attracted 70.83% who strongly agreed while 29.17% agreed.

The statement that read teachers use more effective and active teaching methods on children that understand the language being used 58.33% strongly agreed with the statement while a few were undecided and constitute 12.5%. The learning of first language (L1) facilitates the learning of a second language (L2) is another statement that 62.5% strongly agreed to it while only 4.17% were

undecided. The statement that reads funding for continuous policy research on language in education leads to sustainability of MTE programs 54.17% strongly agreed with the statement while 8.33% of the respondents were undecided.

From the focused group discussions, the parents admitted that they are aware about the language in education policies since they have been attending advocacy meetings about MTBMLE. They are also aware that their children are learning mother tongue in schools.

Table 4.10: Pupils' response on whether they learn Mother Tongue in school?

Information	Category	Frequency	Percentage
Do you learn Mother Tongue in school?	Yes	106	100
	No	0	0

Table 4.11: Pupils' response preference on method of instruction

Information	Category	Frequency	Percentage	Cumulative percentage
Which language do you prefer to use in school?	Mother tongue	40	37.74	37.74
	Swahili	34	32.07	69.81
	English	32	30.19	100

The findings show that 100% of the pupils learn Mother Tongue in school. The research also indicated that 37.74% of the children preferred to learn in Mother Tongue, 32.07% preferred to learn in Swahili and 30.19% preferred to be taught in English.

4.5 Availability of material resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.

The second objective of the study was to examine how the availability of material resources influences the sustainability of Mother Tongue Based Multilingual Education programs. The researcher sought to get a general view of the availability of material resources to support MTBMLE. It was hypothesized that:

H₁: There is significant relationship between availability of material resources and sustainability of Mother Tongue Based Multilingual Education programs.

H₀: There is no significant relationship between availability of material resources and sustainability of Mother Tongue Based Multilingual Education programs.

Table 4.12: Likert scale rating of the availability of material resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.

Statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
A curriculum should enable the learners develop a strong foundation in MT and a quality bridge to transit to the second language(s)	16	6	2	0	0
The curriculum should be contextualised to the learners' environment, expectations and experiences.	14	8	1	1	0
Availability of MT teaching and learning resources is an important factor that promotes the reading culture.	19	4	1	0	0
Availability of resource materials promotes sustainable and quality Mother Tongue Education.	19	3	2	0	0
Teachers should be involved in the development of teaching and learning resources.	20	1	2	1	0
Government allocation of funding for provision for MTE resources facilitates the sustainability of MTE programs	14	6	2	2	0

Findings from 4.12 indicate that the majority of the respondents strongly agree with the statements that the availability of material resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.

Table 4.13: Chi-square test in the results on the availability of material resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs in Tana River County

O/N	O	E	O-E	(O-E) ²	(O-E) ² /E
1	16	17	-1	1	0.058823529
2	6	4.67	1.33	1.7689	0.378779443
3	2	1.67	0.33	0.1089	0.065209581
4	0	0.67	-0.67	0.4489	0.67
5	0	0	0	0	0
6	14	17	-3	9	0.529411765
7	8	4.67	3.33	11.0889	2.374496788
8	1	1.67	-0.67	0.4489	0.268802395
9	1	0.67	0.33	0.1089	0.162537313
10	0	0	0	0	0
11	19	17	2	4	0.235294118
12	4	4.67	-0.67	0.4489	0.096124197
13	1	1.67	-0.67	0.4489	0.268802395
14	0	0.67	-0.67	0.4489	0.67
15	0	0	0	0	0
16	19	17	2	4	0.235294118
17	3	4.67	-1.67	2.7889	0.597194861
18	2	1.67	0.33	0.1089	0.065209581
19	0	0.67	-0.67	0.4489	0.67
20	0	0	0	0	0
21	20	17	3	9	0.529411765
22	1	4.67	-3.67	13.4689	2.884132762
23	2	1.67	0.33	0.1089	0.065209581
24	1	0.67	0.33	0.1089	0.162537313

25	0	0	0	0	0
26	14	17	-3	9	0.529411765
27	6	4.67	1.33	1.7689	0.378779443
28	2	1.67	0.33	0.1089	0.065209581
29	2	0.67	1.33	1.7689	2.640149254
30	0	0	0	0	0
Total					14.60082155

Degree of freedom at 0.05

Level of significant is 20 = 31.410

Chi-square results = 14.60082155

14.36333365 is less than critical value 31.410. Therefore we reject the null hypothesis and accept the alternative hypothesis that availability of resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.

Table 4.14: Frequency table of the availability of material resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.

Variables	Description	Frequency	Percentage
A curriculum should enable the learners develop a strong foundation in MT and a quality bridge to transit to the second language(s)	Strongly Agree	16	66.67
	Agree	6	25
	Undecided	2	8.33
	Disagree	0	0
	Strongly Disagree	0	0
	Total	N=24	100
The curriculum should be contextualised to the learners' environment, expectations and experiences.	Strongly Agree	14	58.33
	Agree	8	33.33
	Undecided	1	4.17
	Disagree	1	4.17
	Strongly Disagree	0	0
	Total	N=24	100
Availability of MT teaching and learning	Strongly Agree	19	79.17

resources is an important factor that promotes the reading culture.	Agree		
	Agree	4	16.67
	Undecided	1	4.17
	Disagree	0	0
	Strongly Disagree	0	0
	Total	N=24	100
Availability of resource materials promotes sustainable and quality Mother Tongue Education.	Strongly Agree	19	79.17
	Agree		
	Agree	3	12.5
	Undecided	2	8.33
	Disagree	0	0
	Strongly Disagree	0	0
Teachers should be involved in the development of teaching and learning resources.	Total	N=24	100
	Strongly Agree	20	83.33
	Agree		
	Agree	1	4.17
	Undecided	2	8.33
	Disagree	1	4.17
Government allocation of funding for provision for MTE resources facilitates the sustainability of MTE programs	Strongly Disagree	0	0
	Total	N=24	100
	Strongly Agree	14	58.33
	Agree		
	Agree	6	25
	Undecided	2	8.33
	Disagree	2	8.33
	Strongly Disagree	0	0
	Disagree		
	Total	N=24	100

The findings from table 4.14 indicates that the statement a curriculum should enable the learners develop a strong foundation in MT and a quality bridge to transit to the second language(s), attracted 66.67% of the respondents who strongly agreed to it while 8.33% were undecided. The statement the curriculum should be contextualised to the learners' environment, expectations and experiences, majority of the respondents 58.22% agreed with the statement while very few respondents that constitute 4.17% disagreed. The statement that reads availability of MT teaching and learning resources is an important factor that promotes the reading culture attracted 79.17% that strongly agreed with it while only 4.17% were undecided.

Availability of resource materials promotes sustainable and quality Mother Tongue Education is a statement that 79.17% strongly agreed with it while 8.33% were undecided. The statement that read

teachers should be involved in the development of teaching and learning resources attracted 83.33% who strongly agreed with the statement, while only 4.17% disagreed. The final statement that read government allocation of funding for provision for MTE resources facilitates the sustainability of MTE programs attracted the majority of the participants who strongly agreed with it and constitute 58.33% while very few respondents disagreed with the statement and constitute 8.33%.

Table 4.15: Pupils' response on availability of MTE resources in schools

Information	Category	Frequency	Percentage
Are there MTE books in your school?	Yes	106	100
	No	0	0
Do you read the MTE books?	Yes	106	100
	No	0	0

Table 4.16: Pupils' response on why they read MTE books

Information	Category	Frequency	Percentage	Cumulative percentage
Why do you read the MTE books?	I understand the content	52	49.05	49.05
	I like the stories and illustrations	40	37.74	86.79
	Did not respond	14	13.21	100

In table 4.15 when the children were asked whether there are MTE books in their schools, 100% of them indicated that they have the books. 100% of the pupils also indicated that they read they read the books when they were asked. When the children were asked why they read the MTE books, table 4.16 indicated 49.05% of the pupils' understand the content more, 37.74% indicated that they like the stories and the illustration. This implies that the availability materials in schools have positive response in the learners since they are able to use them.

From the focused group discussion, it was confirmed that there are MTE books available in the schools. One of parents Habuya* a class one parent say "My daughter has been telling me about the Pokomo language books in school, that she enjoys reading them and they have attractive illustrations and good stories". The parents also commented that the books are really important in

schools because the learners are able to read and understand, however, they also said that the English books should also be used for the learners to be able to learn the language.

4.6 Availability of human resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.

The third objective of the study was to examine how the availability of material resources influences the sustainability of Mother Tongue Based Multilingual Education programs. The researcher sought to get a general view of the availability of material resources to support MTBMLE. It was hypothesized that:

H₁: There is significant relationship between availability of human resources and sustainability of Mother Tongue Based Multilingual Education programs.

H₀: There is no significant relationship between availability of human resources and sustainability of Mother Tongue Based Multilingual Education programs.

Table 4.17: Likert scale rating of the availability of human resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.

Statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Head teachers should have knowledge of MT teaching methodologies and be able to deliver the approaches to the MTE teachers.	13	9	2	0	0
School heads should be effective managers and administrators so as to motivate, inspire, support and communicate well with their staff.	18	3	1	2	0
Teacher’s training and preparation is very important in MTE transformation.	17	4	3	0	0
During the teachers training course, the teacher should be trained on how to deliver the curriculum content in a way that allows the learner who speaks and	18	4	1	1	0

understand MT to grow to their expected grade level standards					
Teachers become conversant with the MTE instructional materials and curriculum through effective training.	16	6	2	0	0
Recruitment and deployment of sufficient of teachers influence the sustainability of MTE in schools.	15	7	2	0	0

Findings from 4.17 indicate that the majority of the respondents strongly agree with the statements that the availability of human resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.

Table 4.18: Chi-square test in the results on the availability of human resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs in Tana River County.

O/N	O	E	O-E	(O-E) ²	(O-E) ² /E
1	13	16.17	-3.17	10.0489	0.621453309
2	9	5.5	3.5	12.25	2.227272727
3	2	1.83	0.17	0.0289	0.01579235
4	0	0.5	-0.5	0.25	0.5
5	0	0	0	0	0
6	18	16.17	1.83	3.3489	0.207105751
7	3	5.5	-2.5	6.25	1.136363636
8	1	1.83	-0.83	0.6889	0.376448087
9	2	0.5	1.5	2.25	4.5
10	0	0	0	0	0
11	17	16.17	0.83	0.6889	0.042603587
12	4	5.5	-1.5	2.25	0.409090909
13	3	1.83	1.17	1.3689	0.748032787
14	0	0.5	-0.5	0.25	0.5
15	0	0	0	0	0

16	18	16.17	1.83	3.3489	0.207105751
17	4	5.5	-1.5	2.25	0.409090909
18	1	1.83	-0.83	0.6889	0.376448087
19	1	0.5	0.5	0.25	0.5
20	0	0	0	0	0
21	16	16.17	-0.17	0.0289	0.00178726
22	6	5.5	0.5	0.25	0.045454545
23	2	1.83	0.17	0.0289	0.01579235
24	0	0.5	-0.5	0.25	0.5
25	0	0	0	0	0
26	15	16.17	-1.17	1.3689	0.084656772
27	7	5.5	1.5	2.25	0.409090909
28	2	1.83	0.17	0.0289	0.01579235
29	0	0.5	-0.5	0.25	0.5
30	0	0	0	0	0
Total					14.34938208

Degree of freedom at 0.05

Level of significant is $20 = 31.410$

Chi-square results = 14.34938208

14.34938208 is less than critical value 31.410. Therefore we reject the null hypothesis and accept the alternative hypothesis that availability of human significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.

Table 4.19: Frequency table on the availability of human resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs in Tana River County.

Variables	Description	Frequency	Percentage
Head teachers should have knowledge of MT teaching methodologies and be able to deliver the approaches to the MTE teachers.	Strongly Agree	13	54.17
	Agree	9	37.5
	Undecided	2	8.33
	Disagree	0	0
	Strongly Disagree	0	0
	Total	N=24	100
School heads should be effective managers and administrators so as to motivate, inspire, support and communicate well with their staff.	Strongly Agree	18	75
	Agree	3	12.5
	Undecided	1	4.17
	Disagree	2	8.33
	Strongly Disagree	0	0
	Total	N=24	100
Teacher's training and preparation is very important in MTE transformation.	Strongly Agree	17	70.83
	Agree	4	16.67
	Undecided	3	12.5
	Disagree	0	0
	Strongly Disagree	0	0
	Total	N=24	100
During the teachers training course, the teacher should be trained on how to deliver the curriculum content in a way that allows the learner who speaks and understand MT to grow to their expected grade level standards	Strongly Agree	18	75
	Agree	4	16.67
	Undecided	1	4.17
	Disagree	1	4.17
	Strongly Disagree	0	0
	Total	N=24	100
Teachers become conversant with the MTE instructional materials and curriculum through effective training.	Strongly Agree	16	66.67
	Agree	6	25
	Undecided	2	8.33
	Disagree	0	0

	Strongly Disagree	0	0
	Total	N=24	100
Recruitment and deployment of sufficient of teachers influence the sustainability of MTE in schools.	Strongly Agree	15	62.5
	Agree	7	29.17
	Undecided	2	8.33
	Disagree	0	0
	Strongly Disagree	0	0
	Total	N=24	100

Findings from table 4.19 indicate that the statement which says head teachers should have knowledge of MT teaching methodologies and be able to deliver the approaches to the MTE teachers, majority of the respondents strongly agreed with the statement and constitute 54.17% and only 8.33% were undecided. The statement which states school heads should be effective managers and administrators so as to motivate, inspire, support and communicate well with their staff, majority of the respondents strongly agreed with the statement and constitute 75% while 8.33% of the respondents disagreed. 70.83% of the respondents agreed with the statement that reads teacher's training and preparation is very important in MTE transformation, while 12.5% were undecided.

The statement that says during the teachers training course, the teacher should be trained on how to deliver the curriculum content in a way that allows the learner who speaks and understand MT to grow to their expected grade level standards attracted 75% of the respondents who strongly agreed to the statement while only 4.17% disagreed. The statement that states teachers becomes conversant with the MTE instructional materials and curriculum through effective training, 66.67% agreed while 8.33% were undecided with the statement. Finally, the statement that says recruitment and deployment of sufficient of teachers influence the sustainability of MTE in schools attracted 62.5% who strongly agreed with the statement while only 8.33% were undecided.

Moreover, the parents agreed that it is important for the teacher to have knowledge on L1 so as they can effectively communicate with the children. They also suggested that the head teacher should ensure that all the class teachers of the lower classes are conversant with the language of the catchment area.

Table 4.20: Pupils' response on whether they learn Mother Tongue in school?

Information	Category	Frequency	Percentage
Do you learn Mother Tongue in school?	Yes	106	100
	No	0	0

In table 4.18, when the pupils were asked whether they learn Mother tongue in schools, the study indicated that 100% of the respondent learn mother tongue in schools. This shows that there is availability of teachers to teach MTBMLE in schools in Tana River County.

4.7 Involvement of stakeholders significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.

The fourth objective of the study was to determine how the involvement of stakeholders influences the sustainability of Mother Tongue Based Multilingual Education programs. The researcher sought to get a general view of the availability of material resources to support MTBMLE. It was hypothesized that:

H₁: There is significant relationship between involvement of stakeholders and sustainability of Mother Tongue Based Multilingual Education programs.

H₀: There is no significant relationship between involvement of stakeholders and sustainability of Mother Tongue Based Multilingual Education programs.

Table 4.21: Likert scale rating of the involvement of stakeholders significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.

Statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Effective MTE programming requires support from the stakeholders.	12	10	1	1	0
Parents should be involved in MTE programmes since they are one of the stakeholders in the education programme.	17	4	2	1	0
Campaigns should be conducted to inform the parents on the importance of	15	8	1	0	0

the MTE programs					
Community should accept and take ownership of educational programs so as to promote self-sufficiency on the basis of the continuity of the programs	19	4	1	0	0
Support of other partners e.g. NGOs, CSOs assists in the sustainability of MTE programs	17	6	1	0	0

Findings from 4.21 indicate that the majority of the respondents strongly agree with the statements involvement of stakeholders significantly influences the sustainability on Mother Tongue Based Multilingual Education programs.

Table 4.22: Chi-square test in the results on the involvement of stakeholders significantly influences the sustainability on Mother Tongue Based Multilingual Education programs in Tana River County

O/N	O	E	O-E	(O-E) ²	(O-E) ² /E
1	12	16	-4	16	1
2	10	6.4	3.6	12.96	2.025
3	1	1.2	-0.2	0.04	0.033333333
4	1	0.4	0.6	0.36	0.9
5	0	0	0	0	0
6	17	16	1	1	0.0625
7	4	6.4	-2.4	5.76	0.9
8	2	1.2	0.8	0.64	0.533333333
9	1	0.4	0.6	0.36	0.9
10	0	0	0	0	0
11	15	16	-1	1	0.0625
12	8	6.4	1.6	2.56	0.4
13	1	1.2	-0.2	0.04	0.033333333
14	0	0.4	-0.4	0.16	0.4
15	0	0	0	0	0
16	19	16	3	9	0.5625

17	4	6.4	-2.4	5.76	0.9
18	1	1.2	-0.2	0.04	0.033333333
19	0	0.4	-0.4	0.16	0.4
20	0	0	0	0	0
21	17	16	1	1	0.0625
22	6	6.4	-0.4	0.16	0.025
23	1	1.2	-0.2	0.04	0.033333333
24	0	0.4	-0.4	0.16	0.4
25	0	0	0	0	0
Total					9.666666667

Degree of freedom at 0.05

Level of significant is $20 = 26.296$

Chi-square results = 9.666666667

9.666666667 is less than critical value 26.296. Therefore we accept the alternative hypothesis that availability of human significantly influences the sustainability on Mother Tongue Based Multilingual Education programs and reject the null hypothesis.

Table 4.23: Pupils' response on parental involvement on children learning

Information	Category	Frequency	Percentage	Cumulative percentage
Do your parents help you with school work?	Yes	94	88.68	88.68
	No	12	11.32	100

Table 4.24: Pupils' respondents on what language do their parents to use in helping them with homework

Information	Category	Frequency	Percentage	Cumulative percentage
Which language do your parents use when they help you with homework?	Mother tongue	38	40.23	40.23
	English	11	11.70	51.93
	Swahili	24	25.53	77.46
	Mix languages	21	22.34	100

88.69% of the respondents which is the numeric value of 94 in table 4.24: indicated that their parents were very supportive in helping children with school work while 11.32%, the numeric value of 12 indicated that their parents do not help them with school work. Out of the 94 pupils whom their parents helped them with homework, 40.23% indicated that their parents use Mother Tongue to help them, 25.53% use Swahili, 22.34% use mix languages while 11.70% use English. The research indicates that most parents are involved in their children's learning. Most parents use Mother Tongue to help their children with school work. This was also confirmed from the parents through the group discussions, they affirmed that they use mother tongue to explain concepts to their children so as to help them understand better. In the discussions at the various FGDs, it was also discovered that the female parents are the one who are actively involved in the learning of the children, they are the majority who help their children with school homework, as well as attend school meetings when they are called for. In addition to that, the parents also confirmed that they are aware of the MTE programs running in their school since they have been continuous advocacy meetings in schools and in the villages.

From the findings of the FGDs, the BOMs and the parents thought that it is a good idea for the community to take ownership of educational programs, but the challenge facing is that they are not involved by the organisations to take ownership, "These organizations have good programs but the problem is they do not empower the community to take ownership of the programs that's why when they exit, the benefits are not sustained. Nevertheless, when given the chance, we will be willing to take ownership and mobilize for resources from the government, county government, NGOs and CBOs, to ensure the continuity of the programs' benefits," one BOM chairman uttered.

Table 4.25: Frequency table on the involvement of stakeholders significantly influences the sustainability on Mother Tongue Based Multilingual Education programs in Tana River County

Variables	Description	Frequency	Percentage
Effective MTE programming requires support from the stakeholders.	Strongly Agree	12	50
	Agree	10	41.67
	Undecided	1	4.17
	Disagree	1	4.17
	Strongly Disagree	0	0
	Total	N=24	100
	Parents should be involved in MTE programmes since they are one of the stakeholders in the education programme.	Strongly Agree	17
Agree		4	16.67
Undecided		2	8.33
Disagree		1	4.17
Strongly Disagree		0	0
Total		N=24	100
Campaigns should be conducted to inform the parents on the importance of the MTE programs		Strongly Agree	15
	Agree	8	33.33
	Undecided	1	4.17
	Disagree	0	0
	Strongly Disagree	0	0
	Total	N=24	100
	Community should accept and take ownership of educational programs so as to promote self-sufficiency on the basis of the continuity of the programs	Strongly Agree	19
Agree		4	16.67
Undecided		1	4.17
Disagree		0	0
Strongly Disagree		0	0
Total		N=24	100
Support of other partners e.g. NGOs, CSOs assists in the sustainability of MTE programs		Strongly Agree	17
	Agree	6	25
	Undecided	1	4.17
	Disagree	0	0
	Strongly Disagree	0	0
	Total	N=24	100

Findings from table 4.25 indicate that the statement effective MTE programming requires support from the stakeholders, 50% of the respondents strongly agreed to the statement while only 4.17% disagreed. The statement that reads parents should be involved in MTE programmes since they are one of the stakeholders in the education programme attracted majority of the respondents that strongly agreed and constitute 70.83% while 4.17% disagreed to that statement. The statement campaigns should be conducted to inform the parents on the importance of the MTE programs majority of the respondents strongly agreed with the statement and constitute 62.5%. Very few of the respondents were undecided with the statement and constitute 4.17%.

79.17% of the respondents strongly agreed to the statement that says community should accept and take ownership of educational programs so as to promote self-sufficiency on the basis of the continuity of the programs while only 4.17% were undecided. The last statement that reads support of other partners e.g. NGOs, CSOs assists in the sustainability of MTE programs attracted 70.83% of the respondents that strongly agreed with the statement while 4.17% were undecided.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents finding of the study in the following thematic areas: summary of the findings, discussion of the study, conclusion and recommendations for further studies. The findings are summarized in line with the objectives of the study.

5.2 Summary of findings

The purpose of the study was to investigate the determinants of the sustainability of Mother Tongue Based Multilingual Education programs among communities in Tana River County Kenya. The objectives of the study include; establishing how the Language in Education Policy influences sustainability of Mother Tongue Based Multilingual Education programs among communities in Tana River County Kenya. To examine how the availability of material resources influence sustainability of Mother Tongue Based Multilingual Education programs among communities in Tana River County Kenya. To assess how the availability of human resources influence sustainability of Mother Tongue Based Multilingual Education programs among communities in Tana River County Kenya. To determine the influence of stakeholders in the program for sustainability of Mother Tongue Based Multilingual Education programs among communities in Tana River County Kenya.

The first objective of this study was to establish how the Language in Education Policy influences sustainability of Mother Tongue Based Multilingual Education programs among communities in Tana River County Kenya. There were six indicators that guided this objective which include; The Kenyan Language in Education Policy asserts that language of the catchment area should be used as a medium of instruction from pre-primary to primary 1-3, a well-planned Language in Education Policy through Mother Tongue Based Multilingual Education (MTB-MLE) is the key to quality education, language is an important tool for dissemination of information, teachers use more effective and active teaching methods on children that understand the language being used, the learning of first language (L1) facilitates the learning of a second language (L2) and funding for continuous policy research on language in education leads to sustainability of MTE programs. The alternative hypothesis stated that; there is significant relationship between Language in Education Policy and sustainability of Mother Tongue Based Multilingual Education programs. The Chi-

square results were 14.36333365 at 0.05 degree of freedom. The Chi-square results were less than the level of significance of 31.410; therefore the alternative hypothesis was accepted. Further analysis also indicated that the children are taught in mother tongue in schools and majority of them would prefer to learn in their first language since they understand better.

In relation to the second objective which was to examine how the availability of material resources influence sustainability of Mother Tongue Based Multilingual Education programs among communities in Tana River County Kenya. There were six indicators to assess the variable which include opinions about the curriculum, availability of teaching and learning materials, involvement of teachers in the development of materials and government funding allocation for the provision of MTE resources. The alternative hypothesis stated that there is significant relationship between availability of material resources and sustainability of Mother Tongue Based Multilingual Education programs. The Chi-square results were 14.60082155 at 0.05 degree of freedom. The Chi-square results were less than the level of significance of 31.410; therefore the alternative hypothesis was accepted. The analysis also indicated that there is availability of MTE materials in schools and the children read them because they have interesting stories and good illustrations and are also able to understand the content.

As per the third objective, this was to assess how the availability of human resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs among communities in Tana River County Kenya. In this objective, there were six indicators to assess the variable which include opinions about head teachers' management and knowledge on MTE, teachers' training on MTE implementation and recruitment and deployment of sufficient MTE teachers in schools. The alternative hypothesis was accepted since the Chi-square results were 14.34938208 at 0.05 degree of freedom. The Chi-square results were less than the level of significance of 31.410. In the study, it also indicated that there is availability of teachers to teach the children in their first language. This was indicated when 100% of the respondents in the questionnaire for the children responded positively.

On the last objective that sought to determine the involvement of stakeholders in the program for sustainability of Mother Tongue Based Multilingual Education programs among communities in Tana River County Kenya. In this objective, there were six indicators to assess the variable which include support and involvement of parents in the MTE programs, importance of MTE campaigns to the community, community acceptance and ownership of educational programs and support from

other partners like NGOs and CSOs in the MTE programs. The Chi-square results were 9.666666667 at 0.05 degree of freedom. The Chi-square results were less than the level of significance of 26.296; therefore the alternative hypothesis was accepted there is significant relationship between stakeholders' involvement and sustainability of Mother Tongue Based Multilingual Education.

5.3 Discussions

This study was a form of sustainability research. Based on the study objectives and data analysis, the following are the main research findings. From the triangulation of the instruments analyzed from the questionnaires, interview and focused group discussions, it was confirmed that the results were similar in all the methods used.

The study sought to establish how the Language in Education Policy influences sustainability of Mother Tongue Based Multilingual Education programs among communities in Tana River County Kenya. The study revealed that there is a great relationship between language in education policies and Mother Tongue Based Multilingual Education. The study found that 91.67% of the respondents affirmed that a well-planned LiEP through MTBMLE is the key to quality education. This has the same opinion as (UNESCO, 2010; Save the children-SC-UK, 2007; DFID, 2005) that implementation of a well-planned Language in Education Policy through bi-lingual or mother tongue based multi-language is the key to quality education.

The study also examined how the availability of material resources influence sustainability of Mother Tongue Based Multilingual Education programs among communities in Tana River County Kenya. According to literature review, the key resources in successful Mother Tongue Based Multilingual Education include the availability of curriculum, teaching and learning materials and funding. Majority of the respondents 66.67% agreed that a curriculum should enable the learners develop a strong foundation in MT and a quality bridge to transit to the second language. Majority of the respondents 79.17% also acknowledged that availability of MT teaching and learning resources is an important factor that promotes children's reading. This findings agrees with (Edwards, 2008; Alidou et al., 2006; Bloch, 2005) that material resources and material development process is another important factor MTBMLE that promotes the reading culture. However, in Chakava's findings on matters of materials, he estimated that nearly 90% of Kenya's book business comes from school textbooks, most of which are in English and Kiswahili while mother tongue has the depressing minority books. The research revealed that only one publisher has shown interest in

mother tongue in this area. There is need for more publishers to get on board so as to ensure sustainability of MTBMLE programs.

The research also assessed how the availability of human resources significantly influences the sustainability on Mother Tongue Based Multilingual Education programs among communities in Tana River County Kenya. Majority of the implementers 91.67% responded positively that head teachers should have knowledge of MT teaching methodologies and be able to deliver the approaches to the MTE teachers, these findings agrees with (Varghese, 2004) that the school leaderships need to acquire important skills and qualities so as to lead the multilingual programs effectively. Also according to the findings, majority of the respondents 75% strongly affirmed that during the teachers training course, the teacher should be trained on how to deliver the curriculum content in a way that allows the learner who speaks and understand MT to grow to their expected grade level standards. These findings concurs with (Malone and Malone, 2012) that teachers and institutionalization of MTBMLE induction, is very effective to Mother Tongue Education programming.

Lastly, the study also determined the involvement of stakeholders in the program for sustainability of Mother Tongue Based Multilingual Education programs among communities in Tana River County Kenya. 87.30% of the implementers were positive about the statement which says that parents should be involved in MTE programmes since they are one of the stakeholders in the education programme. The findings from the research also indicated that parents are involved in their children's learning; this was indicated at 88.68% from the children's responses. However, there is need for more advocacy so that the 11.32% of the parents to involve themselves in their children's education. In the findings, the majority of the respondents at 95.84% also approved that community should accept and take ownership of educational programs so as to promote self-sufficiency on the basis of the continuity of the programs. These findings approves (Malone, 2010) statement that for programs to succeed all the stakeholders need to be involved and support them, they need to encourage each other and share vision about the program in the community as well as building goals for the programs.

5.4 Conclusions

The conclusion of this study is guided by the study's objectives. From the findings, it evidence that the alternative hypothesis which stated that there is significant relationship between Language in Education Policy and sustainability of Mother Tongue Based Multilingual Education programs was accepted. This means that there is high collaboration between Language in Education Policy and multilingual education.

The study revealed that there is significant relationship between availability of material resources and sustainability of Mother Tongue Based Multilingual Education programs. The alternative hypothesis for this was accepted. However, there is need for more publishers to publish books written in mother tongue to ensure effective sustainability.

The study has also revealed that the alternative hypothesis that there is significant relationship between availability of human resources and sustainability of Mother Tongue Based Multilingual Education programs. However, there is need for the teachers to have institutionalized training on MTE while in teacher's college for effective implementation of MTBMLE programming.

Lastly, the alternative hypothesis that stated that there is significant relationship between involvement of stakeholders and sustainability of Mother Tongue Based Multilingual Education programs was accepted. This means that community has to actively participate in the MTE programs and take ownership of the programs. The study revealed that parents are actively involved in the learning process of their children.

5.5 Recommendations

From the research study findings, the researcher recommends that:

1. The government should ensure that the Language in Education Policy is implemented in all schools. This will provide an opportunity for the effectiveness of EFA goals whereas all children will have access quality education. The children will be able to enjoy learning from known to the unknown.
2. The government should highly capitalize on research in education and institutionalization of multilingual education teachers training in colleges so as to exploit the benefits foreseen by the policy enactment.
3. The government and other funding agencies to highly invest in the education sector by providing sufficient resources for the effective implementation and sustainability of the

Language in Education Policy. More publishers should be encouraged to also venture in MTE business so that all languages to have access to education in their own language.

4. The communities should primarily own these MTBMLE programs and avail themselves in resource mobilizations for the successful implementation and sustainability of such project.

5.6 Areas for Further Research

Following the findings of the study, the researcher identified the following areas that could be explored for future research.

1. This study was carried out in Tana River County only. A similar study could be carried out in other areas where similar programs are implemented for comparison purposes.
2. This research focused on the sustainability component of MTBMLE programs, a study to assess the challenges of implementing MTBMLE programs and its mitigations.
3. A study to assess the impact of Mother Tongue Based Multilingual Education will also be helpful.

REFERENCES

- ADEA Newsletter. 2005. Vol.17 No.2. Theme: Education and Languages.
http://www.adeanet.org/newsletter/Vol7No2/en_n8v4_3.html.
- Alidou et al (eds). 2006. Optimizing Learning and Education in Africa. *The Language: ADEA*
- BAKER, C. (2000). Three perspectives on bilingual education policy in Wales: Bilingual education as language planning, bilingual education as pedagogy and bilingual education as politics. In R. DAUGHERTY, R. PHILLIPS and G. REES (eds), *Education Policy in Wales: Explorations in Devolved Governance*. Cardiff: University of Wales Press.
- Banda, F. (2000). The Dilemma of Mother Tongue: Prospects for Mother Tongue Education in Zambia. *Language Cultural and Curriculum*, 9 (2), 109-119.
- Benson, C. (2004). The importance of mother tongue-based schooling for educational quality. *Background paper for EFA Global Monitoring report 2005*. Paris: UNESCO.
- Benson, C. (2000). The primary bilingual education experiment in Mozambique, 1993 to 1997. *International Journal of Bilingual Education and Bilingualism*, 3(3), 149-166.
- Benson, C. (2005). *Girls, educational equity and mother tongue*. Bangkok: UNESCO.
- Biihmann and Trudell (2008). *Multilingual Education and Sustainable Diversity Work: From Periphery to Centre*. New York.
- Bonaya, A. S. (2012). Factors influencing the effective implementation of Mother Tongue Education programs among communities in Tana River County Kenya: M.A Project Research. University of Nairobi.
- Chacoff, A. (1989). (Bi)literacy and empowerment: Education for indigenous groups in Brazil. *Working Papers in Educational Linguistics*, 43-62. Philadelphia: Language Education Division of the University of Pennsylvania
- Chiatoh, A. B. (2011). Assessing community response to literacy in a multilingual context: The case of Cameroon. Unpublished PhD dissertation, Department of African Languages and Linguistics (DALL). Yaoundé: University of Yaoundé
- Chomsky, N. (1965). *Aspects of the theory of syntax*. Cambridge: MIT Press.
- Cochran, W. G. (1977). *Sampling Techniques*, 3rd edition. New York: John Wiley and Sons.

- Cummings, W. G. (1995). *Implementing quality primary education for Countries in Transition*. Paris: UNICEF.
- Cummins, J. (2000). *Language, power and pedagogy: Bilingual children in the crossfire*. Clevedon, England: Multilingual Matters.
- D'Emilio, L. (1995). Education and the Indigenous peoples of Latin America. *In ICDC/UNICEF, Children of minorities: Deprivation and discrimination* (pp. 77-88). Florence, Italy: UNICEF
- Denzin, N. K. (1970). *The research act in psychology*. Chicago: Aldin.
- Dutcher, N. (2004). *Expanding Educational Opportunity in Linguistically Diverse Societies*. Revised edition, Center for Applied Linguistics, Washington D.C.
- Dutcher, N. (1995). The use of first and second languages in education. A review of international experience. *Pacific Island Discussion paper Series No. 1*. Washington, DC: World Bank.
- Ejeh, M.U.C. (2004) *Attitudes of student teachers towards teaching in mother tongue in Nigerian primary schools: Implications for planning*. *Language, Culture, and Curriculum* 17 (1): 73–81.
- Gfeller, E, and Robinson, C. (1998). 'Which Language For Teaching? The Cultural Messages Transmitted By The Languages Used In Education'. *Language and Education* 12 (1): 18-32
- Giddens, A. (1984). *The Constitution of Society*. Cambridge: Polity Press.
- Gorman T. P. (2009). "The development of language policy in Kenya with particular reference to Education system:" In Whitley, W.H (ed.) *Language in Kenya*. Nairobi: Oxford University Press, 397-446
- Graham, E, B. (2009). *Pokomo Mother Tongue Education in Kenya: Implementation and Evaluation*. PhD Thesis. The University of Reading.
- Haworth, P., Cullen, J., Simmons, H., Schimanski, L., McGarva, P., and Woodhead, E. (2004). The role of acquisition and learning in young children's bilingual development: A sociocultural interpretation. *International Journal of Bilingual Education and Bilingualism*, 9(3), 295-309.
- Heugh, K., Benson, C., Bogale, B. and GebreYohannes, M. A. (2007). *Final Report: Study on Medium of Instruction in Primary Schools in Ethiopia*. Research report commissioned by the Ministry of Education, Addis Ababa, September to December 2006.

- Hornberger, N. (2001) Ideological paradox and intercultural possibility: Andean language-in--education policy and practice and its relevance for South Africa. *South African Journal of Applied Language Studies* 19 (3 and 4), 215-230.
- Hoven, J. M. (2007). *The place of Mother Tongue for teaching literacy in Kenyan schools*. Paper presented at the 5th Pan African Reading for all conference, Accra, Ghana.
- Hovens, M. (2002). Bilingual education in West Africa: Does it work? *International Journal of Bilingual Education and Bilingualism*, 5(5), 249-266.
- Jones, J. M. (2007). The place of the mother tongue for teaching literacy in Kenyan schools. Paper presented at the 5th Pan-African Reading For All. Accra, Ghana.
- Kenya Institute of Education. 2002. *Primary Education Syllabus Volume 1*, Nairobi, Kenya. KIE.
- Kioko, A. N. and Muthwii, M.J. (2001). The demands of a changing society: English in education in Kenya today, *Language, Culture and Curriculum*, 14(3), 201-13.
- Krashen, S. (1981). *Second language acquisition and second language learning* (Vol. 2). Oxford: Pergamon Press.
- Krejcie, R. V., Morgan, Daryle, W. (1970). Determining Sample Size for Research Activities, Educational and Psychological Measurement.
- Lenneberg, E. H. (1967). *The biological foundations of language*. New York: John Wiley and Sons.
- Mahidol University International College. (2016). Thailand
- Malone, S. (2007). Mother Tongue Based Multilingual Education: implications for education policy. *Seminar paper on Education Policy and the Right to Education: Towards more Equitable Outcomes for South Asia's Children Kathmandu Nepal*. September 17–20, 2007.
- Malone, S. (2007). Education in ethnic minority communities: *Questions to consider and problems to solve*. In Caroline Haddad (ed.), *Promoting literacy in multilingual settings*, 10–16.
- Malone, S. (2010). Planning Mother Tongue Based Programmes in Minority Language Community. Bangkok: SIL.
- Malone, S. (2011). Factors to consider in developing, assessing and revising curriculum and teaching-learning materials for MTB MLE programs. Bangkok: SIL

- Malone, D. and Malone, S. (2012, March 22-30). MLE workshop bridging between languages workshop. Mahidol University, Thailand.
- Montecel, M. R., and Cortez, J. D. (2002). Successful bilingual education programs: Development and the dissemination of criteria to identify promising and exemplary practices in bilingual education at the national level. *Bilingual Research Journal*, 26(1), 1-10.
- Mugenda, A. G (2011). Social Science Research. Theory and Principles, Nairobi: ARTS Press.
- Mugenda A. G. and Mugenda, O. (1999). *Research Methods Qualitative and Quantitative Approaches*. Nairobi: Acts Press. 49
- Mugenda A. G. and Mugenda, O. (2003). *Research Methods Qualitative and Quantitative Approaches*. Nairobi: Acts Press.
- Musau, P. M. (2003). Linguistic human rights in Africa: Challenges and prospects for indigenous languages in Kenya. *Language, Culture and Curriculum*, 16(2): 155–64.
- Muthwii, M. J. (2004) Language of instruction: A qualitative analysis of the perceptions of parents, pupils and teachers among the Kalenjin in Kenya. *Language, culture and curriculum* 17 (1): 15–32. Nairobi.
- Mwendwa, T. N., Murangira, A. and Lang, R. (2009). Mainstreaming the rights of persons with disabilities in national development frameworks. *Journal of International Development*, 2009; pp 662-672.
- Ninyi A. F. (1993) Policy and Experiment in Mother Tongue Literacy in Nigeria. *International Review of Education*, 39(4), 255-285)
- Nuñez, M., (1994). *Corima: A Bilingual Experiment in the Tarahumara Region in the State of Chihuahua, Mexico: How does it measure against transitional bilingual programs in the United States?* Washington, D.C. ERIC document, ED 398107.
- Ogechi, N (2003). On Language Rights in Kenya. In: *Nordic Journal of African Studies* Vol. 12, No. 3.
- Okombo, D. (2001). *Language Policy in East Africa: The forgotten parameter in African development and governance strategies*. Inaugural lecture, Nairobi: University of Nairobi Press.
- Perna, L. W., and Titus, M. (2005). The relationship between parental involvement as social capital and college enrollment: An examination of racial/ethnic group differences. *Journal of Higher Education*, 76(5), 485-518.

- Powell, R. (2002). Language planning and British empire: Comparing, Malaysia and Kenya. *Current Issues in language planning* 3 (3), 250-279.
- Republic of Kenya. 1976. *Kenya Education Commission Report (Gachathi Report)*. Nairobi: Government Printer.
- Rollnick, M. and Rutherford, M. (1996). The use of mother tongue and English in the learning and expression of science concepts. A classroom-based study. *European Journal of Science Education*, 18, 91-104.
- Save the Children. 2007. *The Use of Language in Children's Education: A Policy Statement*.
- Sen, A. (2001). *Development as Freedom: An approach*. Cambridge, MA: Ikeda Center for Peace, Learning and Dialogue.
- Shaw, P. (2003). Leadership in the diverse school. In C. Baker (Ed.), *Foundations of bilingual education and bilingualism*. Clevedon: Multilingual Matter.
- Skutnabb, T., Kangas, Heugh K. (2003). *Multilingual Education and Sustainable diversity work, from periphery to center*. (Google books)
- Smits, J., Huisman, J., and Kruijff, K. (2008). Home language and education in the developing world. Background paper for EFA Global Monitoring 2009. Paris: UNESCO.
- Stroud, C. (2001). African mother tongues and the politics of language: Linguistic citizenship versus linguistic human rights. *Journal of Multilingual and Multicultural Development*, 22(4): 339-355.
- Tabatadze, S. (2008a). Bilingual educational policy in Georgia. *Journal "Solidaroba"*, (23), 66-80.
- Tabatadze, S. (2008b). *Education reform and non-Georgian language schools*. Tbilisi: Caucasus Institute for Peace, Democracy and Development.
- Tabatadze, S. (2015). Factors Influencing the Effectiveness of Bilingual Educational Programs: *The Prospects of Pilot Programs in Georgia*. Centre for Civil Integration and Inter-Ethnic Relations, Tbilisi, Georgia
- Tadadjeu, M., Mba, G., and Chiatoh, A. B. (2001). The process of education in Cameroon. *African Journal of Applied Linguistic (AJAL)*, 2, 2-30
- The Constitution of Kenya (2010). Republic of Kenya.

- Thomas, W.P., and Collier, V.P. (1997a). *School effectiveness for language minority students*. Washington, DC: National Clearinghouse for English Language Acquisition. www.ncele.gwu.edu/ncbepubs/resource/effectiveness/index.html
- Trudell, B. (2008) Practice in search of a paradigm: Language rights, linguistic citizenship and minority language communities in Senegal. *Current Issues in Language Planning*, 9(4):395–412.
- Trudell, B. (2010). When “Prof” speaks, who listens? The African elite and the use of African languages for education and development in African communities: *Language and Education*, 24 (4), 337-352.
- UNESCO.(2015). Education for All. Monitoring report: *Achievements and Challenges*: UNESCO.
- UNESCO, (2013).4th International Conference on Language and Education, ‘*Multilingual Education for All in Asia and the Pacific: Policies, Practices and Processes*’, held in Bangkok, Thailand in November 2013.
- UNESCO. 2003. *Education in a Multilingual World*. Paris, UNESCO.(UNESCO Education Position Paper.) <http://unesdoc.unesco.org/images/0012/001297/129728e.pdf> (accessed 1 July 2007).
- UNESCO (2000).Education for All. Senegal: UNESCO.
- UNESCO. (1953). *The use of vernacular language in education*. Monograph on Fundamental Education. Paris: UNESCO.
- UNICEF (1999).The state of the world’s children.*Education*.UNICEF.
- United Nations (1948).Universal Declaration on Human Rights.New York: United Nations.
- United Nations (1989).Convention on the Rights of the Child. United Nations
- Varghese, M. M. (2004). Professional development for bilingual teachers in the United States: A site for articulating and contesting professional roles. *Bilingual Education and Bilingualism*, 7(2 and 3), 222-238.

APPENDIX I: Letter of Transmittal

Rehema Bona Abiyo

P.O Box 40215

Mombasa- 80100

05th June 2017

The County Director of Education

Tana River County

P.O Box 13-70101

Hola.

Dear Sir,

I am Rehema Abiyo, a student from the University of Nairobi pursuing Master of Arts in Project Planning and Management. In partial fulfilment of the requirement of the course, I intend to carry out a study on factors influencing the effective sustainability of Mother Tongue Based Multilingual Education/ Mother Tongue Education.

The findings of the study will be useful not only to me, as the one studying it for an academic reason, but also for your department as well as other organizations interested in Mother Tongue Based Multilingual Education.

Kindly grant me the permission to carry out the research with the education officers, head teachers, teachers and pupils under your jurisdiction.

Thank you for your continued support.

Yours Faithfully,

Rehema Bona Abiyo

L50/85399/2016

MA Student

APPENDIX II: Questionnaire Survey Instrument for Teachers

As part of my M.A research project at the University of Nairobi, I am conducting a study about the factors influencing the effective sustainability of Mother Tongue Based Multilingual Education program in Tana Delta Sub- County. I will appreciate if you complete the interview. Any information obtained in connection with this study can be identified with you and will remain confidential.

Schedule A: Demography

Please answer the following questions by selecting the correct alternative.

1. Age

2. Sex Female Male

3. Marital status

a) Single

b) Divorced

c) Widowed

d) Separated

e) Married

4. Level of Education

a) Doctorate

b) Masters

c) Bachelor

d) Diploma

e) Teacher certificate

Schedule B: Language in Education Policies

To what extent do you agree or disagree with the following statements? Please tick on the table below:

#	Statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
A	The Kenyan Language in Education Policy asserts that language of the catchment area should be used as a medium of instruction from pre-primary to primary 1-3.					
B	A well planned Language in Education Policy through Mother Tongue Based Multilingual Education (MTB-MLE) is the key to quality education.					
C	Language is an important tool for dissemination of information.					
D	Teachers use more effective and active teaching methods on children that understand the language being used.					
E	The learning of first language (L1) facilitates the learning of a second language (L2).					
F	Funding for continuous policy research on language in education leads to sustainability of MTE programs.					

Schedule C: Material Resources

To what extent do you agree or disagree with the following statements? Please tick on the table below:

#	Statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
A	A curriculum should enable the learners develop a strong foundation in MT and a quality bridge to transit to the second language(s)					
B	The curriculum should be contextualised to the learners' environment, expectations and experiences.					
C	Availability of MT teaching and learning resources is an important factor that promotes the reading culture					

D	Availability of resource materials promotes sustainable and quality Mother Tongue Education					
E	Teachers should be involved in the development of teaching and learning resources.					
F	Government allocation of funding for provision for MTE resources facilitates the sustainability of MTE programs					

Schedule D: Human Resources

To what extent do you agree or disagree with the following statements? Please tick on the table below:

#	Statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
A	Head teachers should have knowledge of MT teaching methodologies and be able to deliver the approaches to the MTE teachers.					
B	School heads should be effective managers and administrators so as to motivate, inspire, support and communicate well with their staff.					
C	Teacher's training and preparation is very important in MTE transformation.					
D	During the teachers training course, the teacher should be trained on how to deliver the curriculum content in a way that allows the learner who speaks and understand MT to grow to their expected grade level standards					
E	Teachers become conversant with the MTE instructional materials and curriculum through effective training.					
F	Recruitment and deployment of sufficient of teachers influence the sustainability of MTE in schools.					

Schedule E: Stakeholders' Involvement

To what extend do you agree or disagree with the following statements? Please tick on the table below:

#	Statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
A	Effective MTE programming requires support from the stakeholders.					
B	Parents should be involved in MTE programmes since they are one of the stakeholders in the education programme.					
C	Campaigns should be conducted to inform the parents on the importance of the MTE programs					
D	Community should accept and take ownership of educational programs so as to promote self-sufficiency on the basis of the continuity of the programs					
F	Support of other partners e.g. NGOs, CSOs assists in the sustainability of MTE programs					

Thank you for your time to provide this information!!!

APPENDIX III: Questionnaire Survey Instrument for Head teachers and County Education Officials

As part of my M.A research project at the University of Nairobi, I am conducting a study about the factors influencing the effective sustainability of Mother Tongue Based Multilingual Education program in Tana Delta Sub- County. I will appreciate if you complete the interview. Any information obtained in connection with this study can be identified with you and will remain confidential.

Schedule A: Demography

Please answer the following questions by selecting the correct alternative.

- 5. Age
- 6. Sex Female Male
- 7. Profession
- 8. Marital status
 - f) Single
 - g) Divorced
 - h) Widowed
 - i) Separated
 - j) Married
- 9. Level of Education
 - f) Doctorate
 - g) Masters
 - h) Bachelor
 - i) Diploma
 - j) Teacher certificate
- 10. How many schools are in your sub county?
- 11. How many children do you have in your school?
- 12. What is the percentage of girls?
- 13. What is the percentage of boy?
- 14. What is the dropout rate?
 - a) For girls?
 - b) For boys?

Schedule B: Language in Education Policies

To what extent do you agree or disagree with the following statements? Please tick on the table below:

#	Statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
A	The Kenyan Language in Education Policy asserts that language of the catchment area should be used as a medium of instruction from pre-primary to primary 1-3.					
B	A well planned Language in Education Policy through Mother Tongue Based Multilingual Education (MTB-MLE) is the key to quality education.					
C	Language is an important tool for dissemination of information.					
D	Teachers use more effective and active teaching methods on children that understand the language being used.					
E	The learning of first language (L1) facilitates the learning of a second language (L2).					
F	Funding for continuous policy research on language in education leads to sustainability of MTE programs.					

Schedule C: Material Resources

To what extent do you agree or disagree with the following statements? Please tick on the table below:

#	Statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
A	A curriculum should enable the learners develop a strong foundation in MT and a quality bridge to transit to the second language(s)					
B	The curriculum should be contextualised to the learners' environment, expectations and experiences.					
C	Availability of MT teaching and learning resources is an important factor that promotes the reading culture					

D	Availability of resource materials promotes sustainable and quality Mother Tongue Education					
E	Teachers should be involved in the development of teaching and learning resources.					
F	Government allocation of funding for provision for MTE resources facilitates the sustainability of MTE programs					

Schedule D: Human Resources

To what extent do you agree or disagree with the following statements? Please tick on the table below:

#	Statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
A	Head teachers should have knowledge of MT teaching methodologies and be able to deliver the approaches to the MTE teachers.					
B	School heads should be effective managers and administrators so as to motivate, inspire, support and communicate well with their staff.					
C	Teacher's training and preparation is very important in MTE transformation.					
D	During the teachers training course, the teacher should be trained on how to deliver the curriculum content in a way that allows the learner who speaks and understand MT to grow to their expected grade level standards					
E	Teachers become conversant with the MTE instructional materials and curriculum through effective training.					
F	Recruitment and deployment of sufficient of teachers influence the sustainability of MTE in schools.					

Schedule E: Stakeholders' Involvement

To what extend do you agree or disagree with the following statements? Please tick on the table below:

#	Statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
A	Effective MTE programming requires support from the stakeholders.					
B	Parents should be involved in MTE programmes since they are one of the stakeholders in the education programme.					
C	Campaigns should be conducted to inform the parents on the importance of the MTE programs					
D	Community should accept and take ownership of educational programs so as to promote self-sufficiency on the basis of the continuity of the programs					
F	Support of other partners e.g. NGOs, CSOs assists in the sustainability of MTE programs					

Thank you for your time to provide this information!!!

APPENDIX IV: Interview Schedule for Children

School: _____ **Age:** _____ **Sex:** _____ **Class:** _____ **Repeated:** _____

1. Do you learn in Mother Tongue in school (MT)? (Yes) (No).
2. Which language do you prefer your teacher to use while teaching?
 - a) MT b) English c) Kiswahili
3. Are there MTE books in your school? (Yes) (No). Do you read them? (Yes) (No).
4. What do you like reading the MTE books?
 - a) I understand the content
 - b) I like the stories and the illustrations
 - c) Undecided
5. Does your teacher use MT to teach? (Yes) (No).
6. Do your parents help you with school work? (Yes) (No).
7. If so, which language do your parents use when they help you with school work?
 - a) MT b) English c) Kiswahili

APPENDIX V: Focused Group Discussions guide

1. Do you think it is important to have knowledge about MTE?
2. How do you participate in the learning of your children?
3. Have you ever had any MTE advocacy campaigns?
4. What do you think can be done for you to fully own the program?
5. Do you know any education policies?
6. Do you know about the LiEP?
7. Are those policies implemented in your school?
8. Are there books in the schools?
9. Do your children use them?
10. Do you think it is important to have MTE books in the schools?