

**IMPLEMENTATION OF HIV/AIDS SYLLABUS IN PRIMARY
TEACHER TRAINING COLLEGES IN KENYA: AN EVALUATION
STUDY**

Grace Ndegı Kiringa

**A Thesis Submitted in Fulfilment of the Requirements for the Award of the
Degree of Doctor of Philosophy in Curriculum Studies, University of Nairobi**

2015

DECLARATION

This thesis is my original work and has not been presented for a degree in any other university

Grace Ndegı Kiringa

This thesis has been submitted for examination with our approval as University Supervisors

Prof. Gerald Ngugi Kimani

Associate Professor

Department of Educational Administration and Planning

University of Nairobi

Dr. Rose Obae

Lecturer

Department of Educational Administration and Planning

University of Nairobi

DEDICATION

This work is dedicated to my children Brenda Hedwig Murugi, Flynn Elias Muswii, Leroy Moses Kiringa and Peter Paul Wambua Junior.

ACKNOWLEDGEMENT

The task of doing research and writing is no doubt an arduous one. Indeed many people have either directly or indirectly assisted in making this study possible. Thus, this study would not have been done without the help, cooperation and contribution of many individuals, to whom I wish to acknowledge my indebtedness for their valuable assistance.

I am greatly indebted to my supervisors, Prof Gerald Kimani and Dr. Rose Obae for their advise and valuable guidance, constructive criticism and patience in following and supervising this work step by step up to the end.

I am grateful to God who has enabled me pursue my PhD degree and Deutscher Akademischer Austausch Dienst (DAAD) which offered me the scholarship that enabled me carry out this study. The University of Nairobi for offering me fees waiver.

Finally I would like to express my gratitude to my parents and my late husband Dr. Peter Paul Wambua for inspiring in me the love for education. They constantly urged me on when I felt like giving up.

Although the burden and demanding task of writing was made possible the researcher takes responsibility of any errors, lapses and omissions accordingly.

TABLE OF CONTENT

Declaration.....	ii
Dedication	iii
Acknowledgement	iv
List of tables.....	x
List of figures.....	xii
Abbreviations and acronyms.....	xiii
Abstract	xiv

CHATPER ONE

INTRODUCTION

1.1 Background to the study	1
1.2 Statement of the problem	9
1.3 Purpose of the evaluation study	11
1.4 Objectives of the evaluation study	11
1.5 Research questions.....	12
1.6 Significance of the study.....	13
1.7 Limitations of the study	14
1.8 Delimitations of the study	14
1.9 Assumptions of the study.....	15
1.10 Definition of significant terms	15
1.11 Organization of the study.....	16

CHAPTER TWO

REVIEW OF THE RELATED LETERATURE

2.1 Introduction.....	18
2.2 Behavioural theory and HIV/AIDS education.....	18
2.3 HIV/AIDS syllabus implementation and leadership obstacle course model	20
2.4 Role of schools in mitigating HIV/AIDS transmission	22
2.5 Effectiveness of HIV/AIDS school based programmes.....	24
2.6 Role of teachers in behaviour change curriculum.....	26
2.7 Teacher trainers’ knowledge, skills and attitudes towards implementation of HIV/AIDS syllabus.....	28
2.8 Teaching methodologies and implementation of HIV/ AIDS syllabus	37
2.9 HIV/AIDS assessment methods used by teacher trainers in the implementation of HIV / AIDS syllabus.....	42
2.10 Teacher trainees knowledge and attitudes towards the implementation of HIV/ AIDS syllabus	43
2.11 Teaching learning materials and resources and implementation of HIV/AIDS syllabus	44
2.12 Challenges encountered by teacher trainers in implementing HIV/AIDS education syllabus in PTTCs	47
2.13 Implementation of HIV/AIDS syllabus	52
2.14 Curriculum evaluation	54
2.15 Curriculum evaluation model	56

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction.....	61
3.2 Research design	61
3.3 Target population	61
3.4 Sample size and sampling procedure.....	62
3.5 Research instruments	64
3.6 Pilot of the instruments	65
3.7 Data collection procedures.....	69
3.8 Data analysis techniques	70
3.9 Ethical considerations	70

CHAPTER FOUR
DATA ANALYSIS

4.1 Introduction.....	72
4.2 Instrument return rate.....	72
4.3 Demographic characteristics of the respondents.....	73
4.4 Teachers trainers' knowledge, skills and attitudes towards implementation of HIV/AIDS education syllabus	79
4.5 Teaching methodologies employed by teacher trainers in teaching HIV/ AIDS syllabus.	89

4.6 To determine HIV/AIDs assessment methods used by teacher trainers to assess student teachers in PTTCs	95
4.7 To determine student-teachers knowledge and attitude towards	96
HIV/AIDS	96
4.8 Establish the teaching resources / learning materials used in the implementation of HIV/ AIDS syllabus.....	107
4.9 Challenges encountered by teacher trainers in implementing HIV/AIDS education syllabus in PTTCs.	115
4.10 Suggestions made to mitigate challenges experienced while implementing the HIV/AIDS syllabus.....	117

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction.....	122
5.2 Summary of the study	122
5.3 Conclusions.....	127
5.4 Recommendations.....	129
5.5 Suggestions for further research	130
References.....	132

APPENDICES

Appendix A: Letter of introduction	147
Appendix B: Questionnaire for teacher trainers	148
Appendix C: Questionnaires for student-teachers	156
Appendix D: The observation schedule	160
Appendix E: The provincial distribution of PTTCs.....	162
Appendix G: Research permit.....	164

LIST OF TABLES

Table 1: Instruments return rate	73
Table 2: Age and gender of the teacher trainers	74
Table 3: Religion of teacher trainers	75
Table 4: Marital status of teacher trainers.....	75
Table 5: Academic qualifications of teachers trainers	76
Table 6: Gender and age of the student teachers	77
Table 7: Religion of student teachers	78
Table 8: Marital status of student teachers	78
Table 9: Professional qualification of teacher trainers	80
Table10: Teacher trainers trained in their current teaching subject.....	80
Table 11: Teacher trainers time of joining the teacher training college	81
Table 12: Teachers trainers’ teaching skills.....	82
Table 13: Comments on nature of the information learnt from the in-service seminars / workshops attended	84
Table 14: Teacher trainers’ opinion on whether teaching of HIV/AIDS syllabus required a different approach from other subjects.....	85
Table 15: Teacher trainers’ attitudes towards implementation of HIV/AIDS syllabus	87
Table 16: Overall teacher trainers’ attitudes towards the implementation of HIV/AIDS syllabus	88
Table 17: Teaching methodologies used in teaching HIV/AIDS education	89
Table 18: Adequacy of HIV/AIDS syllabus teaching methodologies	92

Table 19: Appropriateness of the instructional techniques used in teaching HIV/AIDS syllabus	93
Table 20: Teaching methodologies used by the teachers trainers	94
Table 21: Mode of assessment on HIV/AIDs education knowledge.....	96
Table 22: Student teachers knowledge about HIV/AIDS transmission	97
Table 23: Overall student teachers knowledge about HIV/AIDS transmission	100
Table 24: Student teachers attitude towards the value of HIV/AIDS education	103
Table 25: Overall student teachers attitude towards the value of HIV/AIDS education	104
Table 26: Student teachers’ enjoyment of HIV/AIDS education	105
Table 27: Overall student teachers enjoyment of HIV/AIDS education	106
Table 28: Teaching resources/learning materials used in the implementation HIV/AIDS	107
Table 29: Availability of resources for teaching HIV/AIDS syllabus	109
Table 30: How the teaching materials were acquired	110
Table 31: Adequacy of the supply of learning resources	111
Table 32: Criteria used in selection of learning methods for HIV/AIDS syllabus	113
Table 33: Audio – visual resources used in teaching HIV/AIDS syllabus	114
Table 34: Teacher trainers’ opinion on the adequacy of the HIV/AIDSsyllabus content	118
Table 35: Overall opinion on adequacy of HIV/AIDS syllabus content	119
Table 36: Teachers’ views on HIV/AIDS syllabus	120

LIST OF FIGURES

Figure 1: Conceptual framework representing input, process, output and outcome model interrelationship in the implementation of HIV/AIDS syllabus.....	59
Figure 2: Challenges faced by teacher trainers in implementation of HIV/AIDS education syllabus in PTTCs	115

ABBREVIATIONS AND ACRONYMS

A	Agree
AIDS	Acquired Immune- Deficiency Syndrome
ASALs	Arid and Semi- Arid Areas
CBS	Central Bureau of Statistics
D	Disagree
ECA	Economic Commission for Africa
GoK	Government of Kenya
HIV	Human Immune deficiency Virus
HPAs	High Potential Areas.
KCPE	Kenya Certificate of Primary Education
KDHS	Kenya Demographic and Health Survey
KICD	Kenya Institute of Curriculum Development
LOC	Leadership Obstacle Course Model
M.O.H	Ministry of Health
MoES&T	Ministry of Education Science and Technology
NACC	National AIDS Control Council
NASCOP	National AIDS and STI Control programme Organization
PI	Primary school teacher one
PTTCs	Primary Teacher Training Colleges
SA	Strongly Agree
SD	Strongly Disagree
SSA	Sub-Saharan Africa
STI	Sexually Transmitted Infections
TOC	Target- Oriented Curriculum

U	Undecided
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNESCO	United Nations Educational Scientific and Cultural
UNFPA	United Nations Population Fund
UNICEF	United Nations Children Fund Frequency
%	Percent

ABSTRACT

The purpose of this study was to evaluate the implementation of Human Immune Deficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) syllabus in Primary Teacher Training Colleges (PTTCs) in Kenya. The main variables of the HIV/AIDS syllabus which were evaluated consisted of the capacity of teacher trainers, teaching methodologies, assessment methods, teaching/learning materials, students' knowledge and attitude, challenges encountered in the implementation of the syllabus and the adequacy of the syllabus. The study adopted an evaluation design. The target population for the study was 1500 teacher trainers and 21,839 student teachers. The sample size comprised of the 306 teacher trainers and 775 student teachers who were selected through simple random sampling and multistage stratified sampling method from seventeen (17) PTTCs. The research instruments used were questionnaires and observation schedule. Data was analysed using frequencies and percentages. Findings indicate that teacher trainers were academically qualified to teach the syllabus. About 64.2% of the teacher trainers were graduates with bachelor of education degree and 19.4% had master's degree in education. Further, 59.3% of the teacher trainers had attended an in-service seminar/workshop on teaching the syllabus. About 73.0% of the teacher trainers had positive attitudes towards teaching HIV/AIDS syllabus. Teaching methodologies commonly used were discussions (91.6%), question and answer (87.2%) and lecture method (86.6%). Student teachers knowledge about HIV transmission was found high. Overall the student teachers attitude towards the value of HIV/AIDS syllabus was positive. The most commonly used teaching materials /learning resources were Kenya Institute of Curriculum Development (KICD) syllabus (96.0%), KICD Publications (93.6%), textbooks (98.8%), use of resource persons (71.0%) and charts and posters (70.0%) respectively. On adequacy of the syllabus (59.7%) of the teacher trainers felt that the syllabus content was inadequate. From the findings of this study it is apparent that the syllabus was worthy implementing in PTTCs since teacher trainers and student teachers had positive attitudes and appeared to be enjoying teaching and implementing the syllabus. Although HIV/AIDS syllabus is being implemented through other subjects it has been effectively implemented. The study concluded that teacher trainers were well equipped with requisite knowledge to teach HIV/AIDS syllabus, teacher trainers and student teachers had positive attitudes towards HIV/AIDS syllabus implementation. The study recommended that in-service and orientation on professional practices, through guidance and supervision by the Ministry of Education Science & Technology (MOES&T) be carried out on teacher trainers. That participatory method of teaching which include role play, dramatization, visits and discussions should be used more in the teaching/implementation of HIV/AIDS syllabus in PTTCs.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Acquired Immunodeficiency Syndrome (AIDS) has claimed more than 30 million people since it was first recognized in 1981 making it one of the most destructive epidemics in recorded history (Joint United Nations Programme on HIV/AIDS [UNAIDS], 2012). Despite recent improved access to anti-retroviral treatment and care in many regions of the world AIDS epidemic claimed 1.2 million lives in 2011 out of which 230,000 were children [UNAIDS], 2012).

Globally there are 34 million people living with Human Immune deficiency Virus [HIV] /AIDS (UNAIDS, 2012). Africa remains by far the worst hardest affected region in the world (Oyoo, 2003). Out of the estimated 34 million people living with HIV/AIDS by the end of 2011, 23.5 million people are in Sub-Saharan Africa (SSA) and 300, 000 in North Africa and Middle East. South and South East Asia is the second hardest hit in the world with 4.0 million people living with HIV/AIDS followed by Latin America with 1.4 million people. Eastern Europe and Central Asia has 1.4 million people while North America, Western and Central Europe has 2.3 million people. East Asia, Caribbean and Oceanic are least affected with 830,000, 230,000 and 53,000 respectively (UNAIDS, 2005). In 2007, there were close to 5 million new infections worldwide, out of this SSA alone had 3.2 million (UNAIDS, 2012). Despite these gains, Sub-Saharan Africa accounted for 71% of the adults and

children newly infected in 2011, underscoring the importance of continuing and strengthening HIV prevention efforts in the region (UNAIDS, 2012). In Africa, the epidemic is concentrated in the so called AIDS belt stretching from East through Central and Southern Africa where typically, infections are over 15% of the sexually active population (Kavin, 2000).

East Africa continues to provide the most hopeful indications that serious AIDS epidemic can be reversed (UNAIDS, 2005). The countrywide drop in HIV/AIDS prevalence in Uganda since the mid 1990's is now being mirrored in urban parts of Kenya where infection levels are dropping in some places quite steeply (NASCOP, 2005). In Kenya, the first HIV/AIDS case was detected in 1984 (Republic of Kenya, 1997). The Government of Kenya (GOK) in 1997 established HIV/AIDS policy guidelines in the Sessional paper No.4 and in 1999 HIV/AIDS was declared a national disaster (Central Bureau of statistics (CBS) [Kenya] & Ministry of Planning and National Development, 2005).

The epidemic peaked in Kenya in the year 2007 with an overall prevalence of 7.6% in adults that declined to 5.6% in 2012 in many parts of the country (NASCOP,2014). Prevalence estimates by county shows the geographical variability of the HIV burden across the country. It is estimated that HIV prevalence ranges from a high 27.1% in Homa Bay County to below 0.2% in Wajir County. Ten counties have an estimated prevalence higher than the national average, while 7 counties have prevalence of less than 2% (NASCOP, 2014)

Despite the decline, HIV/AIDS continues to ravage every sector of Kenya's economy leaving behind thousands of orphans and creating wide spread poverty and helplessness among the population (Central Bureau of Statistics [CBS] {Kenya}. et al. 2004). It is estimated that 1.6 million people have been infected while 49,126 died from the disease in 2011 (National AIDS Control Council [NACC], 2011).

Majority of people in Kenya contract HIV/AIDS virus through sexual contact thus need for multi-sectoral and comprehensive programming aimed at promoting interventions that reduce high risk sexual behaviour (CBS et al., 2004). The Kenya national vision calls for concerted efforts towards a national transformation that ensures our prosperity and global competitiveness by 2030 for a health vibrant and productive population is essential for Kenya to achieve vision, 2030 (NACC, 2011). The GOK through Ministry of Education Science and Technology (MOES&T) produced HIV/AIDS syllabus for schools and colleges (MOES&T, 1999).

The HIV/AIDS syllabus was introduced to promote behaviour change and development that is appropriate to the youth stage of development and HIV/AIDS prevention and control. Schools have access and organization structure to provide coherent programme of HIV/AIDS education (Kealey, Peterson, Gaul, & Divoh, 2000). The HIV/AIDS syllabus objectives for colleges are to: -equip teachers with necessary knowledge, skills and attitudes to enable them handle HIV/AIDS education content competently; expose teachers to the subject content; equip teachers with appropriate methodologies

of handling and assessing the content and familiarize teachers with the curriculum of all primary levels they are being prepared to teach.

The syllabus is meant to be learnt through other subjects in the curriculum or be taught as a separate subject (MoES&T, 1999). Traditionally school based curricular are provided by teachers, making teachers key to successful implementation (Kealey et al., 2000). Consequently, teacher training is regarded as essential for effective implementation in schools of any innovative teacher provided curriculum (Cameron, 1991).

After training student teachers they are expected to disseminate HIV/AIDS knowledge to primary school going children. The purpose of the primary school HIV/AIDS curriculum is to equip the pupils with the necessary knowledge, skills and attitudes that will enable them adopt behaviour that will help prevent them from being infected with and spreading HIV/AIDS. In turn, the pupils will communicate effectively facts and issues on HIV/AIDS to their peers and other members of the society (MoES&T, 1999).

HIV/AIDS is threatening children as never before (United Nation Children's Fund [UNICEF], 2005). Children under 15 years account for 1 in 6 global AIDS related deaths and in 1 in 7 new global HIV infections. A young person aged 15-24 years contract HIV every 15 seconds (UNICEF, 2005). To halt and begin to reverse the spread of the disease, young people must be provided with facts about HIV transmission and how to prevent it. More than two decades into the pandemic surveys have established that the majority of young people

still have a limited understanding on how to protect themselves from the virus (UNICEF, 2005). According to UNAIDS, (2008) more than ten million young people globally are living with HIV, two-thirds of whom live in Sub-Saharan Africa. New HIV infections are concentrated among young people, with roughly 45 per cent of all new infections occurring among those aged 15 to 24 years. Globally, women constitute 50 per cent of the total number of people living with HIV, but in Sub-Saharan Africa, this proportion rises to approximately 61 per cent. Each day, more than 2400 young people become infected with HIV virus and some five million young people are living with HIV.

Most of the world's births to adolescents 95 per cent occur in developing countries, and nine in 10 of these births occur within marriage or a union. About 19 per cent of young women in developing countries become pregnant before age 18. Girls under 15 account for 2 million of the 7.3 million births that occur to adolescent girls under 18 every year in developing countries (UNFPA, 2013).

About 19 per cent of young women in developing countries become pregnant before age 18 (United Nations Populations Fund (UNFPA), 2013). According to estimates for 2010, 36.4 million women in developing countries between ages 20 and 24 report having had a birth before age 18. Of that total, 17.4 million are in South Asia. Every year in developing countries, 7.3 million girls under the age of 18 give birth (UNFPA, 2013).

In Kenya, dropout rate among girls in primary schools has been attributed partially to early pregnancies. According to the reports in ("School's tragedy," 2005), and ("Eight girls quit school after falling pregnant," 2005) five pupils of a primary school in Butere dropped out of school due to pregnancy in standard five, three of the girls were in standard five while others in standard seven. In Bomet, eight pupils dropped out among them a standard three pupil. This confirms that many young people become sexually active in their teens and many before their 15th birthday (UNAIDS, 2004).

The HIV/AIDS related death amongst teachers is much higher compared to any other employed group (Lodiaga, 2000). About 10 teachers die of AIDS weekly translating to 400 teachers in a month ("AIDS death among teachers worrying," 2005). Teachers who are closest to the pupils and are expected to improve on their preventive behaviour are the ones most at risk. Who then will be the role model of the children?

Mumah, (2003) reported that primary school teachers are aware of HIV/AIDS but in depth knowledge regarding HIV/AIDS is still wanting. Lestor, (2005) argues that most human behaviour is influenced by attitudes, and attitude articulation is often a function of information or knowledge base. Moskal, (1991) and Mumah, (2003) suggest however that merely providing information to students about how HIV is transmitted is not sufficient to effect behavioural changes. Strategies must be developed that motivate students to change their sexual behaviour (Edgar, 1988).

Multi-faceted approach in teaching HIV/AIDS syllabus has been recommended it includes: role play, discussion, dramatization, demonstration and case studies among others (MoES&T, 1999). Lipson, (1991) suggest attitudinal changes require more than the passive absorption of knowledge through lecture method, discussion and visual messages. Lipson, (1991) further suggest that more interactive designs, in which students are encouraged to respond, reflect and elaborate upon what they are seeing and hearing. This is in agreement with Njagi, (2003) and Fennel, (1990) who indicated that use of interactive methods as more efficient in teaching HIV/AIDS syllabus and direct interaction with HIV positive individuals seems to illicit the most attitudinal change respectively. Behaviour change programmes seek to promote safer individual behaviour as well as changes in social norms that generate healthier patterns of sexual behaviour. Behaviour change is complex; it involves knowledge, motivations and choices, which are influenced by social cultural norms, as well as risk assessment in relation to immediate benefits and future consequences (UNAIDS, 2012)

According to Lodiaga (2000) HIV/AIDS education curriculum materials in use to date are reported not to be youth friendly in terms of gender and cultural sensitivity. Some of them are also not appropriate due to fast changes and development in the HIV/AIDS research. Schools and colleges have inadequate and appropriate materials for teachers (Lodiaga, 2000). Pressure of examination oriented education curriculum force the youth to pay greater attention to examinable subject in their studies compared to low level of

attention to some aspects of HIV/AIDS curriculum. There has been allegation that students leave college when they are not well prepared enough and curriculum specialists think that the content they have to cover in colleges is either inadequate or irrelevant (Omulando & Shiundu, 1992).

The introduction of Free Primary Education (FPE) in Kenya in 2003 contributed to rise in primary school enrolment (CBS, 2005). Total enrolment in primary schools was 7.4 million in 2004 up from 7.1million in 2003 (CBS, 2005). The completion rates also improved from 52.0% in 2003 to 56.0% in 2004 (CBS, 2005). The current primary school completion rate is 80 % (NACC, 2011). The annual school dropout rate improved from 5.0% in 1999 down to 2.0% in 2004. The number of registered KCPE candidates increased by 13.0% from 570,047 in 2003 to 644,813 in 2004 (CBS, 2005). Gross enrolment rates in public primary schools by gender in ages (6-13) are 3,810,400 male pupils and 3,574,400 female pupils totalling to 7,384,800 (CBS, 2005).

From the above statistics, it is clear that most of the children today in Kenya can access and complete their basic education. If at this stage children are well equipped with knowledge and strategies for negotiating sexual relationships and options for relating to the opposite sex that do not involve sexual contact then we have a guarantee of raising children free of HIV/AIDS (Kavin, 2000).

1.2 Statement of the problem

The quality of knowledge teachers hold concerning HIV/AIDS is wanting (Economic Commission for Africa [ECA], 2000). This is attested by the fact that HIV/AIDS awareness in Kenya is registered at 99% of the entire population (NACC, 2001). In addition, Primary Teachers Training Colleges (PTTC's) require student teachers to have some HIV/AIDS related coursework in order to graduate (White & Ballard, 2001). Other than the colleges, the universities which train post-primary teachers now require pre-service on HIV/AIDS education course for the teacher trainers.

Farrant (1980) noted that expert knowledge and related pedagogical skills, though important to a teacher, do not by themselves provide adequate training for teachers. In addition to equipping student teachers with subject knowledge and teaching skills teacher education should develop in them useful characteristics such as dependability, honesty, moral integrity, initiative, firmness, kindness, and patience. These, in turn, will help shoulder their responsibility of guiding impressionable young minds into well-adjusted responsible and morally upright members of society (Kibera, 2005). Planned instruction regarding HIV/AIDS in PTTCs has been introduced by MOES&T. The teacher trainers are the implementers of the intended syllabus. Their mastery of the content should effectively be demonstrated in the classroom when teaching the offered syllabus. The students who are the receivers of the intended syllabus should be able to interact with the syllabus as intended (Pinar & Irwin, 2004). Teacher trainers for PTTCs training at the university

tend to emphasize content as opposed to methods and skills, which Diploma colleges concentrate more on (Republic of Kenya, 1999). This is an indicator that teacher trainers do not share a common training background.

Research conducted by Kiringa, (2003), Ouko, (2003) and Kelly, (2000) revealed that implementation of HIV/ AIDS education in schools is facing a number of problems which including inadequacy of teacher knowledge and confidence, embarrassment in treating of sexuality issues with the young and with those of opposite sex, lack of preparation to teach psycho-social skills and HIV/AIDS prevention, feeling that part of the curriculum is not critically important, and anxiety that in dealing with sexuality and sexual behaviour would break traditional taboos and offend parents.

The HIV/AIDS scourge marches on aggressively killing yet many teachers ("AIDS death among teachers worrying," 2005). This casts a shadow of doubt on the quality of in-service and pre-service training being offered to teachers (Mumah, 2003). The knowledge gained from the training has not been translated to behaviour modification. Indirectly, the teacher influences students by examples through verbal and non- verbal behaviour, classroom rules and regulations and interpretation of values embodied in the subject matter taught to learners (Kibera, 2005). Teachers and pupils are either affected or infected by HIV/AIDS. This shows inadequacy of knowledge teachers are getting about HIV/AIDS therefore the need to evaluate HIV/AIDS syllabus implementation in PTTCs.

1.3 Purpose of the evaluation study

The purpose of this study was to evaluate the implementation of Human Immune Deficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) syllabus in Primary Teacher Training Colleges (PTTCs) in Kenya. The main components of the HIV/AIDS syllabus which were evaluated consisted of the capacity of teacher trainers, teaching methodologies, assessment methods, teaching/learning materials, students' knowledge and attitude, challenges encountered in the implementation of the HIV/AIDS syllabus and extent of the adequacy of the syllabus

1.4 Objectives of the evaluation study

The study was guided by the following objectives:-

1. To establish the extent to which teacher trainers in PTTCs are equipped with relevant knowledge to enable them teach HIV/AIDS education syllabus.
2. To determine whether teacher trainers in PTTCs are equipped with the skills and attitudes to enable them teach HIV/ AIDS syllabus.
3. To identify the teaching methodologies employed by teacher trainers in PTTCs in teaching HIV/ AIDS education.
4. Establish HIV/ AIDS assessment methods used by teacher trainers on student teachers in PTTCs.
5. To determine student-teachers knowledge and attitude towards HIV/AIDS.

6. To establish the teaching materials / learning materials used by teacher trainers in teaching HIV/AIDS education syllabus in PTTCs.
7. To identify the problems encountered by teacher trainers in implementing HIV/AIDS education syllabus in PTTCs.
8. Establish solutions / suggestions to problems experienced while implementing the HIV/AIDS syllabus.
9. Establish the adequacy of HIV/AIDS education syllabus.

1.5 Research questions

The study sought to address the following research questions:-

1. To what extent are teacher trainers equipped with the relevant knowledge to train the student teachers of primary schools?
2. Are teacher trainers well equipped with the necessary skills and attitudes to train the student teachers of primary schools?
3. What methodologies/ teaching styles are the teacher trainers using to train the student teachers of primary schools?
4. What mode of assessment is being used by teacher trainers to examine the student – teachers?
5. What is the attitude of student – teachers towards HIV/AIDS syllabus?
6. Are the teacher trainers having adequate teaching materials to implement the syllabus?
7. What problems are the teacher’s trainers experiencing when handling the HIV/AIDS syllabus?

8. What solutions / suggestions do you recommend to problems you are facing in implementing HIV/AIDS syllabus?
9. To what extent is the syllabus content adequate?

1.6 Significance of the study

Educational interventions are unlikely to achieve their desired aims unless they are implemented as intended (Basch, 1984) and (Botvin, 1990). It should not be assumed that once schools adopt an innovation full implementation would follow (Basch, 1984) and (Resnicow, Cross, & Wynder, 1993). In general, interventions are more likely to be implemented successfully if they are relatively simple to understand and deliver (Rogers, 1995) and do not require high levels of resources.

Teachers are core to any successful implementation in school. Therefore, this study is important because it will explore the adequacy of the content of HIV/AIDS education syllabus and uncovers barriers that hinder effective implementation of HIV/AIDS syllabus in PTTCs. The research findings shall be important to the syllabus designers, they may be used in designing appropriate remedial measures to improve the subject. Investments in HIV/AIDS curriculum implementation are in vain if teacher trainers in PTTCs are not pre-serviced or in serviced on how to teach HIV/AIDS syllabus. Therefore, this study provides data on whether teacher trainers have been prepared to train the student teachers in PTTCs.

Evaluation of students' knowledge and attitude toward HIV/AIDS is essential for viable prevention strategies. With the increased enrolment rates in primary schools, the research will be very timely in providing necessary data to improve on the implementation. The research will also guide the government in formulating policies to guide HIV/AIDS campaigns and generate new knowledge in the area of curriculum studies.

1.7 Limitations of the study

The HIV/AIDS education syllabus dealt with sexual issues, which in African culture is a taboo to discuss openly. To overcome the limitation the researcher explained the importance of the study, the need for honesty and the guarantee on confidentiality of the information sourced.

1.8 Delimitations of the study

The research was delimited to the then twenty seven (27) PTTCs although the syllabus was being implemented in other institutions like Early childhood development teacher training, Technical teachers' training institutions and non-formal education providers. Therefore the findings of the study are delimited to PTTCs only. The researcher also did not evaluate the initial planning of the syllabus and the quality of output of the syllabus implementation.

1.9 Assumptions of the study

The assumptions of the study were as listed below:-

1. All PTTCs adhered to government directive of implementing HIV/AIDS syllabus.
2. Respondents provided accurate responses to the questions used in the study.

1.10 Definition of significant terms

The following are definitions of significant terms used in the context of this study:

Evaluation: refers to the systematic and objective assessment of a project or program either on-going or completed

Endemic: refers to (disease) continuously prevalent in a particular geographic location, community or population.

Epidemic: refers to a wide spread outbreak of a disease within a population.

HIV Prevalence: refers to the percentage of a population that is infected with HIV.

Implementation: refers to actual process of making curriculum real by ensuring that its ultimate clients who are the learners interact with it as was intended.

Integration: refers to inclusion of AIDS message into co- curricula and any other activities in and out of school.

Intended curriculum: refer to what is planned to be taught in the classroom by the curriculum developers.

Offered curriculum: refers to what teachers teach in the classroom on a day to day basis.

Pandemic: refers to a wide spread disease outbreak affecting the population of an extensive area of the world.

Received curriculum: refers to what students actually experience in the classroom.

Syllabus: refers to an outline and summary of topics to be covered in an education or training course.

Virus: refers to one of the smallest infectious organism, which only lives and reproduces in live cells of other living things that they infect.

1.11 Organization of the study

The study is organized into five chapters: the first chapter dealt with the introduction to the study which comprised of the background to the study, statement of the problem, purpose of the study, research objectives, research questions, limitations of the study, delimitations, basic assumptions of the study, definition of significant terms and lastly organization of the study.

Chapter two presents the review of related literature: Behavioural theory and HIV/AIDS education, HIV/AIDS syllabus and Leadership Obstacle Course (LOC) implementation model, Role of schools in mitigating HIV/AIDS transmission, Effectiveness of HIV/ AIDS school based programmes, Role of

teachers in behaviour change curriculum, Teacher trainers' knowledge, skills and attitude and implementation of HIV/AIDS education syllabus, Teaching methodologies and implementation of HIV/AIDS syllabus, HIV/AIDS assessment methods used by teacher trainers and implementation of HIV/AIDS syllabus, Teacher trainees knowledge and attitude towards HIV/AIDS implementation of HIV/ AIDS syllabus, Challenges encountered by teacher trainers in implementing of HIV/AIDS education syllabus in PTTCs, Teaching learning materials and resources and implementation of HIV/AIDS syllabus, Implementation of HIV/AIDS syllabus, Theoretical framework and finally conceptual framework of the study.

In chapter three, methodology of the study is presented. This is divided into research design, target population, sample and sampling procedure, the research instruments, pilot study, validity and the reliability of research instrument and finally the data analysis techniques. Chapter four consists of data analysis, interpretation and discussions. In chapter five, the summary of the findings, conclusions and recommendations for further research are presented. References and the appendices form the last section of this study.

CHAPTER TWO

REVIEW OF THE RELATED LETERATURE

2.1 Introduction

This chapter is organized under the following themes: Behavioural theory and HIV/AIDS education, HIV/AIDS syllabus and Leadership Obstacle Course (LOC) implementation model, Role of schools in mitigating HIV/AIDS transmission, Effectiveness of HIV/AIDS school based programmes, Role of teachers in behaviour change curriculum, Teacher trainers' knowledge, skills and attitude and implementation of HIV/AIDS education syllabus, Teaching methodologies and implementation of HIV/AIDS syllabus, HIV/AIDS assessment methods used by teacher trainers and implementation of HIV/AIDS syllabus, Teacher trainees knowledge and attitude towards HIV/AIDS syllabus, Challenges encountered by teacher trainers in implementing HIV/AIDS education syllabus in PTTCs, Learning materials and resources used in the implementation of HIV/AIDS syllabus, Implementation of HIV/AIDS syllabus, Theoretical framework and finally conceptual framework of the study.

2.2 Behavioural theory and HIV/AIDS education

Education for HIV/AIDS as a behavioural change strategy draws on several well-known behavioural theories. For example, social learning theory asserts that people serve as models of human behaviour and that some people are capable of eliciting behavioural change in certain individuals, based on the individual's value and interpretation system (Bandura, 1986). The theory of

reasoned action states that one of the influential elements for behavioural change is an individual's perception of social norms or beliefs about what people who are important to the individual do or think about a particular behaviour (Fishbein & Ajzen, 1975). The diffusion of innovation theory posits that certain individuals from a given population act as agents of behavioural change by disseminating information and influencing group norms in their community (Rogers, 1995). Education for HIV/AIDS draws from elements of each of these behavioural theories as it implicitly asserts that teachers can be influential in eliciting behavioural change among the students.

The theory of participatory education has also been important in the development of HIV/AIDS education (Freire, 1970). Participatory or empowerment models of education posit that powerlessness at the community or group level, and the economic and social conditions inherent to the lack of power are major risk factors for poor health (Amaro, 1995). Empowerment in the Freirian sense results through the full participation of the people affected by a given problem or health condition; through such dialogue the affected community collectively plans and implements a response to the problem or health condition in question. The Implementation of HIV/ AIDS syllabus in PTTC equally requires same effort from all people involved.

The study was also informed by the behavioural and humanistic approaches. B.F. Skinner's S-R theory stipulates that learning is a function of change in overt behaviour. Changes in behaviour are the result of an individual's response to events (stimuli) that occur in the environment. This theory

provides a framework to ideas on how and why people change behaviour that puts them at risk, for example HIV/AIDS infection. Such theories can strengthen the intervention by empowering people to personally develop their own solution to change their environment. Behaviourism is a function of knowledge or attitude. Humanistic theories emphasize that a person must first have the knowledge that there is a problem to be able to make informed choices. He/she must then understand the magnitude of that problem and the repercussions and develop an attitude. HIV/AIDS is basically a behavioural problem as it is mainly transmitted through behavioural practices such as unprotected sex, sex with multiple partners, sharing of sharp objects such as needles, razors, knives etcetera. As such to combat the pandemic it is widely accepted that people have to change their behaviour. To do so, people need accurate and timely information about HIV/AIDS. Such information is provided to teacher trainers through HIV/AIDS education. It is assumed that people contract HIV/AIDS due to lack of adequate and accurate HIV/AIDS information. Hence by providing HIV/AIDS education to PTTCs the MoES&T hopes to change behavior of the teacher trainers so that eventually they can provide accurate HIV/AIDS information to student teachers who will then provide accurate information the primary school pupils.

2.3 HIV/AIDS syllabus implementation and leadership obstacle course model

Neal, (1971) came up with LOC model to determine the success or failure of organizations. The model treats staff resistance to change as problematic and proposes that data should be gathered to determine the extent and nature of the

resistance (Allan & Francis, 1988). The idea is for leaders to neutralize this obstacle by making sure those five conditions of LOC model exists. They are discussed as follows: -

First, the organization member must be having a clear understanding of the proposed innovation. In the case of HIV/AIDS syllabus implementation in PTTCs, it is important to find out if teachers have a clear understanding of the proposed innovation, know what specific needs are being addressed by its implementation in PTTCs and intended audience. If teachers know reasons and justifications for the new syllabus it is more likely that they will accept to implement it.

Secondly, individuals within the organization must be given the skills and have the capabilities requisite for carrying out the innovation. This study seeks to establish if teachers are equipped with new skills and capabilities to enable them implement the syllabus. Teachers will suggest ways in which if those skills are lacking can be developed through in service activities.

Thirdly, the necessary materials and equipment for the innovation require new materials. In this study, teachers would be involved in suggesting what materials would be necessary in HIV/AIDS syllabus implementation. Leaders would guarantee that these materials and the necessary equipment for teaching HIV/AIDS syllabus would be forthcoming.

Fourthly, the organization – the school in this case must be modified so that it is compatible with the innovation being suggested. In the case of HIV/AIDS syllabus implementation schools need to reschedule the timetable to fit in the new syllabus. At the same time there is need to create space to accommodate new materials for the syllabus and officer in charge of the syllabus.

The last stage participants in the innovation must be motivated to spend the required time and effort to make the innovation a success. The people in charge of HIV/AIDS syllabus should make sure that rewards are built into the HIV/AIDS effort so that teachers are committed to the program. Teachers must be motivated not only to plan the curriculum, but also to take the time and to make the effort to deliver the HIV/AIDS syllabus as developed. The model explicitly guides curriculum planners on how implementation should be done

2.4 Role of schools in mitigating HIV/AIDS transmission

Education is critical to children's future potential and sense of self-esteem, and to the generational transmission of knowledge and values within societies (UNAIDS, 2008). Schools have a critical role to play in preparing children and young people for their adult roles and responsibilities (UNESCO, 2009). There seems to be a growing consensus that schools can play an important role in providing youth with a knowledge base which may allow them to make informed decisions and help them shape a healthy lifestyle (Ledger, 1999). The school is the only institution in regular contact with a sizeable proportion

of children (Zabin & Hirsch, 1988) with virtually all youth attending it before they initiate sexual risk-taking behaviour (Kirby & Coyle, 1997).

The transition to adulthood requires being informed and equipped with the appropriate skills and knowledge to make responsible choices in our social and sexual lives. In most countries, young people between the ages of five and thirteen spend relatively large amounts of time in school. Thus, schools provide a practical means of reaching large numbers of young people from diverse social backgrounds in ways that are replicable and sustainable (UNESCO, 2008). Teachers are likely to be the most skilled and trusted source of information. Moreover, in many countries, young people have their first sexual experiences while they are still attending school, making the setting even more important as an opportunity to provide education about sexual and reproductive health (UNESCO, 2009).

Schools provide an effective way to prevent the spread of HIV/AIDS and potential to provide culturally sensitive and age-appropriate programs (Kirby & Coyle, 1997). It is in schools, where dissemination of accurate, comprehensive information and provision of opportunities for the development of skills relevant to HIV/AIDS topic, such as delaying of sexual activity, condom use, abstinence, sexual decision making and HIV/AIDS risk behaviours as the most effective preventive methods can be taught to combat this fatal disease (Ford et al., 2001). Other researches done indicate that schools represent the most efficient means of teaching majority of the youth about HIV and AIDS (Ford et al., 2001).

School is important principally because it reaches a large proportion of the young population for many years. The school settings provide an opportunity to communicate with young people and provide learning opportunities and a safe environment to practice new skills especially towards risky sexual behaviours. It also helps young people increase understanding about health issues and therefore make informed choices about their behaviour, help them feel good about themselves and others and foster the development of communication and decision making skills. Aggleton (1996) summarises the findings from numerous studies and identifies the Provision of relevant information, exercises and activities to encourage personal appraisal of risk and awareness, skills training in negotiation and communication awareness and access to appropriate health services and condoms as likely to promote the sexual and reproductive health of young people.

Many aspects in school can promote or inhibit health behaviour. Hidden curriculum and the way messages are transmitted through children and young people's daily experience of their surroundings and relationships at school is important. The quality of social interactions among pupils between staff contribute to the ethos and climate in a school (Jennie Naidoo & Jane Wills, 2000).

2.5 Effectiveness of HIV/AIDS school based programmes

The urgency to educate general public about AIDS stems from the fact that until a cure for the disease is found, education is the primary means by which

the disease can be prevented or contained. Countries, which have introduced school-based programs to teach HIV/ AIDS education, reveal increased knowledge and slight change of behaviour (Ford, Zimmerman, Anderman, & Lynda, 2001). In the past decades many school-based programs have been designed for the sole purpose of delaying the initiation of sexual activity (Silva, 2002).

Research done reveals that a well-planned and implemented life skills or sex and HIV education interventions, even when provided for short periods, have been found to increase knowledge; develop skills that is self-efficacy to refuse sex and obtain male and female condoms and positive attitudes required to change risk behaviours such as values about sex and pressuring someone to have sex; and reduce sexual risk behaviours among the sexually active (Bankole *et al.*, 2007; Paul- Ebhohimhen, Poobalan, van Teijlingen, 2008; Gallant and Maticka-Tyndale, 2004; Magnussen, Ehri, Ejere and Jolly, 2004; Speizer, Magnani and Colvin, 2003; Kirby, Laris and Roller, 2005; Kirby, Obasi and Laris, 2006). HIV and AIDS education reduces the risk of HIV by delaying the age of first sexual encounter, increasing male and female condom use, reducing the number of sexual partners among those already sexually active, attitudinal changes, greater acceptance of people living with HIV or AIDS, promoting the early treatment of STIs, facilitating access to confidential and voluntary counselling and testing (VCT), and reducing other behaviours that increase risk such as drug use, in particular injecting drug use.

2.6 Role of teachers in behaviour change curriculum

Teachers in the classroom have a responsibility to act in the place of parents, contributing towards ensuring the protection and well-being of children and young people. (UNESCO, 2009). From the perspective of a classroom, instructional leadership requires teachers to take the lead in how children and young people experience sexuality education through discovery learning and growth. Teachers are often the main adults other than family members with whom young people interact on a daily basis (Tijuana, 2004). In an era of HIV/AIDS, teachers play an even more critical role of being a source of accurate information and a person with whom young people can raise sensitive and complicated issues about sexuality. As the AIDS epidemic spreads, the need becomes more urgent for teachers to discuss AIDS in the context of human development, sexuality, and pregnancy prevention. Teachers also need to know how to protect their own health and the importance of not putting any of their students at risk through their own behaviours.

Ideally, as trusted gatekeepers of information, teachers can be instrumental in imparting knowledge and skills to young people. Teachers can function as role models, advocates for healthy school environments, guides for students in need of services, resources for accurate information, mentors, and effective instructors. But to meet these expectations in the AIDS era, teachers need skills and knowledge as well as support from the educational system and broader community.

The global epidemic cannot be reversed without sustained success in reducing new HIV infections among young people. Nearly half the world's population is under 25 (UNFPA, 2006). Globally, it is estimated that young people under age 25 accounted for an estimated 45% of all new HIV infections in adults in 2007. While knowledge alone is often insufficient to produce long-lasting behaviour change, an accurate understanding of the risks of HIV and how to prevent exposure is a prerequisite to risk reduction. Tragically, many young people lack basic knowledge about HIV prevention. Survey data from 64 countries indicate that 40% of males and 38% of females aged 15–24 had accurate and comprehensive knowledge about HIV and about how to avoid transmission (UNFPA, 2006).

Although this represents an improvement, especially for females, over 2005 knowledge levels, when 37% of males and 28% of females were found to have a basic knowledge of HIV, knowledge levels in 2007 are still well below the Declaration of commitment's goal of ensuring comprehensive HIV knowledge in 95% of young people by 2010. A behaviour change curriculum involves innovative learning activities that may require the use of new or non-traditional teaching styles with which teachers are unfamiliar with (Botvin, 1990).

The teacher is an important part of any education system. Within the context of HIV/AIDS teachers have two major roles: - helping to protect the young by giving them the required knowledge and skills for safe and abstinence living as well as protecting themselves from becoming infected (Kavin, 2000). The

HIV/AIDS education aims at modifying students' behaviour. To adopt a new behaviour, an individual must know what actions constitute that behaviour. Likewise to implement effectively teachers must understand what is expected of them in their role as curriculum providers (Kealey et al., 2000). This is particularly true in the case of behaviour change curriculum that requires mastery and implementation of new teaching techniques.

According to Coombs, (1962) the role of a teacher in behaviour change curricula should be that of a person who assists, helps, aids and ministers to growing living dynamic organisms already in the process of becoming. The teacher should also be able to guide the learner to interact with the content practically, instead of theoretically drilling them through it for the purpose of passing examinations.

2.7 Teacher trainers' knowledge, skills and attitudes towards implementation of HIV/AIDS syllabus

Implementation of a new programme entails social action that builds a climate of acceptance for the change. It is, thus, an interaction process between those who have created the programme and those who are charged to deliver it (Ornstein & Hunkins, 1998). Loucks and Lieberman (1983) define curriculum implementation as the trying out of a new practice and what it looks like when actually used in a school system.

Putting the curriculum into operation requires an implementing agent who is the teacher. It has long been recognized that teachers have a major role in

determining and implementing the curriculum. They interpret and give life to the curriculum specifications of governments and ministries, and translate curriculum intentions into classroom practices (Norris, 1998). As Scott (1994) mentions, they not only control the rate but also the degree of change of any curriculum. Stufflebeam & Shinkfield (1986) argue that effective curriculum implementation include staff development strategies, as teachers need to be equipped to adjust their classroom instruction according to the requirements of the new curriculum.

The most important person in the curriculum implementation process is the teacher. With their knowledge, experience and competencies, teachers are central to any curriculum implementation effort. Regardless of which philosophical belief the education system is based on, there is no denying that teachers influence students' learning. Better teachers foster better learning. Teachers are most knowledgeable about the practice of teaching and are responsible for introducing the curriculum in the classroom.

Stenhouse (1975) identifies the teacher as the agent in the curriculum implementation process. She argues that implementation is the manner in which the teacher selects and mixes the various aspects of knowledge contained in a curriculum document or syllabus. Teachers, in particular, play a central role in the implementation of a school curriculum. Fullan (2001) thus argues the importance of the teacher as a central change agent, as the teacher is the one who is primarily responsible for the successful implementation of a

new curriculum. Implementation takes place when the teacher's personality, the teaching materials and the teaching environment interact with the learner (University of Zimbabwe, 1995).

The importance of teachers in curriculum planning, development and most importantly implementation cannot also be overemphasized. Widdowson (1993) pinpoints the importance of taking into consideration teachers' roles in the curriculum implementation process in relation to other participants, such as policymakers, researchers, materials designers, and learners involved in the educational process. Teachers make important decisions with consequences for students. In the classroom, they do so behind closed doors. No one can control all the specific decisions that teachers make, even during a highly specified instructional episode (Tanner & Tanner, 1995).

A major setback in effective curriculum implementation is the problem of unqualified teachers, especially specialist teachers in areas like vocational and technical subjects. In most instances, curriculum is designed up to implementation without adequate manpower to translate these documents into reality.

According to Morrison, Bachman, & Connor (2005) the teacher's pedagogy, classroom management strategies, and interactions with students at classroom level can determine how much is learned. Therefore, learning is contingent on the teachers' ability to create and sustain optimal learning environments. There are at least three important dimensions of teaching that influence learners' literacy acquisition directly or indirectly: (1) the classroom

environment teachers create, (2) teachers' warmth and responsiveness to their students, and (3) the amount and type of instruction they provide (Morrison, Bachman, & Connor, 2005).

Alexander (2001) argues that there are three elements of teaching: (i) frame, (ii) form and (iii) act. That the core acts of teaching that is task, activity, interaction and judgement are framed by classroom organisation called 'space', pupil organisation, time and curriculum, and by classroom routines, rules and rituals. If the teacher is to be able to translate curriculum intentions into reality, it is imperative that the teacher understand the curriculum document or syllabus well in order to implement it effectively (University of Zimbabwe, 1995).

In the context of classroom interaction, the transmission, facilitation and acceleration are very important components for effective learning. For instance, learning in the classroom involves arranging and transferring of information from a source (teacher) to destination (learner) (Heinichi, Molender, & Russel 1999). In this respect effective communication on the part of the teacher is an integral part of effective classroom interaction. However, scholars have identified other variables as being important for the quality of instruction that is received in a classroom. These include, attitude of the teacher (Osakwe, 2009), knowledge base, and mastery of subject knowledge by the teacher (Osakwe, 2009; Darling-Hammond, 2000), and the socio cultural context (Osakwe, 2009). These scholars are in consensus that a substantial proportion of student achievement is attributable to the

characteristics and performance of the teachers in their respective schools. According to Darling-Hammond (2000) differences in teacher effectiveness determines students' achievement over and above the effects of class size and heterogeneity in a classroom.

Moreover, teachers' attitude has also been found to be associated with quality teaching and learning in the classroom. For example, possession of positive work attitude enhances teaching, thereby leading to the achievement of learning objectives and the overall educational objectives (Okorodudu, 2006). This implies that teachers who possess negative attitudes impair the ability of students to receive messages from the subjects that they teach, leading to wrong interpretation of concepts. Research also shows that the teachers' knowledge is key to effective interaction in the classroom (Osakwe, 2009; Okorosaye-Orubite, 2005, Darling-Hammond, 2000).

Traditionally school based curricular are provided by teachers, making teachers key to successful implementation (Kealey et al., 2000). Consequently, teacher training is regarded as essential for effective implementation in schools of any innovative teacher provided curriculum (Cameron, 1991). Some studies have shown that in-service training is positively related to more complete implementation and in some cases enhanced student outcome (Ross, Luepker, Nelson, Saavedra, & Hubbard 1991).

Increasingly, countries are beginning to offer HIV/AIDS education in schools for younger youth as from ages 8 to 12. Some teachers will need to know how to relate to students of different ages and use different materials and strategies. In addition, meeting the needs of students requires an ability to relate to young people, build trust in the classroom, and be a good listener. No subject requires better communication skills with students than teaching about sexuality, reproductive health, and HIV/AIDS.

Training is important in boosting teachers' self-confidence in handling elements of HIV/AIDS education which teachers consider challenging (Buston, 2002). It is also important in translating psycho-social theory into acceptable classroom lessons in order to meet the needs of policy makers, address school and classroom cultures, and acknowledge the requirements and skills of teachers whilst retaining core elements which research suggests encourages behavioural change (Wight & Abraham, 2000). The ultimate goal of teacher training for HIV/AIDS is to improve students' knowledge, attitudes, and behaviours regarding reproductive health and HIV. But effective training first has to have an impact on the teachers themselves, helping them examine their own attitudes toward sexuality and behaviors regarding HIV prevention, understand the content they are teaching, learn Participatory teaching skills, and gain confidence to discuss sensitive and controversial topics (Tijuana, 2004).

Student teacher trainers are critical, often neglected group and should receive adequate training to prepare them for their roles. Their comfort and abilities will certainly influence new and impressionable teachers. Training primary school teachers offers an opportunity to reach young people before these youth become sexually active and to help those who are already active to protect themselves from pregnancy and disease. Introducing all teachers to HIV/AIDS content has value, especially where the content is infused throughout the school's overall curriculum (Tijuana, 2004).

Research has found that teacher training can positively affect teachers' attitudes toward sexuality education and participatory techniques. In Thailand, 35 teachers received training that emphasized a better understanding of young people and their environment, the teachers' own attitudes and values toward HIV/AIDS and sexuality, and learning and practicing key skills in facilitating HIV/AIDS and sexuality training. Using pre- and post-tests and interviews, researchers found that following the training, the teachers had more knowledge and understanding of HIV/AIDS, more positive attitudes toward young people's sexuality and toward people living with HIV/AIDS, an increased willingness to use participatory methods, stronger facilitation skills, increased communication and better relationships with students, and a greater commitment toward teaching about sexuality and HIV/AIDS. Some research has shown that teacher training incorporated into a broader school district intervention can influence students' behaviours.

A project in the Soroti district of Uganda with students ages 13 to 14 included teacher training on Reproductive Health (RH) /HIV in the existing structures of the school district, using a health educator, the local teacher training college, and other resources. Two years after the baseline survey, students whose teachers had received the training reported a significant decline both in having sexual intercourse in the past month and in the average number of sexual partners. The control group did not have similar reductions. The study concluded, “To have an impact on behaviour, the quality of delivery of the curriculum and teaching strategies must be of sufficient quality and intensity. The quality of the implementation is probably more important than the detailed design of materials or curricula. Life skills programs that addressed HIV/AIDS issues are more effective when teachers explore their own attitudes and values, establish a positive personal value system, and nurture an open, positive classroom climate.

Sexuality and Reproductive Health / HIV/AIDS education are often controversial because some individuals believe that talking about sexuality in schools may increase sexual activity. However, according to two exhaustive reviews of studies by the World Health Organization (WHO) and the U.S. National Campaign to Prevent Teen Pregnancy, sexuality education programs do not lead to an increase in sexual activity among young people. Even more encouraging, the reviews found that effective Reproductive Health / HIV/AIDS education in schools can result in delaying, first intercourse or, if young people are already sexually active, increasing use of contraception

(Grunseit A,1997). Both reviews found that teacher training including the kind of preparation, training and support a teacher receives is a key component of a successful school-based Sexuality and Reproductive Health / HIV/AIDS program.

The analysis of 250 evaluations of United States sexuality education programs identified one of the key elements that led to greater behaviour change to be a teaching approach that actively involves students, is skill-based, and uses real-life situations. A recent analysis of 11 school-based HIV prevention programs for African youth also identified teacher training as critical. If a program is to be faithfully implemented, teachers must be properly trained for and committed to it the analysis concluded (Gallant M, 2004). The HIV/AIDS epidemic in developing countries has resulted in more attention to developing student curricula and training teachers to use the curricula.

Education provides knowledge and information, and to develop the necessary skills so that people can make an informed decision about their health behaviour. The education approach towards HIV/AIDS prevention is based on set of assumption about relationship between knowledge and behaviour: that with increased knowledge, there will be a change in attitudes which may lead to changed behaviour. Learning involves cognitive that is information and understanding while affective involves attitudes and feelings and behavioural skills.

According to Social Psychology theories of behaviour change, people's behaviour is partly determined by their attitude to that behaviour. An individual attitude to a specific action and the intention to adopt it is influenced by beliefs, motivation which comes from the people's values, attitudes and drives or instincts, and influences from social norms. A belief is based on the information a person has about an object of action. It links the object to some attribute. For example, someone believes that unprotected sexual contact leads to HIV infection. The person will avoid risk sexual behaviour which leads to HIV transmission. The information will influence beliefs which will in turn influence behaviour.

Values are acquired through socialization and there are those emotionally charged beliefs which make up what a person thinks is important. Persons' values will influence a whole range of feelings about family, friendship and career. Attitudes are more specific than values and describe relatively stable feelings towards particular issues. Peoples attitude are made up of cognitive and affective. HIV/AIDS syllabus implementation requires that the students be given the correct information to enable them establish their beliefs and attitude in order to form a character that will enable them to live free of HIV virus.

2.8 Teaching methodologies and implementation of HIV/ AIDS syllabus

The final destination of any curriculum is the classroom. As we enter the classroom, decision making becomes the responsibility of the teacher. A teacher is viewed to be the key learning resource not so much the main source of knowledge but as the central organizer of learning for their learners. As the

central organizer of learning, the teacher's use of instructional materials is paramount as Wasiche (2006) states that the best way of organizing teaching and learning is to use a variety of instructional methods.

Instruction related factors are also identified as influencing the process of curriculum implementation and the learning environment. For instance, whether students are interested in the subject matter and motivated to learn, the connection of subject matter to daily life positively influenced both the curriculum implementation process and the learning environment. Teachers are therefore expected to follow the prescribed syllabus exactly and make sure that they do not miss any topic/component. When teachers diligently follow a prescribed syllabus in teaching a lesson, then they are considered to have fidelity of use or fidelity of implementation.

Implementing instruction in the classroom includes specifying instructional or learning goals, selecting content, selecting learning experiences and choosing techniques or tasks to evaluate instruction. In planning for instruction lesson plans are used. A lesson plan is an outline prepared in advance of teaching, so that time and materials will be used efficiently (Peter, 2009). Ideally, different lessons require different lesson plans and different students require different lesson plans.

Instructional approaches are important elements during curriculum implementation. It is assumed that as the curricula change so should the instructional methodology (MoE, 2011). Wang, Nojan, Strom and Walberg (1984) posit that for the curriculum to be implemented effectively, alternative

instructional methods need to be adopted too. According to (MoE, 2011) the learner should be placed at the centre of the teaching and learning process through methods that actively and meaningfully engage them in learning activities. Such methods include, group activities, discussion and problem solving.

Wasiche (2006) observes that small group instructions during the lesson, a teacher assisting one student at a time especially *weak* or *low achievers*, encouraging students to demonstrate to each other during the lesson, providing frequent feedback by giving assignments, marking and revising assignments immediately, motivating students by providing incentives for any small progress and encouraging students to interact freely in class are some of the techniques that can enhance students performance.

Teacher-centred methods of teaching have been common in classroom because, teachers lacked confidence, mastery of subject matter content and basic teaching skills (Thijs, 1999), (Howie, 2002) and (Motswiri, 2004). Lack of teaching material, facilities and time and large class sizes have also made it hard to use learner-centred method of teaching especially in technical subjects (Howie, 2002).

Although a move away from traditional, a teacher-centred, direct instruction towards a more student centred, understanding based form of teaching that focuses on exploration and experimentation is fundamental to many contemporary reforms in science education, researchers report teachers continuing to teach in the same way they were taught. Smerdon and Burkam

(1999) found that teachers still view lecture as the most expeditious method for covering a large volume of material. Therefore students continue to listen, copy notes and watch demonstrations of experiments in science classes while their teachers lectured. Treagust (1991) also indicates that much of what students are required to do in classrooms can be tedious and is not intellectually demanding.

According to Ajibola (2008), when instruction is directed towards the needs of the child, there is an accompanying tendency to make sure that they fully understand the material being taught. The focus is no longer on how much students can remember, but how they understand; what meaning they makes of understanding; and, whether they can apply the knowledge and meaning in real-world situations.

Effective delivery of HIV and AIDS education requires a balance of teacher led and learner-centred methodologies. Traditional ‘chalk and talk’ teacher lectures and media such as posters and leaflets can convey facts and increase learner knowledge. Interactive and participatory teaching methods, such as song, drama, storytelling and role play, are more effective in addressing attitudes and behaviours and in helping learners to develop the skills they need to resist negative pressures and make healthy life choices. Participatory methods that allow learners to play an active role in the learning process can be interesting and enjoyable; promote critical thinking and learning through experience; and enable students to learn from each other. However,

participatory methods are time-consuming and require skilled facilitation to ensure that the learning objectives are clear and the focus is not lost (UNESCO, 2008).

Teachers' confidence in teaching sex and HIV/AIDS could depend on how they perceive their own ability to teach these topics (self-efficacy). This will only relate to whether they think they will be able to conduct various activities and exercises that they are supposed to. Studies have showed that some teachers feel uncomfortable with some of the teaching methods included in a programme like role play and group discussions (UNESCO, 2008).

The HIV/AIDS syllabus requires interactive teaching and skills-building sessions. It requires that teachers engage pupils in active learning sessions to stimulate creative and critical thinking and encourage a more open-minded attitude, so that students will feel personally engaged in the material (Family Health International (FHI), 2005). These includes group discussions using visual aids and materials, brainstorming, performing arts, and role-plays on how to say no to sex and how to discuss condom use with partners. These methods will enable young people to become actively involved in and responsible for their own learning (FHI, 2005).

Teacher should offer learning experiences appropriate to the social and cognitive development of pupils and that an ongoing and progressive programme or spiral curriculum, in which the same topics are revisited, is most effective. HIV/AIDS syllabus is effectively taught using learning

methods which are learner centered and participatory, but the drive to push up standards has meant many teachers reverting to traditional didactic method commonly known as 'chalk and talk' method (Jennie Naidoo & Jane Wills, 2000).

2.9 HIV/AIDS assessment methods used by teacher trainers in the implementation of HIV / AIDS syllabus.

Since most students want to succeed at school, what the assessment of their learning consists of, will virtually determine what learning activities they will undertake especially as the assessment period draws near. Those learning activities which are closely connected with what is included in the assessment are undertaken enthusiastically; and those which are only remotely linked with what goes into assessment package are hardly undertaken. Thus, student assessment is a powerful learning tool which can be used with great advantage in the teaching-learning process (Oginga, E.A, et al, 2014). However, it can also hamper the teaching learning process. Thus, the learning activities and the assessment activities form the means of acquiring the desired knowledge, skills and attitudes. Assessment activities also help in the determination of the degree to which the learning objectives are being or have been met. It is in this process that assessment procedures promote or thwart the achievement of learning objectives (Oginga, E.A, et al, 2014). The assessment methods mainly recommended consists of oral tests, written tests, assignments and observation (MoES&T, 1999).

2.10 Teacher trainees knowledge and attitudes towards the implementation of HIV/ AIDS syllabus

It is important to note that curriculum implementation cannot take place without the learner. The learner is therefore the central figure in the curriculum implementation process. Implementation takes place as the learner acquires the planned or intended experiences, knowledge, skills, ideas and attitudes that are aimed at enabling the same learner to function effectively in a society (University of Zimbabwe, 1995).

Curriculum activities in any educational jurisdiction must involve learners. Therefore, the final evaluation of any new curriculum implementation will depend on whether the new curriculum promotes students' learning or not. As indicators of any curriculum outcomes, the learner's' perceptions of curriculum implementation may eventually determine the extent to which the intended curriculum is successfully implemented and further sustained.

While teachers are the arbiters of the classroom practice, the learners hold the key to what is actually transmitted and adopted from the curriculum. The learner factor influences teachers in their selection of learning experiences, hence the need to consider the diverse characteristics of learners in curriculum implementation (Whitaker, 1995).

However, it is still not clear how learners should be involved in the curriculum implementation phase even though they are the main recipients of the programme. Learners may be so entrenched in their thinking and behaviour

that changes proposed in the curriculum may not be enthusiastically received. For example, learners may be used to being given notes by their teachers and the new programme requires them to make their own notes. Some learners may not know how to make notes and have to be taught how to go about it. Even getting learners to participate in discussions may not be well received if they have been accustomed to being passive recipients of information (Ornstein & Hunkins, 1998). In a study by GoK and UNICEF (1995), data on the attitude of pupils towards NFE indicated that their attitude towards NFE was positive. The pupils in the study reported that they desired education and wished to continue with education so as to have a better future.

2.11 Teaching learning materials and resources and implementation of HIV/AIDS syllabus

Material resources play a significant role in curriculum implementation. The main aim of preparing and producing curriculum materials is to assist teachers implement the curriculum and students interpret the content correctly (Oluoch, 1992). Resources and materials are critical ingredients in learning, and the intended programme cannot be easily implemented without them. No meaningful teaching and learning, which is a component of curriculum implementation, takes place without adequate resource materials (Lockheed et al, 1991). For curriculum to be fully implemented, schools should be supplied with adequate resource materials such as textbooks, teaching aids and stationery in order to enable teachers and learners to play their role satisfactorily in the curriculum implementation process. Resources and

materials are designed to help teachers better enact the curriculum in practice (Ball & Cohen, 1996). They also play powerful roles in shaping teaching practice as well as practitioner ideas about teaching and learning.

Teaching / learning materials and resources form the medium through which teaching is carried out. Teaching/ learning materials can be divided into two categories; those used by the students and those used by the teachers. Materials used by the teachers are important because they help teachers prepare schemes of work and lesson notes which guide them in the course of teaching. They include the syllabi, the teachers' guides, chalkboard, maps, globe, and pictures. The availability of teaching and learning materials is very crucial in the advancement of education. On this note, Republic of Kenya (1976) states, "Books and other materials are the basic tools of educational development. They must therefore be available to the learner in adequate quality and quantities. They must also be available at the time they are required."

Republic of Kenya (1988) asserts that teaching and learning materials should be planned and utilized in the most effective manner to bring about efficient provision of quality and relevance in education. The importance of teaching and learning materials is further highlighted by Mungai (1992) who stated that resources have been in use from the earliest times. This view is echoed by Nyamok (1997) who states that if a teacher uses the teaching materials effectively, he will be able to use the time thus created for other educational activities. Adequate resources take care of the learners' individual differences

and they encourage learners to participate during the teaching learning process. This makes learning more interesting to the learners and the learners are made active during the learning process. Ouma (1987) supports this view by stating that, resources encourage learners to participate in the learning process, motivates them, cater for individual differences and enable learners to gain experience by using their senses.

Resources are vital inputs needed to effectively conduct instructional activities at all levels of the educational system. Material resources include, ‘those items so designed, modified and prepared to assist teaching/ learning operations. Successful implementation is affected by the nature of the particular school’s physical and human resources (Rogan & Grayson, 2003). Resources in terms of human, material, and financial has been considered indispensable in determining the successful implementation of a curriculum (Carless, 1999a; Li, 1998). Fullan and Miles (1992) assert that implementation demands resources for training, for substitutes, for new materials, for new space, and, above all, for time.

The teaching of HIV/AIDS in schools requires that there is preparation and distribution of scientifically accurate, good quality teaching and learning materials on HIV/AIDS. Inadequacy or lack of instructional materials is therefore an impediment in any curriculum implementation and by extension HIV/AIDS curriculum integration into the syllabus. Since HIV/AIDS education was integrated into the mainstream subjects, very few relevant

instructional resources have been availed to facilitate its teaching. Despite implementation of the HIV/AIDS education policy in schools, a study by Coombs and Kelly (2002) concluded that there is ubiquitous evidence that less teaching and teaching materials are getting into classrooms and the teachers have virtually no guidelines for coping with the pandemic. In a related study, Malambo (2002) sought to find out how teachers teaching HIV/AIDS education were equipped in terms of instructional materials. He established that teachers lacked adequate resources for the teaching of HIV/AIDS Education. Effective teaching has a lot to do with availability of instructional aides. Research done by Plummer et al., (2006) revealed that teachers taught curriculum content well but sometimes had difficulty adopting new teaching styles.

2.12 Challenges encountered by teacher trainers in implementing HIV/AIDS education syllabus in PTTCs

Challenges of curriculum implementation can originate from within the teacher or the system (school environment) (Kealey et al., 2000). Both can inhibit a positive teacher reaction to a new curriculum and undermine its subsequent implementation and long-term acceptance (Levenson & Hamilton, 1989). Behaviour change curriculum involves innovative learning activities that may require the use of new or non-traditional teaching styles with which the teachers are unfamiliar with (Botvin, 1990). Although many countries include HIV and AIDS education in their curricula and coverage with HIV/AIDS education in schools is high (IATT on Education, (2005), Kiringa,

(2003) and Ouko, (2003) found out that the quality of school-based education is variable and the studies have identified the following challenges and shortcomings:

HIV and AIDS syllabus is always addressed as a compulsory part of the school syllabus and receive little attention and inadequate time in an already crowded curricula. HIV and AIDS education may not be given priority where teachers are already overloaded and where there is no support from head teachers, school administrators, school inspectors and education sector supervisory staff. Educators are often not involved in developing the curriculum or sufficiently trained to deliver it. Teachers often receive no training to address their own values and attitudes as well as their own vulnerability and risk, and are not provided with appropriate teaching and learning materials.

HIV/AIDS education is not comprehensive. It often focuses on knowledge and facts and does not adequately address attitudes, values, skills and behaviour. Selective teaching, which only covers some topics and does not address sexual relationships, gender, condoms or drug use, is common. Such selective teaching is often the response to resistance or perceived resistance from community and religious leaders, school management committees and parents, but provides poor quality, ineffective HIV/AIDS education that is unlikely to have a positive impact on behaviour. HIV/AIDS education is often not relevant to the real life situation of children and young people and teaching methods do not adequately engage them in discussions.

The epidemic is worsening teacher shortages. In Tanzania, 100 primary school teachers died of AIDS-related illness each month and in 2006 it was estimated that 45,000 additional teachers were needed to make up for those lost to the epidemic (UNESCO and EFAIDS, 2007). In Mozambique it is estimated that the education sector will lose 9,000 teachers by 2010. In Kenya, over 14,500 teachers are thought to be HIV positive. In high prevalence countries, HIV and AIDS are estimated to cause 77% of teacher absenteeism.

Effective learning is also adversely affected by inadequate education system responses in areas such as HIV and AIDS curricula, educator and student conduct, discrimination and the rights of educators and students, universal precautions to protect teachers and learners from infection, treatment for educators, and care and support for educators and students.

Buston, (2002) reports that implementation is also hindered by competition for curriculum time, brevity of lessons, low priority accorded to the subject by senior management, particularly in relation to timetabling, teachers limited experience and ability in use of role-play. The nature of adoption process, staff absence and turnover, theoretical understanding of the package and commitment to the research also influences the extent of implementation across and within schools.

Sexual harassment of students by teachers also hinders the implementation of HIV/AIDS syllabus. In one Ugandan district, 31 percent of schoolgirls and 15 percent of schoolboys reported having been sexually abused, primarily by

teachers (Gachuhi, 1999). During interviews and the focus group discussion, students as well as teachers cited many instances of teachers and students engaging in sexual relationships, some of which resulted in pregnancies. This concurs with research done by Nzioka, (2007) in teacher training colleges in Kenya which alleged that academically weak female trainees are particularly at risk of HIV infection. These trainees were reported that they seek favours such as grades from male teaching staff in exchange for sex. An overwhelming majority about 10 out of 12 male trainee respondents lamented what they referred sexually generated grades or marks given to female trainees. This was said to be common during the teaching practice because tutors have a greater influence on teaching practice assessment final grade as opposed to other subject which are externally examined (Nzioka, 2007).

Other reasons for transactional sexual relationship were coercion, material exchange, and admiration to mutual consent. Students and teachers stated that they generally knew which teachers were involved in sexual relationships or engaged in other inappropriate sexual behaviours but were reluctant to report for fear of the teacher being sanctioned or the trainee being suspended from college thus, these teachers would have no credibility with students when teaching RH/HIV content (Nzioka, 2007).

The HIV/AIDS-related attrition of teachers and managers in African educational systems is alarming. Mortality, morbidity, and absenteeism in high-prevalence countries are expected to increase rapidly over the next 10 to 15 years. The World Bank estimates that in Kenya, Zambia, and Zimbabwe,

about 1.5 percent of the teaching profession is lost each year to AIDS, and that the percentage of teachers who are HIV-positive is more than 30 percent in Uganda and Malawi, 20 percent in Zambia, and 12 percent in South Africa (Tijuan, 2004). Teacher attrition due to HIV/AIDS leads to deteriorating educational systems through stress on the human-resource base, worsening ratios of educators to students, loss of experienced teachers, increased demands on staff health benefits, and pressure on educator training colleges to keep pace with the demand for new teachers.

HIV/AIDS syllabus is not examinable. Therefore, there is often no natural “niche” for HIV/AIDS syllabus implementation and no teacher prepared to teach it. Furthermore in many schools there is no incentive to allocate limited time and resources to HIV/AIDS syllabus (Smith, 1995). Consequently if implemented at all, such curricula may be placed in academic course subject and be taught by teacher who have little or no background or interest in HIV/AIDS syllabus and who may perceive the unit as intrusion on their normal practice (Kaeley, 2000). Teachers’ are also very busy; there are many special programs and concerns competing for their attention and time in the crowded school day. Buston (2002) in his research on implementation of a teacher – delivered sex education programme reports that implementation was hindered by competition for curriculum time, brevity of lessons, low priority accorded to the subject by senior management , particularly in relation to time tabling, and teachers limited experience and ability in use of role play. The nature of adoption process, staff absence and turnover, theoretical

understanding of the package, and commitment to the research were also factors influencing the extent of implementation across and within schools.

A central weakness of many prevention initiatives for young people is that they do not speak frankly or provide the accurate, comprehensive information that young people need. Many countries that require HIV education in schools have curricula that prioritize abstinence-focused programming, discouraging forthright discussions about condoms and safer sex.

2.13 Implementation of HIV/AIDS syllabus

Implementation of HIV/AIDS syllabus has the potential to be affected by aspects of the programme model, quality of delivery, target audience, and participant responsiveness. For example, if the syllabus requires more time than the teacher can devote in a day or week to non-academic activities, then it is more likely to be diluted when it is implemented. Similarly, quality of delivery is critical for any intervention programme. If the teacher merely reads out the manual as opposed to injecting their own energy into the delivery of the material they will be less likely to engage the students. If students are not engaged (that is, low participant responsiveness) with an intervention they will not remember what is presented to them or make the connection between what they are learning and its relevance to their own lives.

The implementation of any school based syllabus is greatly affected by the support that is provided within the programme. Implementation support system includes pre-planning, the quality of materials, the quality and

structure of the technical support model, and implementer readiness. The success of any school-based initiative begins with the pre-planning that is conducted. It is important to know the interventions that a schoolteacher has implemented because the history of that experience (positive or negative) will influence how they approach subsequent programmes and their beliefs about effectiveness.

Beliefs are one aspect of implementer readiness that can influence the likelihood of programme success but first, implementers must be convinced of the value of the intervention and then feel prepared to conduct the programme. Included in the technical support system is the content and quality of the intervention training and the ongoing support that is provided. Similar to quality of delivery of an intervention, the training that prepares implementers to use programme can vary in terms of quality. If it is poorly organized or boring, the participants will more than likely walk away from the session disinterested and unprepared. Under these circumstances even the best quality programme is doomed to fail. The same happens when the teacher implements the programme in the classroom.

External influences to the actual programme may greatly impact on the quality of the programme implementation. In other words the environment or context in which a programme is implemented has its own ability to support or undermine it. These include the school ethos policies and management structure to feel that the intervention being proposed is appropriate for the

school and the students. This type of institutional “buy-in” is critical for successful implementation.

The success of syllabus implementation is when all the parties concerned are prepared to support and teach the syllabus as required. This takes place in the classroom where the learner is allowed to interact with the curriculum under the supervision of the teacher. If the syllabus is implemented as guided by MOES&T and it is given the necessary support then qualified teachers will graduate from PTTCs. This will lead to successful implementation of HIV/AIDS syllabus in primary schools and this is why the study was to evaluate on the implementation of the HIV/AIDS syllabus in PTTC in Kenya.

2.14 Curriculum evaluation

Sanders and Worthen (1997) defines program evaluation as the systematic and objective assessment of a project design either ongoing or completed. Evaluation assesses the project design, implementation and results. They further explain that the ultimate purpose is to determine the project relevance, achievement of objectives, effectiveness of impact and sustainability. Scriven (1967) clearly points out that the purposes of evaluation are to render judgement about value or worthy of the project or program, to determine the project relevance and to assesses project impact. Scriven (1967) adds that it is important that mechanisms for evaluation are built into the project at its inception and he echoes Sanders’ view on the purposes of evaluation as:

- 1) To empower teachers to have more say about how school budgets are allocated.
- 2) To judge the quality of school curriculum in specific content areas.
- 3) To accredit schools that meet minimum accreditation.
- 4) To determine the value of a middle school antiviolence program.
- 5) To satisfy an external funding agency demands for reports on effectiveness of school programme.

In discussing evaluation, Sanders (1997) says that it is important to view evaluation as part of an ongoing process of a project rather than merely a final step. The present study fits well in that it is looking at how HIV/AIDS syllabus is being implemented into the primary teacher training programme.

Gooler (1971) states that, there are a number of roles the evaluator can play in the performance of his task. He may raise questions, he may collect and interpret data, and he may serve as judge. The evaluator collects throughout the project life data about what audiences are thinking, feeling and wanting with respect to various objectives of the program or project. He may study and interpret data, thus continually reminding curriculum developer of his accountability. The evaluator can be an amplifier of consumer demands as well as communicator of curriculum needs.

Basically the role of researcher was seen as that of collecting and interpreting data on education for HIV/AIDS education in primary teacher training programme as well as communicator of findings to policy makers. Irwin

(2009) in discussing evaluation mentioned that a number of potentially worthy while evaluations are hampered because either the nature of what is being evaluated is not specified or that specification relies upon educational terms that are imprecise. That educational evaluation must specify whether it is an education product or teachers sort a programme that is being evaluated. Alkin further emphasized: Does the evaluation concern itself to the program goals, design or implementation? Hence the present study concentrated on evaluation of implementation HIV/AIDS syllabus education in the primary teachers training colleges.

Scriven (1967) distinguished between formative and summative evaluation and he clearly pointed out that formative evaluation is conducted to provide program staff with information useful in improving the program. While summative evaluation is done to provide consumers, teachers with judgments about the worthy of the program after completion. Sanders et al, (1997) notes that Scriven formative and summative dichotomy does not capture adequately all the basic types of evaluation and he offers a typology that distinguishes between evaluation conducted by programme employees as the internal and those conducted by outsiders as external evaluation

2.15 Curriculum evaluation model

The study was based on Context, Input, Process and Product (CIPP) Stufflebeam's evaluation model by (Stufflebeam, 1985). He views evaluation as the process of delineating, obtaining, and providing useful information for judging decisions alternatives. He developed an evaluation framework to serve

managers and administrators facing four different kinds of educational decisions.

Based on his research, Stufflebeam (1985) states that one of the framework is referred to as context evaluation to serve as planning decisions. It helps in determining what needs are to be addressed in an educational program to help in defining objectives for the program. There was therefore need for the researcher to establish whether the HIV/AIDS syllabus objectives for PTTCs were achieved.

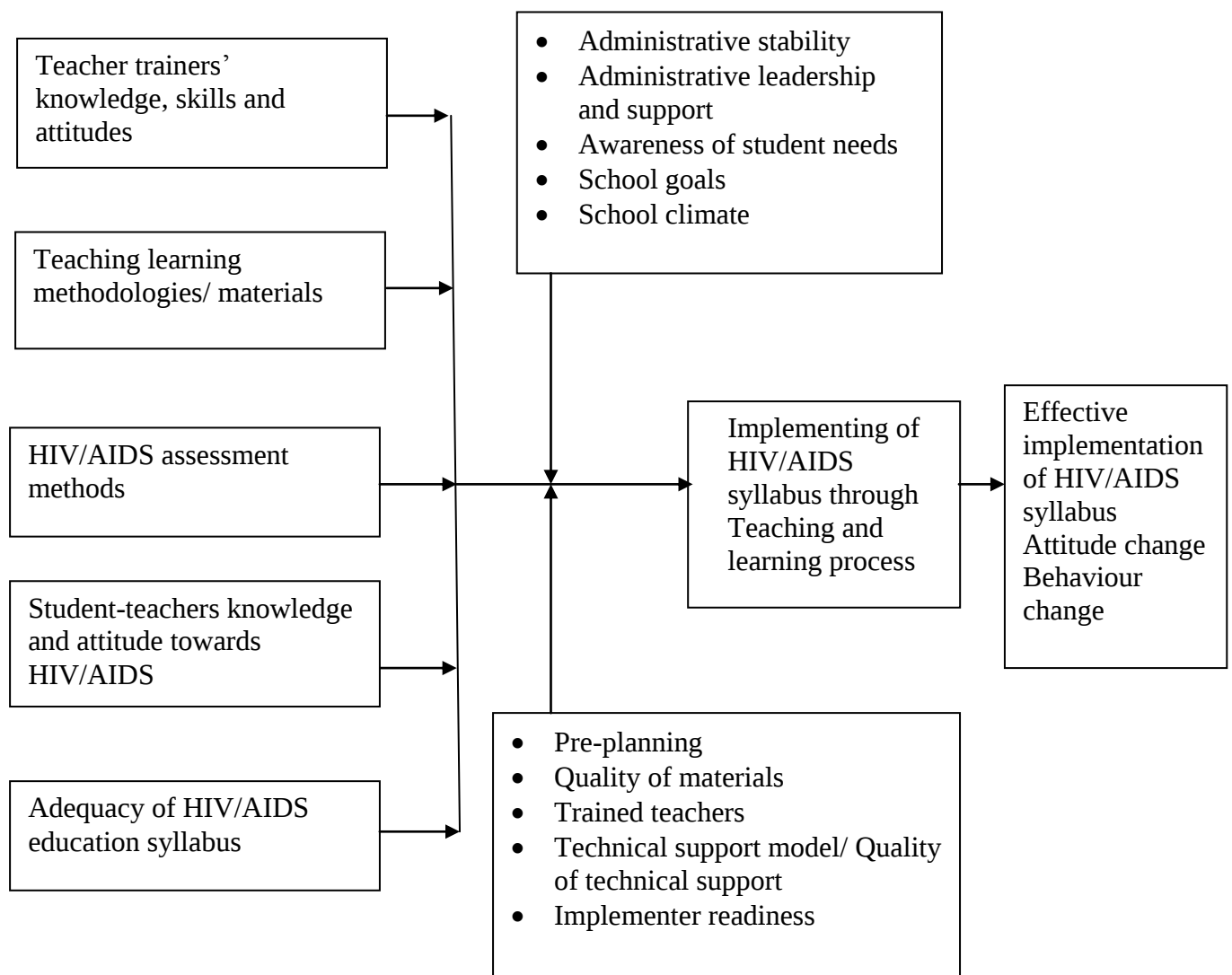
The second framework of evaluation by Stufflebeam was input evaluation which serves structuring decisions through determining what resources are available, what alternative strategies for the program should be considered and what plan seems to have the best potential for meeting needs facilitates design of program procedures. The study sought to find out the teaching resources / learning materials available for implementing the HIV/AIDS syllabus, teaching methodologies being used by the teacher trainers and which teaching methodologies has more impact on behavioural change as compared to others.

Stufflebeam (1985) further came up with third framework which was referred to as process evaluation, which is meant to serve implementing decisions. The study further sought to establish how well was the HIV/AIDS syllabus being implemented, what challenges were teacher trainers facing in the implementation of HIV/AIDS syllabus and suggestions for improvement were

established. Recommendations of the study were made based on the findings on how the syllabus can be monitored, controlled and refined.

The last frame work suggested was on product evaluation meant to serve recycling decisions. This is based on the results obtained, how well were needs reduced? What should be done with the program after it has run its course? These questions are important in judging program attainment. This evaluation model fitted well in the current study because it helped in the determination of the worth of the implementation of the HIV/AIDS syllabus. This model was important in this study since the purpose of the study was the implementation of HIV/AIDS syllabus in PTTCs. The conceptual framework is in figure 2.1 below.

Figure 1: Conceptual framework representing input, process, output and outcome model interrelationship in the implementation of HIV/AIDS syllabus



The framework is based on the input, process, output and outcome model. The framework focuses on the stages of curriculum development, implementation and how it aims at achieving the desired educational outcomes. The framework shows that once the curriculum has been developed at the KICD, it is implemented by teacher trainers. During the implementation, various factors such as teacher knowledge, skills and attitude, resources and materials, instructional methods and learner characteristics (knowledge and attitude) influence the implementation. When these factors are favourable, then the curriculum is effectively implemented and hence will achieve the desired educational output which is behavioural change among the students.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes methods that were used in carrying out this study. It covers the following areas: research design, target population, sample size and sampling techniques and research instruments, validity and reliability of research instruments, data collection and data analysis procedures were also discussed.

3.2 Research design

The research design adopted for this study was evaluation study design. Gall, Borg, & Gall, (1996) defines evaluation study design as a design used for collecting data used for making decisions about the merit, value or worth of an educational program. The design was suitable for this study because it provided a framework for collecting qualitative and quantitative data which helped in making judgments on instructional methods, curriculum materials, and assessment methods being used in implementation of HIV/AIDS syllabus.

3.3 Target population

The target population for the study consisted of twenty seven (27) PTTCs in Kenya located in the then eight provinces. The government manages twenty (20) colleges whereas seven (7) were managed by religious organization. The target population for the teacher trainers comprised of one thousand five hundred (1500) teacher trainers whereas student teachers comprised of twenty

one thousand eight hundred and thirty nine (21, 839). Student teachers were incorporated in the study because majority of them were expected to be in their early adulthood either married or single hence the study concerns were more applicable to them (Kinyua, 2001).

3.4 Sample size and sampling procedure

3.4.1 Sample size

Multistage stratified sampling method was used to select government owned colleges. The colleges were grouped into urban, Arid and Semi-Arid Areas (ASALs) and High Potential Areas (HPAs) (appendix H). In North Eastern and Coast province which had only one college located in urban area, the college was automatically selected. In Central, Eastern and Rift valley provinces simple random sampling method was used to select as follows: - In Central one college out of two colleges located in ASALs and one out of two colleges located in HPAs; In Eastern two colleges out of three located in HPAs were selected and in Rift valley three colleges out of the four located in HPAs were selected. Simple random sampling was used to select one college from two colleges located in HPAs in Western province and one college out of two located in ASALs and Migori which was the only one located in HPAs in Nyanza province. A total of twelve (12) public colleges were selected out of twenty colleges.

Multistage stratified sampling method was used to select private owned colleges followed by simple random sampling method. Two colleges out of

three located in ASALs were selected and two out of three located in HPAs were also selected. International teaching and training college which was located in Nairobi was also selected. A total of five (5) private colleges were selected out of seven colleges.

The colleges were located in ASALs, HPA and urban areas. The Colleges selected included Garissa in ASALs in North Eastern Province, In Central province Kamwenja, Muranga and Kilimambogo from HPAs areas were selected. In Eastern Province Egoji and Chuka from HPA, and St. Augustine from ASALs were selected. In Rift valley, Kericho and Tambachi from HPA were selected. In Western province Eregi was selected from HPAs. Coastal province, Shanzu from urban centre was selected whereas in Nyanza: Bondo, Nyanchwa, St. Pauls and Kamagambo were selected. In Nairobi, International Teaching and Training College also formed part of the study.

There were one thousand one hundred and fifty (1,150) teacher trainers in the PTTCs and three hundred and fifty (350) in private colleges (Teacher Service Commission, 2005). This brings to a total of one thousand five hundred (1500) teacher-trainers. According to Krejcie & Morgan, (1970) from a population of one thousand five hundred (1500) one selects three hundred and six (306) subjects. Therefore, Eighteen (18) teacher trainers were selected using simple random sampling method from each college to be studied. PTTCs enrolled a total of twenty one thousand eight hundred and thirty nine (21,839) students-teachers in 2004. Public teacher training colleges had an enrolment of seventeen thousand six hundred and eighteen (17,618) compared to private

institution which recorded two thousand three hundred and thirty (2,330) (CBS, 2005). According to Krejcie & Morgan, (1970) a sample size of three hundred and seventy five (375) and three hundred and thirty one (331) be selected from a population of twenty one thousand eight hundred and thirty nine (21,839) and seventeen thousand six hundred and eighteen (17,618) respectively. A total of seven hundred and seventy five (775) student teachers were studied. Each college was represented by fifty two (52) student teachers.

3.5 Research instruments

Data for this study was collected using two sets of instruments' namely; questionnaires and observation schedule. The researcher, with the guidance of the supervisors, developed the questionnaires and the observation schedule. A questionnaire for teacher trainers consisted of twenty eight (28) items. The questions sought information on teacher trainers' background that is academic qualification and professional training. The items further sought information on teaching methodologies, awareness of teacher trainers concerning teaching of HIV/AIDS syllabus as laid down by MOES&T. Finally the questionnaire enquired about teaching resources/learning materials, problems encountered, and assessment methods being used and the attitude and knowledge of teacher trainers towards the implementation of HIV/AIDS syllabus.

3.5.1 Student teacher questionnaire

Student teacher questionnaire on knowledge towards HIV/AIDS comprised of forty (40) among them the respondents were expected to indicate whether they

Strongly Agreed (SA), Agreed (A), Undecided (U) Disagreed (D) Strongly Disagree (SD) against the statements indicated (appendix C).

3.5.2 Observation schedule

The observation schedule comprised of questions asking for general information and a checklist for establishing teaching approaches, effectiveness of resources used, and teaching resources available and learning activities. Observation of actual lesson presentation was considered important by the researcher because it was envisaged that it could provide information on how the teacher trainers were interacting with the student teachers as well as the materials and facilities available during actual teaching (Appendix D).

3.6 Pilot of the instruments

A pilot study was carried out in the then Eastern and Central provinces. The colleges selected were Machakos PTTC and Thogoto PTTC. Thirty (30) questionnaires were administered to teacher trainers and forty (40) to student teachers who were selected using simple random sampling method. The return rate was a hundred per cent. This was done to determine whether there were ambiguities in any item, if the instruments could illicit the type of data anticipated, to indicate whether the research objectives had been appropriately addressed, thus enhancing validity and reliability. It was also done to indicate whether the type of data collected would be meaningfully analysed in relation to the stated research objectives and questions (Kinyua,2001).The pilot study revealed deficiencies in the instruments which were addressed before main

study. The purpose of piloting was to find out: whether items were precise and comprehensive enough to provide the required data, to eliminate any ambiguities in the items of research tools, to determine whether the research tools used would elicit the type of data anticipated and, determine the extent of validate of the instruments.

Supervisors in the department of Educational Administration and Planning at University of Nairobi examined the research instruments after piloting and made corrections in terms of relevance of the items which were used and indicated whether type of data collected was meaningfully analyzed in relation to the stated objectives and questions and of the study. The supervisors made recommendations which led to refinement and modification of the research instruments which include: The lists in the questionnaires had their items arranged sequentially; it was also found necessary to make responses to them very flexible from the outset. Some questions were reformatted so that they could illicit specific information. Ambiguities, bias, irrelevancies and errors in the instruments; were checked and corrected. The corrected version of the instruments enabled the researcher to elicit the type of data anticipated; and the information collected through the items addressed the objectives of the study.

3.6.1 Validity of the research instruments

Validity is the degree to which the instruments measure what they purported to measure (Gay et al., 2006). In this study, content validity (both item validity

and sampling validity) of the instruments was established before conducting the actual study. Content validity is the degree to which a test measures an intended area as per the objectives and research questions of the study (Gay et al., 2006). Item validity was concerned with whether items were relevant to the measurement of the intended content area. Sampling validity was concerned with how well the items sampled the total content area being measured. The experts (the two supervisors); and the specialists in the field of curriculum studies reviewed and verified the relevance of the items in the instruments in line with the study objectives and research questions. After fieldwork the instruments were revised based on recommendation of supervisors and were considered valid.

3.6.2 Reliability of research instruments

Reliability is the degree to which an instrument consistently measures what it is supposed to measure. Thus, a more important aspect of reliability is the constituency of scores obtained by the same individuals when re-examined with the same measuring instrument on different occasions, or different but equivalent or parallel instruments on the same or different occasions, or under variable examining conditions (Majumdar, 2005).

Test – retest reliability was applied to the instruments under the study. Test – retest reliability is the degree to which scores on the same test are consistent over time. It provides evidence that scores obtained in a test at one time are the same or close to the same when the test is re-administered some other time.

Thus, test – retest method was implored where the questionnaire was given to the respondents for the first time, and then, administered again after two weeks. The two sets of scores were computed and correlated using the Pearson (*r*) correlation coefficient, and the results were interpreted. The person *r* calculates correlation that deals with two sets of scores. The Pearson *r* formula was used to compute the coefficient of correlation between the test and retest scores thus giving a reliability coefficient using the formular as per (Gay et al., 2006).

Formula

$$r = \frac{\Sigma xy - \frac{(\Sigma x)(\Sigma y)}{N}}{\sqrt{\left(\Sigma x^2 - \frac{(\Sigma x)^2}{N}\right)\left(\Sigma y^2 - \frac{(\Sigma y)^2}{N}\right)}}$$

Where

N = Total number of subject

X = Raw score of x

Y = Raw scores of y

Σ = symbol of summation

Σx² = The sum of the square of x; square each score and add up all the squares

Σy² = The sum of the squares of y; square each score add up all the squares

(Σx)² = Square of the sum x: add up all the scores and square them

(Σy)² = Square of sum y: add up all the scores and square them sum

√ = square root symbol

X = represents set of scores form first test

Y = Represents set of scores form second test

$$\Sigma x = 15$$

$$\Sigma y = 17$$

$$\Sigma x^2 = 55$$

$$\Sigma y^2 = 53$$

$$\Sigma xy = 57$$

The reliability coefficient was 0.85 which showed that the instruments were highly reliable. The Spearman Prophecy Formula was used to balance the scores to give consistent reliability level. The reliability results were examined, discussed and reviewed by the supervisors' relation to the purpose, objectives, and research questions. Suggestions given were used to make adjustments in the instruments.

3.7 Data collection procedures

The researcher sought a research permit from the National Commission for Science, Technology and Innovation (NACOSTI) and thereafter wrote letters to the principals of the selected PTTCs to be allowed to do the study. Before visiting the colleges selected, the researcher made appointments with the principals of colleges. Administration of the questionnaires and observation guide was done by the principal researcher. The respondents were expected to fill the questionnaires. The completed questionnaires were collected on the same day.

3.8 Data analysis techniques

Qualitative and quantitative raw data collected from the questionnaires and observation schedule were checked, edited, organised and coded. Descriptive statistics was used to analyse data which yielded frequencies, mean and percentages. Frequency tables were particularly constructed for demographic profile variables such as age, sex, academic qualifications and marital status.

Questionnaires eliciting responses of rating used likert scale to quantify the responses so as to enable computational and ultimately the determination of ranking. Analysis for the nine questions was presented in form of percentages, mean and frequency distribution tables. Quantitative data was collected using student teacher questionnaires on knowledge and attitude towards HIV/AIDS and was analysed through inferential and descriptive statistics. The results were presented through tables and percentages to allow for data interpretation, conclusions and recommendations as per the, research objectives of the study. For the questions that elicited qualitative data they were grouped into thematic themes and categories based on research questions and objectives. Content analysis is careful, detailed, systematic examination and interpretation of a particular body of material in an effort to identify patterns, themes, biases and meanings (Berg& Latin, 2008).

3.9 Ethical considerations

The study sought consent from the sampled student teachers and teacher trainers. In this regard, student teachers and teachers trainers were briefed on the research process and its purpose. They were notified that participation was

purely on voluntary terms. In addition, participants were assured that information on their personal attributes and opinions would be handled and processed in confidentiality.

CHAPTER FOUR

DATA ANALYSIS

4.1 Introduction

This chapter presents the analysis of data that was gathered from the field. The chapter presents the statistical analysis of the views of the respondents regarding the implementation of HIV/AIDS syllabus in PTTCs. This chapter is organised into themes: Introduction; Instrument return rate; Demographic characteristics of the respondents; Demographic characteristics of the teacher trainers; the extent to which teacher trainers in PTTCs are equipped with relevant knowledge to enable them teach HIV/AIDS education syllabus, teacher trainers skills and attitudes to enable them teach HIV/ AIDS syllabus, teaching methodologies employed by teacher trainers in PTTCs in teaching HIV/ AIDS education, establish HIV/ AIDS assessment methods, student-teachers knowledge and attitude towards HIV/AIDS syllabus, teaching materials / learning materials used by teacher trainers in teaching HIV/AIDS education syllabus in PTTCs, challenges encountered by teacher trainers in implementing HIV/AIDS education syllabus in PTTCs and adequacy of HIV/AIDS education syllabus.

4.2 Instrument return rate

Instrument return rate is the proportion of questionnaires filled in and returned after their administration. This step entailed cross checking the questionnaire items in order to identify any which could have been left blank or incomplete.

In such cases, the respondent helped to complete them especially if the reasons for blank questions were clarity. The instruments used in data collection consisted of the teacher trainers' questionnaires, student teachers questionnaires and observation schedule. Table 1 represents the research instruments return rate.

Table 1: Instruments return rate

Instrument	Distributed	Returned	%
Teacher trainers questionnaire	306	268	88.0
Student teacher questionnaire	900	775	86.0
Observation schedule	17	17	100.0

As shown in Table 1, out of 306 teacher trainers' questionnaires distributed, 268 (88.0%) returned the questionnaires. Out of 900 questionnaires distributed to the student teachers out of which 775(86.0%) were returned. The return rates were above 80% and hence deemed adequate for data analysis.

4.3 Demographic characteristics of the respondents

This section presents the demographic characteristics of the respondents in the study. Specifically the section presents the demographic characteristics of the teacher trainers and student teachers.

4.3.1 Demographic characteristics of the teacher trainers

The demographic characteristics considered for the teacher trainers were gender, age, professional qualifications, experience and training of the

respondent. The results obtained are presented in tabular forms. Table 2, represents age and gender of the teacher trainers.

Table 2: Age and gender of the teacher trainers

Age (years)	Male		Female		Total	
	f	%	f	%	f	%
20 - 29	24	13.4	13	14.6	37	13.8
30 - 39	60	33.5	24	27.0	84	31.3
40 - 49	68	38.0	36	40.4	104	38.8
50 and above	27	15.1	16	18.0	43	16.1
Total	179	100.0	89	100.0	268	100

Data shows that most of the teacher trainers were in the middle ages hence are in a position to understand how issues of HIV/AIDS affect their students. Data also shows that there were more male teacher trainers from the sample than there were female teachers. Data on the age of the respondents indicated that, majority of them 104 (38.8%) were 40-49 years old followed by those aged 30-39 years who constituted 84 (31.4%). Only 43 (16.0%) of the teacher trainers were aged 50 years and above, hence, nearing retirement while, 37 (13.8%) were between 20-29 years.

The respondents were also asked to indicate their religion. The findings are presented in table 3.

Table 3: Religion of teacher trainers

Religion	f	%
Christian	262	98.0
Muslims	6	2.0
Total	268	100.0

Findings on religion showed majority of the teacher trainers implementing HIV/AIDS syllabus were Christians. The study further sought to establish the marital status of the teacher trainers. Table 4 presents the marital status of the teacher trainers

Table 4: Marital status of teacher trainers

Marital status	f	%
Married	206	76.9
Single	49	18.3
Widowed	10	3.7
Separated	3	1.1
Total	268	100.0

Findings on marital status of the teacher trainers showed that majority of the teacher trainers were married. They were further asked to indicate their academic qualifications. Their responses are presented in table 5.

Table 5: Academic qualifications of teachers trainers

Education level	f	%
Diploma(others)	12	4.5
Diploma in Education	32	11.9
Bachelor of Education	172	64.2
Master of Education	52	19.4
Total	268	100.0

As shown in table 5 findings show that majority of teacher trainers were qualified as teachers and hence could adequately implement the HIV/AIDS curriculum.

4.3.2 Demographic information of the student teachers

Frequency counts and percentage were used to describe the demographic data of student teachers used in the study. Table 6, presents gender and age of the students teachers

Table 6: Gender and age of the student teachers

Characteristic	f	%
Gender		
Male	343	44.3
Female	432	55.7
Age		
Below 21 yrs	138	17.8
21-25 yrs	521	67.2
26-30 yrs	77	9.9
31-35 yrs	39	5.1

According to the results in Table 6, 432 (55.7%) were females while 343 (44.3%) were males. The study revealed that there were more female student teachers in the sample than there were male student teachers. Additionally 521 (67.2%) of the student teachers were between 21 and 25 years, 138 (17.8%) were below 21 years while 77 (9.9%) were aged between 26 and 30 years and 39 (5.1%) were between 31 and 35 years. Majority of the student teachers were below 25 years of age since they comprised 85.0%, this means that they had just finished their O levels. The researcher further asked the student teachers to indicate their religion.

Table 7: Religion of student teachers

Religion	f	%
Christian	751	96.9
Muslim	24	3.0
Total	775	100.0

Of the 775 student-teachers who provided information about their religion, almost all the student teachers 751 (96.9%) were Christians while only 24 (3.0 %) being Muslims. In table 8, represents marital status of student.

Table 8: Marital status of student teachers

Marital status	f	%
Married	163	21.0
Single	605	78.1
Widowed	1	0.1
Separated	4	0.5
Divorced	2	0.3
Total	775	100.0

Data on marital status, the results of the study showed that majority of the student teachers were single. Single people are at higher risk of being infected with HIV/AIDS. Establishing the knowledge skills and attitudes of this category of students is important to them than any other group of students such as the married.

4.4 Teachers trainers' knowledge, skills and attitudes towards implementation of HIV/AIDS education syllabus

To establish the teacher trainers' knowledge, skills and attitudes in the implementation of HIV/AIDS education syllabus, the teacher trainers were asked to indicate their level of education. Data revealed that majority of the teachers 172(64.2%) of the teachers trainers had a Bachelor of Education degree, 52(19.4%) had a Master of Education degree while 32(11.9%) had Diploma in education. Teacher trainers require specialized training, mentoring and support in order to conduct their training in a way that strengthens the linkage with continuous teacher professional development throughout their teaching careers. A well-functioning professional development system depends on mechanisms, capacity, resources and above all a commitment to continuous learning both within and outside the classroom (UNESCO, 2011).

Teacher trainers should receive adequate training in order to prepare student teachers for their roles. Their comfort and abilities in teaching will certainly influence new and impressionable teachers. Training primary school teachers offers an opportunity to reach young people before these youth become sexually active and to help those who are already active to protect themselves from pregnancy and disease (Tijuana, 2004). Student teachers require accurate information from their teacher trainers. Young people are equally affected by the HIV/AIDS pandemic and therefore the teacher trainers should be well equipped with requisite knowledge to prepare the students teachers in their

future roles of moulding young children at the primary schools. Table 9 presents professional qualifications of teacher trainers.

Table 9: Professional qualification of teacher trainers

Professional Qualification	f	%
SI	12	4.5
Diploma in Education	32	11.9
Bachelor of Education	172	64.2
Master of Education	52	19.4
Total	268	100.0

Data on the professional teaching grades, 172 (64.2%) of the teachers trainers were bachelor of education teachers and 52 (19.4%) had master's degree. Adequate teacher professional preparation for any subject is necessary. These findings reveal that majority of the teachers are trained bachelor of education teachers.

The teacher trainers were asked whether they were trained in their current teaching subject. The data is presented in table 10.

Table10: Teacher trainers trained in their current teaching subject

Trained	f	%
Yes	258	96.3
No	10	3.7
Total	268	100.0

Table 10 shows that majority of the teacher trainers 258 (96.3 %) were trained in the subjects they were currently teaching and only 10 (3.7%) were not trained in the subjects they were teaching. Table 11 represents time of teacher trainers of joining the teacher training college.

Table 11: Teacher trainers time of joining the teacher training college

Time of Joining the college	f	%
Direct from university	63	23.5
From teaching secondary school	178	66.4
From teaching primary school	27	10.1
Total	268	100.0

Data on the timing of joining the college, 178 (66.4%) of the teachers trainers reported that they joined the training college from teaching secondary schools, 63(23.5%) reported that they joined training college direct from the university. The researcher also sought to establish whether the teacher trainers had been given any introductory course on teaching approaches, any in service course or any training in HIV/AIDS. Table12 below shows teacher trainers' teaching skills.

Table 12: Teachers trainers' teaching skills

Teaching skill	yes		no	
	f	%	f	%
Given an introduction course on PTTCs teaching approaches	123	45.9	145	54.1
Attended in-service seminars/workshop on teaching	159	59.3	109	40.7
Did in-service courses dealing with teaching HIV/AIDS	108	67.9	51	32.1

The question on whether they were given induction on PTTCs teaching approaches, 123(45.9%) of the teacher trainers were inducted whereas 145 (54.1%) were not inducted. Majority 145(54.1%) of the teacher trainers were university graduates and therefore were not familiar with the PTTCs teaching approaches. Further, 159 (59.3%) of the teacher trainers reported that they had attended an in-service seminar/workshop on teaching while 109(40.7%) had never attended any in-service teacher training. Among the teacher trainers who reported that they had attended an in-service training on teaching, 108(67.9%) reported that they did an in-service course dealing with HIV/AIDS.

The goal of any in-service course training is to enable teachers implement the curriculum as intended (Kealey, 2000). In service training is training of practicing teachers as part of a process of professional development or for the purpose of updating their curriculum knowledge, improving their pedagogical

skills and/or implementing a new programme at institutional level. Pre- and in-service training are increasingly part of a continuum of professional development in which teachers engage throughout their careers (UNESCO, 2011). Well-trained and supported teacher trainers are key to the success of any reform at institutional level. They are decision-makers and implementers, as well as intellectual role models for their students (UNESCO, 2011).

For any intended changes in purpose, approach, content and methods of teaching and learning HIV/AIDS syllabus can only become a reality if the teachers are adequately trained for change by retraining. Pre service and in service training are essential in acquiring the necessary knowledge, attitudes and skills for effective curriculum implementation at all levels. Effective teaching of student teachers involves building the knowledge and skills of teacher trainers. Teacher trainers are gatekeepers, as well as role models and a source of intellectual leadership for student teachers. Effective interventions will give teacher trainers access to new content, knowledge, research skills, teaching methodologies and the opportunity to make a much greater impact on generations of new teachers entering the profession, (UNESCO, 2011).

Among the teachers' trainers who attended an in-service training, they were asked to comment on the nature of the information which they learnt from the seminar; the results are found in the table13 below:

Table 13: Comments on nature of the information learnt from the in-service seminars / workshops attended

Comments	f	%
Conflicting cultural beliefs	18	11.3
It is interesting	17	10.7
It did not meet my expectations	14	8.8
It changed my attitude	110	69.2
Total	159	100.0

The results showed that 110 (69.2%) of the teachers' trainers who attended an in-service training their attitude was influenced by the training. Another, 18 (11.3%) reported that they got conflicting information from the training with their cultural beliefs, 17 (10.7%) reported that the information they received was interesting while 14 (8.8%) reported that the training did not meet their expectations. Oluoch, Omulando and Shiundu (1992) observed that pre-service and in-service training of teachers is key to any curriculum implementation.

For curriculum implementation venture to succeed, the teachers involved must understand and accept the ideas contained in the new curriculum being proposed or implemented. Teachers should look at the particular curriculum development effort as their own and not something being imposed from outside. Thus they have to understand, accept and internalize the philosophy or reasoning behind the new ideas, materials and teaching methodology

advocated in the new curriculum. To enable teachers gain this understanding and acceptance, it is necessary for them to go through specially designed educational programmes.

These programmes should be directed both at the serving teachers and at the teacher trainees. Relevant training programmes should hence be instituted within the regular teacher preparation curriculum so as to enable newly qualified teachers to be conversant with the new curriculum before they leave college. At the same time suitable in-service training programmes should be organized to help the serving teachers' acquaint themselves with new curriculum. Teacher trainers were further asked whether teaching of HIV/AIDS syllabus required a different approach from other subjects.

Table 14: Teacher trainers opinion on whether teaching of HIV/AIDS syllabus required a different approach from other subjects

Response	f	%
Yes	150	56.0
No	118	44.0
Total	268	100.0

The results in the above table shows that 150 (56.0%) reported that the teaching of HIV/AIDS requires a different teaching approach from the other subjects and therefore in service training should be regularly organized in order to equip teacher trainers with new teaching approaches.

For any successful implementation of the curriculum teachers need to be well equipped with the right attitude. Therefore it was necessary in this study to establish whether teacher trainers had the right disposition to implement the HIV/AIDS syllabus. Table 15 below show teachers' trainers' attitude towards the HIV/AIDS Syllabus.

Table 15: Teacher trainers' attitude towards implementation of HIV/AIDS Syllabus

Attitude	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
I feel scared when teaching HIV/AIDS education	7 (2.6%)	16 (6.0%)	7 (25.0%)	72 (26.9%)	16 (39.6%)
I feel restless when teaching HIV/AIDS education	4(1.5%)	23(8.6%)	66(24.7%)	73(27.2%)	102(38.1%)
I feel irritated when teaching HIV/AIDS education	3(1.1%)	19(7.1%)	67(25.0%)	71(26.5%)	108(40.3%)
I feel impatient when teaching HIV/AIDS education	6(2.2%)	22(8.2%)	67(25.0%)	68(25.4%)	105(39.2%)
I like Teaching HIV/AIDS syllabus	30(11.2%)	48(17.9%)	70(26.1%)	58(21.6%)	62(23.1%)
I feel time allocated to teaching HIV/AIDS syllabus is a waste.	6(2.2%)	15(5.6%)	56(20.9%)	45(16.8%)	146(54.5%)
I feel easy when teaching HIV/AIDS education	46(17.2%)	104(38.8%)	69(25.7%)	33(12.3%)	16(6.0 %)

From the above results 106(39.6%) teacher trainers strongly disagreed that they felt scared when teaching HIV/AIDS education with another 72(26.9%) reported that they disagreed with the same. This implies that majority of the teacher trainers were never scared of teaching HIV/AIDS education. Moreover, the results showed that majority 17 (65.3 %) of the teacher trainers disagreed that they felt restless when teaching HIV/AIDS education. Further, 179(66.8%) of the teacher trainers disagreed that they felt irritated when teaching HIV/AIDS education while 173(64.6%) disagreed that they felt impatient when teaching HIV/AIDS education. About 146(54.5%) of the teacher trainers disagreed with the statement that time allocated for teaching HIV/AIDS syllabus was a waste of time.

Table 16: Overall teacher trainers' attitude towards the implementation of HIV/AIDS syllabus

Attitude	f	%
Positive	196	73.0
Neutral	8	3.0
Negative	64	24.0
Total	268	100.0

The overall attitude of the teacher trainers was positive 196 (73.0%) implying that there was a general positive attitudes toward teaching HIV/AIDS syllabus among the teacher trainers. However, it is also important to note that 64 (24.0%) had a negative attitudes towards teaching the syllabus and 8(3.0%)

were neutral. This means that teachers had the right disposition to implement HIV/AIDS syllabus.

4.5 Teaching methodologies employed by teacher trainers in teaching HIV/ AIDS syllabus.

The student teachers reported the following as the teaching methodologies employed by teacher trainers in teaching HIV/AIDS education. Table 17, presents teaching methods popularly used in teaching HIV/AIDS syllabus

Table 17: Teaching methodologies used in teaching HIV/AIDS education

Teaching Methodologies	Always		Never		Sometimes	
	f	%	f	%	f	%
Watching Videos	50	18.7	73	27.2	145	54.1
Discussion	152	56.7	41	15.3	75	28.0
Dramatization	46	17.2	85	31.7	137	51.1
Listening to audio tapes	32	11.9	112	41.8	124	46.3
Question and answers	132	49.2	18	6.7	118	44.0
Visits	31	11.6	128	47.8	109	40.7
Use of resource persons	77	28.7	48	17.9	143	53.4
Debates	38	14.2	116	43.3	114	42.5
Case studies	33	12.3	141	52.7	94	35.0
Composing songs and singing	51	19.1	79	29.4	138	51.5
Lecture	117	43.7	53	19.8	98	36.6
Role plays	43	16.0	82	30.6	143	53.4

Data presented in table 17 revealed that it was further reported that only 50 (18.7%) used videos as a method of teaching HIV/AIDS syllabus. Slightly more than half 152(56.7%) used discussion as a teaching method, only 46 (17.2%) used dramatization as a teaching method. Further, the results showed that 112 (41.8%) of the teachers trainers reported that they have never used audio tapes while teaching HIV/AIDS syllabus while 18(6.7%) reported that

they have never used questions and answers as a method of teaching and 412 (87.5%) reported that they never used visits as method for teaching. The results of the study also show that, 116 (43.3%) reported that they never use debates while 141 (52.7%) reported that they never use case studies and 79 (29.4%) reported that they never use composition of songs as a method for teaching HIV/AIDS. Finally, 53 (19.8%) reported that they never use lectures as a method for teaching HIV/AIDS while 82 (30.6%) reported that they never use role plays as a method. These findings were confirmed by the observation schedule where the researcher observed that lecture and discussion methods were the most used methods of teaching.

According to the study, the most popular method of teaching HIV/AIDS among the sampled PTTC was discussions which was reported by 152(56.7%) of teachers' trainers. This was followed by questions and answers reported by 132(49.2%) and lectures method reported by 117(43.7%) of the teachers trainers. Visits were the least popularly used methods of teaching HIV/AIDS syllabus in the sampled PTTCs having been reported by only 31(11.6%) of the teachers' trainers.

Young people are more likely to respond positively to those educational effort implemented in a less formal manner. For example, a group discussion or role play exercises rather than a more formalized lecture method. Secondly young people are more likely to respond positively to those educational efforts

implemented with an element of flexibility and humour rather than in an exclusively serious context (Coleman & Ford, 1996).

Data in table 17 clearly shows that the methodologies used by teacher trainers to teach HIV/AIDS syllabus are the least effective and they happen to be the most frequently used by the teacher trainers. They include question and answer method, discussions and lecture method. Effective techniques such as visits, debates, dramatization, role play and case-studies were grossly underrated and rarely used. This casts doubts on the proper orientation and training of the teacher trainers in the teaching of HIV/AIDS syllabus, because the most effective techniques should be the most feasible ones for teaching HIV/AIDS to teacher trainers.

Effective learning in HIV /AIDS syllabus also depends on how schools teach about HIV/AIDS. Delivering HIV/AIDS education requires a balance of teacher led and learner-centred methodologies. Traditional ‘chalk and talk’ teacher lectures and media such as posters and leaflets can convey facts and increase learner knowledge. Interactive and participatory teaching methods, such as song, drama, storytelling and role play, are more effective in addressing attitudes and behaviours and in helping learners to develop the skills they need to resist negative pressures and make healthy life choices. Participatory methods that allow learners to play an active role in the learning process can be interesting and enjoyable; promote critical thinking and learning through experience; and enable students to learn from each other. However, participatory methods are time-consuming and require skilled

facilitation to ensure that the learning objectives are clear and the focus is not lost. Table 18 below show adequacy of HIV/AIDS syllabus teaching materials

Table 18: Adequacy of HIV/AIDS syllabus teaching methodologies

Teaching methods	very adequate		adequate		inadequate	
	f	%	f	%	f	%
Lectures	56	20.9	165	61.6	47	17.5
Discussions	139	51.9	109	40.7	20	7.4
Dramatization	108	21.6	111	41.4	49	18.3
Listening to audio tapes	58	21.6	145	54.1	65	24.3
Question and answers	89	33.2	135	50.4	44	16.4
Visits	113	42.2	106	39.6	49	18.2
Use of resource persons	161	60.1	73	27.3	34	12.7
Watching videos	140	52.2	89	33.2	39	14.5

According to the above table, 165(61.6%) of the teacher trainers reported that the lecture method was adequate while 109 (40.7%) reported that discussions were adequate as a teaching method. Additionally, 111 (41.4%) and 145 (54.1%) reported that the dramatization and listening to audio tapes respectively were adequate. Further, 135(50.4%) reported that the questions and answers were adequate, 49 (18.2%).

In general, these results show that over 75% of the student teachers felt that the teaching methods applied during the teaching of the HIV/AIDS syllabus was either adequate or very adequate. Table 19 below shows the

appropriateness of the instructional techniques used in teaching HIV/AIDS syllabus.

Table 19: Appropriateness of the instructional techniques used in teaching HIV/AIDS syllabus

Instructional technique	appropriate		most appropriate		not appropriate	
	f	%	f	%	f	%
Watching videos	121	45.1	130	48.5	17	6.3
Discussion	104	38.8	158	59.0	6	2.2
Dramatization	137	51.1	104	38.8	27	10.1
Listening to audio tapes	153	57.1	74	27.6	41	15.3
Question and answers	141	52.6	93	34.7	34	12.7
Visits	110	41.0	138	51.5	20	7.4
Using resource Persons	82	30.6	173	64.6	13	4.8
Role plays	135	50.4	97	36.2	36	13.4

Teachers' trainers were asked the appropriateness of the above instructional techniques on suitability to teach HIV/AIDS syllabus. Only 17(6.3%) of them reported that watching videos was not appropriate while 6(2.2%) considered discussions as in appropriate. Further, the results show that 27(10.1%) considered dramatization as not appropriate, 14(15.3%) considered listening to audio tapes as inappropriate and 34(12.7%) considered question and answers technique as in appropriate. The data collected implies that majority of the teachers' trainers found that the most appropriate instructional technique being

used to teach HIV/AIDS syllabus were use of resource persons, discussions, visits and watching videos respectively. Students teachers were asked to indicate the teaching methodologies used by the teacher trainers.

Table 20: Teaching methodologies used by the teachers trainers

Teaching Methodologies	always		sometimes		never	
	f	%	f	%	f	%
Watching						
videos	54	7.0	537	69.3	184	23.7
Discussion	290	37.4	420	54.2	65	8.4
Dramatization	72	9.3	439	56.6	264	34.1
Listening to						
audio tapes	85	11.0	401	51.7	289	37.3
Question and						
answers	311	40.1	365	7.1	99	12.8
Visits	58	7.5	376	48.5	341	44.0
Use of						
resources						
persons	112	14.5	553	71.4	110	14.1
Debates	85	11.0	376	48.5	314	40.5
Case studies	58	7.5	300	38.7	417	53.8
Composing						
and singing						
songs	178	23.0	407	52.5	190	24.5
Lecture	250	32.3	421	54.3	104	13.4
Role plays	79	10.2	416	53.7	280	36.1

Table 20 above shows that 537(69.3%) of the student teachers reported that they sometimes watch videos as a method of instruction, 290(37.4%) reported that discussion are always used by the teachers, 439(56.6%) reported that

dramatization is sometimes used. Further, 311(40.1%) reported that they always use questions and answers with another 401 (51.7%) reporting that listening of audio tapes is sometimes used as a medium of instruction when being taught the HIV/AIDS syllabus.

According to the results, the most rare methods employed by the teacher trainers in instructing the HIV/AIDS syllabus was cases studies (56.2%), followed by debates (59.5%) and listening to audio tapes (62.7%). The mainly used methods were discussion (91.6%), question and answer (87.2%), and lecture method (86.6 %). The most effective methods for teaching HIV/AIDS syllabus which leads to behavioral change include the ones which teacher trainers rarely used. Top on the list is case studies (53.8 %), visits (44.0%) debates (40.5%), listening to audiotapes (37.3%), role play (36.1%), dramatization (34.1 %).

4.6 To determine HIV/AIDS assessment methods used by teacher trainers to assess student teachers in PTTCs

Teacher trainers were asked on the mode of assessment they were using to assess the student teachers knowledge on HIV/AIDS and table 21 shows the results:

Table 21: Mode of assessment on HIV/AIDS syllabus implementation

Mode of assessment	Yes		No	
	f	%	f	%
Essay	154	57.5	114	42.5
Assignment	157	58.6	111	41.4
Observation	154	57.5	114	42.5
Oral test	157	58.6	111	41.4
Combined methods	148	55.2	120	44.8

The results show that 154 (57.5%) of the teacher trainers reported that essays were used as a mode of assessment on HIV/AIDS syllabus implementation, 157 (58.6%) reported that assignment was used as a mode of assessment while 154 (57.5%) reported the use of observation as a mode of assessment. Additionally, the results show that 157 (58.6%) reported that oral tests were used as a mode of assessment while 148 (55.2%) reported the use of all the combined methods of assessment. This results implies that teacher trainers used mainly oral test and assignment to assess student teachers HIV/AIDS knowledge.

4.7 To determine student-teachers knowledge and attitude towards HIV/AIDS

Teacher trainers should be well equipped with requisite knowledge in order for them to prepare the students teachers in their future roles of moulding young children at the primary schools. Table 22 below shows student teachers knowledge about HIV/AIDS transmission.

Table 22: Student teachers knowledge about HIV/AIDS transmission

Attributes of knowledge	agree		undecided		disagree	
	f	%	f	%	f	%
Mosquito bite is one possible cause of HIV infection.	41	5.2	32	4.1	702	90.6
Infected blood can transmit the virus.	761	98.2	7	0.9	7	0.9
Sexual intercourse with an AIDS person is a possible transmission route	754	97.3	4	0.5	17	2.2
Living in the same house with an AIDS person is possible transmission route	67	8.7	32	4.1	676	87.2
Shaking hands with an AIDS person is a possible transmission route	14	1.8	16	2.1	745	96.1
Living in the same room with a AIDS person is a possible transmission route	63	8.1	37	4.8	675	87.1
Sharing a swimming pool with an AIDS person is a possible transmission route	82	10.6	93	12.0	600	77.4
Sharing the same toilet with an AIDS person is a possible transmission route	51	6.6	49	6.4	675	87.1
Sneezing and coughing are possible route for AIDS infection	60	7.8	59	7.6	656	84.7
Mother to fetus infection is possible transmission route	637	82.2	32	4.1	106	13.7
AIDS is a viral infection disease	702	90.6	26	3.3	47	6.1
There is no effective treatment	613	79.1	50	6.4	112	14.5

There is a effective vaccine	212	27.4	98	12.6	465	60.0
Patient have particular appearances	404	52.1	59	7.6	312	40.3
People behaviors show signs of sickness after infection of HIV/AIDS	58	7.4	21	2.7	696	90.0
AIDS is a life threatening disease	659	85.0	19	2.5	97	12.5
I am confident in my ability to protect myself from HIV/AIDS	663	85.5	52	6.7	60	7.8
I would consider avoiding dental checkups for fear of catching HIV/AIDS	97	12.6	61	7.9	617	79.6
I know that HIV/AIDS is most common among homosexuals and drug users	146	18.9	50	6.4	579	74.7
AIDS death is not a big problem as media suggests	102	13.1	46	5.9	627	80.9

On the question about knowledge about HIV/AIDS transmission, about 41 (5.2%) reported that mosquito bite is a possible cause of HIV infection which ought not to be the case. However, 761(98.2%) reported that infected blood can transmit the virus which is true and another 754(97.3%) reported that sexual intercourse with an AIDS person is a possible transmission route for HIV.

On the contrary, 67(8.7%) of the student teacher agreed that living in the same house with an AIDS person is a possible transmission route while 14(1.8%) agreed that shaking hands with an AIDS person is a possible transmission route. Further, the results showed that 63(8.1%) agreed that living in the same room with an AIDS person is a possible route for HIV transmission while 82 (10.6%) reported that sharing a swimming pool with an AIDS person is a possible transmission route. It was also found that 60(7.8%) of the student teachers agreed that sneezing and coughing are possible route for AIDS infection while 82.2% agreed that mother to fetus infection is a possible transmission route.

Further 702 (90.6%) agreed that AIDS is a viral infection disease, 613(79.1%) agreed that there is no effective treatment for HIV/AIDS and only 212 (27.4%) agreed that there is an effective vaccine. Additionally, 404(52.1%) agreed that patients have particular appearances, 58 (7.4%) agreed that people behaviors show sighs of sickness after infection of HIV/AIDS and 659 (85.0%) agreed that AIDS is a life threatening disease.

Additionally, 663(85.5%) agreed that they were confident in their ability to protect themselves from HIV/AIDS while 269 (34.7%) agreed that they would decline a blood transfusion because of the risk of contracting HIV/AIDS. Further results showed that 476 (61.4%) agreed that they would rather get any other disease than HIV/AIDS, 97(12.6%) agreed that they would consider avoiding dental checkups for fear of catching HIV/AIDS.

It is also important to note that 371(47.9%) agreed that they would be comfortable to be around someone with HIV/AIDS while 736(94.8%) agreed that to protect themselves they learn more about how HIV/AIDS could be transmitted. Table 23 below show overall knowledge about HIV/AIDS transmission.

Table 23: Student teachers knowledge about HIV/AIDS transmission

Knowledge	f	%
Low	54	7.0
Moderate	13	1.7
High	708	91.3
Total	775	100.0

Finally, the overall student teachers knowledge about HIV transmission was considered high at 708(91.3%). However, it's also important to note that there was low knowledge about the HIV transmission among 54(7.0%) of the student teachers.

This finding imply that age-appropriate sexuality education may increase knowledge and contribute to more responsible sexual behaviour however there are gaps in even basic knowledge about HIV and its transmission. In 26 of 31 countries with generalized epidemics in which nationally representative surveys were recently carried out, less than 50% of young women have comprehensive and correct knowledge about HIV (UNAIDS, 2012).

Globally, while knowledge about HIV and safer sexual behaviour among young people has improved, only 34% of young people have comprehensive and accurate knowledge of HIV/AIDS. Young people need accurate and adequate knowledge about HIV prevention to make informed choices on sexual behaviour. The Demographic Health Survey of 2008/2009 found out that comprehensive knowledge about HIV prevention among young people in Kenya is below 50%. Young men have a high level of knowledge than young women. This shows a great need to raise awareness of HIV prevention among the youth (NASCOP, 2014). Student teachers need to have access to accurate information and high quality HIV/AIDS education to enable them to develop the requisite knowledge, attitudes and skills before they reach an age where some of them might engage in risk taking behaviour and this will ensure that when they graduate they are able to disseminate accurate information to the primary school going children.

Pre-service training provides opportunity to raise awareness among student teachers about the impact of HIV/AIDS on their own lives. Student teachers commence their training programme when they are young, often away from home and their families for the rest time, and subject to a number of pressures, including sexual debut and/ or risk- taking. This combination of factors makes them vulnerable to HIV infection, in addition to other STIs and unintended pregnancy. Institutions which integrate the sexual health of their trainees as part of a well-rounded training programme can maximize the opportunity to develop better prevention knowledge and skills amongst young adults. This could be especially valuable for young people who are not yet sexually active (UNESCO, 2011). Table 24 shows student teachers' attitude towards the value of HIV/AIDS education.

Table 24: Student teachers attitude towards the value of HIV/AIDS education

	agree		undecided		disagree	
	N	%	N	%	N	%
HIV/AIDS education is important in everyday life	753	97.2	11	1.4	11	1.4
HIV/AIDS education is needed virtually in all aspects of life	737	95.1	23	3.0	15	1.9
HIV/AIDS education is an essential subject in everyday life	747	96.4	15	2.0	13	1.6
HIV/AIDS education is part of life skills	731	94.2	22	2.9	22	2.9
There is nothing interesting in HIV/AIDS education	79	38.3	49	10.2	647	83.5
I belief HIV/AIDS education is not helpful to learners	165	21.3	87	11.3	523	67.5
I can get perfectly well in everyday life without HIV/AIDS education	80	10.3	50	6.5	645	83.2
I belief the society can develop well without HIV/AIDS education	40	5.2	29	3.7	706	91.1
I enjoy reading HIV/AIDS education in my free time	610	78.7	58	7.5	107	13.8
I am willing to integrate HIV/AIDS education outside school in my day to day activities.	707	91.2	45	5.8	23	3.0

According to the above results student teachers agreed that HIV/AIDS education is important in every day's life and agreed that HIV/AIDS education is needed virtually in all aspects of life.

Further, 610(78.7%) agreed that they enjoy reading HIV/AIDS education in their free time and 707(91.2%) agreed that they are willing to integrate HIV/AIDS education outside school in their day to day activities. Table 25 shows overall the student teachers value of HIV/AIDS.

Table 25: Student teachers attitude towards the value of HIV/AIDS education

Attitude	f	%
Positive	541	69.8
Moderate	68	8.6
Negative	166	21.6
Total	775	100.0

Overall the student teachers attitude towards the value of HIV/AIDS was high at 541 (69.8%) with only 68 (8.6%) having a low score values and 166 (21.6 %) having a negative attitude. Table 26 shows student's teachers' enjoyment of HIV/AIDS education

Table 26: Student teachers' enjoyment of HIV/AIDS education

	agree		neutral		disagree	
	f	%	f	%	f	%
I have never enjoyed studying HIV/AIDS education in school.	80	10.3	32	4.1	663	85.5
I have always enjoyed studying HIV/AIDS education in school	684	88.3	25	3.2	66	8.5
I would like to develop my HIV/AIDS education in school	723	93.3	39	5.0	13	1.7
I am interested in acquiring further knowledge of HIV/AIDS education	736	94.9	29	2.9	10	1.3
HIV/AIDS education is an interesting topic because it leaves room for personal opinion.	715	92.3	28	3.6	32	4.1
I appreciate reading topic on HIV/AIDS education more than for other subject.	324	41.8	121	15.6	330	42.5
I desire to learn more on HIV/ AIDS education	611	78.9	102	13.1	62	8.0
I find it easier to understand HIV/AIDS education than other subjects	462	59.6	110	14.2	203	26.2
I always appreciate HIV/AIDS assignments.	568	73.3	113	14.6	94	12.1
I wish to be asked a question about HIV/AIDS education by the teacher.	642	82.8	76	9.8	57	7.4

On the student teachers learning experience of HIV/AIDS education, only 80(10.3%) that agreed that they never enjoyed studying HIV/AIDS education in school, 684(88.3%) agreed that they have always enjoyed studying HIV/AIDS education in school and 723(93.3%) agreed that they would like to develop their HIV/AIDS education in school. Further, 736(94.9%) agreed that they are interested in acquiring further knowledge of HIV/AIDS education and 715 (92.3%) agreed that HIV/AIDS education is an interesting topic because it leaves room for personal opinions.

The results of the study further showed that only 324(41.8%) of the student teacher who agreed that they like reading the topic on HIV/AIDS education more than for other subjects, 611(78.9%) agreed that they wish they could do better in HIV education. Additionally, only 76(9.8%) of the student teachers who agreed that they find it harder to understand more HIV/AIDS education issues. Table 27 below shows the overall student teachers enjoyment of HIV/AIDS education.

Table 27: Overall student teachers enjoyment of HIV/AIDS education

Enjoyment	f	%
Positive	590	76.1
Moderate	29	3.7
Negative	156	20.1
Total	268	100%

The overall student teachers enjoyment of HIV/AIDS education was considered positive with 590 (76.1%) reporting positive enjoyment while only 156 (20.1%) who had a negative opinion on the enjoyment of the HIV/AIDS education. Asked whether they felt confident to effectively teach HIV/AIDS syllabus, data revealed that 732 (94.5%) of the student teacher agreed that they can teach the HIV/AIDS syllabus confidently.

4.8 Establish the teaching resources / learning materials used in the implementation of HIV/ AIDS syllabus

To establish the teaching resources/ learning materials used by teacher trainers in teaching HIV/AIDS syllabus in PTTCs, table 28, presents the data.

Table 28: Teaching resources/learning materials used in the implementation HIV/AIDS

Resource	always		sometimes		never	
	f	%	f	%	f	%
KICD syllabus	210	78.4	48	17.9	10	3.7
Resource persons	53	19.8	138	51.5	77	28.7
Charts posters	93	34.7	97	36.2	78	29.1
News papers	58	21.6	117	43.7	93	34.5
Text books	250	93.2	15	5.6	3	1.1
Good health magazines	48	17.9	112	41.8	108	40.3
Local Community	23	8.6	99	36.9	146	54.4
NASCOP publication	26	9.7	95	35.4	147	44.9
Video tapes	46	17.2	127	47.4	95	35.5
AMREF publications	22	8.2	88	32.8	158	59.0
KICD publications	150	56.0	101	37.7	17	6.3
Audio visual	33	12.3	112	41.8	123	35.9

The teacher trainers were asked about the teaching resources that they were using in the teaching of HIV/AIDS syllabus. The results showed that 210 (78.4%) reported that they always used KICD syllabus while on the use of resource persons, 138 (51.5%) reported that they are sometimes used while 77(28.7%) reported that they are never used and only 53 (19.8%) who reported that resource persons are always used. According to 93(34.7%) of the teacher trainers, charts and posters were always used while 97(36.2%) reported that the charts and posters were used sometimes and 78 (29.1%) reported that charts and posters were never used. On the use of newspapers, 117(43.7%) reported that they are used on sometimes while 93 (34.5%) reported that they are never used.

The results further revealed that 250(93.2%) of the teacher trainers reported that text books were always used while 3 (1.1%) reported that they were never used. Good health magazines were found to be sometimes used according to 112(41.8%). The use of local community was found to be never used according to 146 (44.9%) while 95 (35.4%) of the teacher trainers reported that they are sometimes used. Further, it was found that 127(47.4%) reported that the use of video tapes was sometimes used while 95(35.5%) reported that they were never used. AMREF publication were found to be never used according to 158(59.0%) while 110 (41.0%) reported that the KIE publications were never used and 112(41.8%) reported that audio tapes were sometimes used.

In summary, the most used teaching material / resources were KIE syllabus (96.0%), KICD Publications (93.6%), textbooks (98.8%), use of resource persons (71.0%) and charts and posters (70.0%) respectively. Table 29 shows the availability of teaching resources in the colleges.

Table 29: Students teachers response on the availability of resources for teaching HIV/AIDS syllabus

Resource	available		not available		not relevant	
	f	%	f	%	f	%
Syllabus	750	96.8	5	0.7	20	2.5
Resources persons	567	73.2	138	17.8	70	9.0
Charts and posters	596	76.9	104	13.4	75	9.7
News papers	601	77.5	91	11.7	83	10.8
Text books	541	69.8	162	20.9	72	9.3
Good health magazines	468	60.4	227	29.3	80	10.3
Local community	402	51.9	241	31.1	132	17.0
NASCOP publications	255	32.9	389	50.2	131	16.9
Video tapes	466	60.2	232	29.9	77	9.9
AMREF publications	289	37.3	375	48.4	111	14.3
KICD publications	421	54.3	256	33.0	98	12.6
Audio tapes	416	53.7	278	35.9	81	10.5

On the availability of resources for teaching HIV/AIDS, the syllabus was reported to be available by 750(96.8%) respondents, resource persons were

reported to be available by 567(73.2%) respondents while charts and posters were reported to be available by 596(76.9%). Further, 601(77.5%) of the respondents reported that newspapers were available, 541(69.8%) reported that text books were available and 468(60.4%) of the respondents reported that good health magazines were available.

Further, 402 (51.9%) reported that local communities teaching materials were available as resources, 255 (32.9%) reported that NASCOP publications were available and 289 (37.3%) reported that AMREF publications were available. The results further show that the syllabus was most available (96.8%), newspapers (77.5%), charts and posters (76.9%) and resources persons (73.2%) respectively. Textbooks and KICD publications which were mostly used by the teacher trainers were not available for use at school because they were 69.8% and 54.3 % respectively. Table 30 below shows how the teaching materials were acquired.

Table 30: Teacher trainers response on how the teaching materials were acquired

Acquisition	yes		no	
	f	%	f	%
Buying	200	74.6	68	24.5
Made by teachers	99	36.9	169	63.1
Made by students	68	25.4	200	74.6
Donations	180	67.2	88	32.8
Borrowed	48	17.9	220	82.1

On acquiring the learning resources for the college, the study found that 200 (74.6%) of the teacher trainers reported that the learning resources were bought, 99(36.9%) reported that the learning resources are prepared by the teacher trainers themselves and 68(25.4%) reported that they are made by the student teachers. Further, 180(67.2%) reported that the learning materials used for teaching HIV/AIDS in the PTTCs are acquired through donation and 48(17.9%) reported that they are borrowed. The data implies that most of the teaching materials were either bought or donated. Table 31 shows the adequacy on the supply of learning resources.

Table 31: Teacher trainers rating on the adequacy of the supply of learning resources

Resources	f	%
Very adequate	9	3.4
Adequate	84	31.3
Inadequate	175	65.3

The results in the above table indicates that 175 (65.3%) of the teacher trainers reported that the supply of the learning resources for HIV/AIDS syllabus were inadequate. Additionally, 84 (31.3%) reported that the supply was adequate with only 9 (3.4%) reporting that the supply was very adequate.

Kafwa (2005) argues that HIV/AIDS education has not been taken seriously because there are no trained teachers and also there are no instructional materials. Material resources play a significant role in curriculum

implementation. The main aim of preparing and producing curriculum materials is to assist teachers implement the curriculum and students interpret the content correctly (Oluoch, 1992). The teaching of HIV/AIDS in schools requires that there is preparation and distribution of scientifically accurate, good quality teaching and learning materials on HIV/AIDS. Inadequacy or lack of instructional materials is therefore an impediment in any curriculum implementation and by extension HIV/AIDS curriculum integration into the syllabus.

Since HIV/AIDS education was integrated into the mainstream subjects, very few relevant instructional resources have been availed to facilitate its teaching. Despite implementation of the HIV/AIDS education policy in schools, a study by Coombs and Kelly (2002) concluded that there is ubiquitous evidence that less teaching and teaching materials are getting into classrooms and the teachers have virtually no guidelines for coping with the pandemic. In a related study, Malambo (2000) sought to find out how teachers teaching HIV/AIDS education were equipped in terms of instructional materials. He established that teachers lacked adequate resources for the teaching of HIV/AIDS education. A study conducted by Hyde, Kiage, Barasa and Ekatan (1993) to identify the role of education in preventing HIV/AIDS infection found that teachers experienced considerable embarrassment when discussing sexual and reproductive health topics in the classroom. Table 32 shows that teachers were further asked to state the criteria they used to select learning resources.

Table 32: Criteria used in selection of learning methods for HIV/AIDS syllabus

Criteria	yes		no	
	f	%	f	%
Lesson objective	200	74.6	68	25.4
Lesson topic	172	64.2	96	35.9
Time availability	105	39.2	163	60.9
Class size	59	22.0	209	78.0
Age of the student	76	28.2	192	71.7
Ease of availability of resource	90	33.6	178	66.4

The teacher trainers were asked the criteria they used in the selection of learning methods for HIV/AIDS syllabus, 200 (74.6%) reported that they used lesson objectives while 172 (64.2%) reported that they were guided by the lesson topic and 105 (39.2%) time availability. Further, 59 (22.0%) reported that the class size determined the selection of the learning methodology while 76 (28.2%) reported that they used the age of the student as the criteria and finally, 90 (33.6%) reported that they used the ease of availability of resources to determine the teaching method. Table 33 shows the audio visual resources used in teaching HIV/AIDS syllabus.

Table 33: Audio – visual resources used in teaching HIV/AIDS syllabus

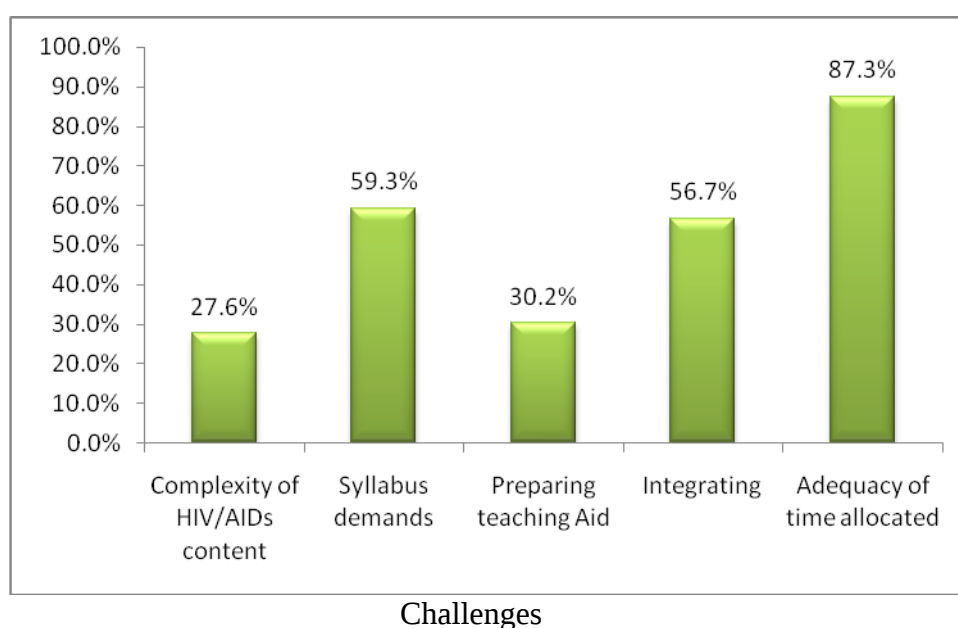
Criteria	yes		no	
	f	%	f	%
Chalkboard	248	92.5	20	7.5
Posters	127	47.4	141	52.6
Newspaper/magazines	86	32.1	182	67.9
Radio	48	17.9	220	82.1
Videos tapes	115	42.9	153	57.1
Slides	62	23.1	206	76.8
Films	49	18.3	219	81.7
Real objects	53	19.8	215	80.2

The study has revealed various audio visual resources used in teaching HIV/AIDS syllabus by the teacher trainers. The most frequently used method was the use of chalk boards which was reported by 248(92.5%) of the teacher trainers. Further, 127(47.4%) reported using posters while 86(32.1%) reported the use of newspaper/magazines and 48(17.9%) reported using radio. The analysis also showed 115(42.9%) of the teacher trainers reported using video tapes, 62(23.1%) reported using slides, and 49(18.3%) reported using films.

4.9 Challenges encountered by teacher trainers in implementing HIV/AIDS education syllabus in PTTCs.

To establish the challenges faced in the implementation of HIV/AIDS education syllabus, the teacher trainers were asked to indicate whether they faced any challenges while implementing HIV/AIDS syllabus. Data revealed that 178(66.4%) reported that they did while 90 (33.6%) reported otherwise. Figure 4.1 shows challenges faced by teacher trainers in teaching HIV/AIDS education.

Figure 2: Challenges faced by teacher trainer in implementation of HIV/AIDS education syllabus in PTTCs.



As showed in figure 2, challenges mentioned by the teacher trainers included complexity of HIV/AIDS content cited by (27.6%), syllabus demands cited by (59.3%), preparing teaching aids (30.2%), integration cited by 152 (56.7%) and in adequate time allocated to teach the syllabus (87.3%). The highest

challenge the teacher trainers were facing was inadequate time allocated to teach the syllabus into their subjects. Knowledge increases confidence in teaching any subject therefore any challenge being experienced by the teachers especially in the teaching of the subject obviously it reflects poor preparation to handle the subject.

Integration is a philosophy of teaching in which content is drawn from several subject areas to focus on a particular topic or theme such as using population data on deaths experienced in a region due to HIV/AIDS has led to decrease in people in the course of teaching a subject such as mathematics. The content integrated within the current primary teacher education syllabus is in no way adequate for student teachers development of meaningful knowledge, skills and attitudes towards sexuality. The nature of infusion and integration also offers challenges: The teacher trainers in PTTC are not likely to handle HIV/AIDS education training satisfactorily if they lack training in the subject, infusion and integration leaves very little room for monitoring progress and evaluation of the effects of the content being brought in to the existing curriculum. HIV/AIDS syllabus is not offered as a fully-fledged course in PTTCs therefore, specialization on sexuality is not viable. As a result, the contents have less attention in terms of time and resources.

4.10 Suggestions made to mitigate challenges experienced while implementing the HIV/AIDS syllabus

The following suggestions were offered by the teacher trainers and the student teacher towards improving the implementation of the HIV/AIDS syllabus in PTTCs.

4.10.1 Increase of funding

That MoES&T should increase funding towards implementation of HIV/AIDS syllabus so that the colleges can acquire enough teaching resources for the teacher trainers. 45.6 % of the teacher trainer indicated that they used the teaching resources which were available at the college.

4.10.2 Exposure to HIV / AIDS syllabus

Majority of the teacher trainers indicated that they had not attended any in service course and if they had it was not relevant to HIV/AIDS syllabus. Therefore there is need for the MoES&T to take deliberate effort to conduct HIV/AIDS syllabus in service seminars/ workshops for all the teacher trainers to increase their awareness and appreciation of the subject. This will help them to appreciate the content of the HIV/AIDS syllabus and therefore not find it complex. 40.7 % of the teacher trainers indicated that they had not attended any in service course.

4.10.3 Teaching Resources / learning resources

That colleges should regularly invite resource persons who are in a position to counsel the students' teachers in order to enable them appreciate the subject more. Most of the teacher trainers reported that the teaching resources for the HIV/AIDS syllabus were not adequate. The observation schedule revealed that the teacher trainers mainly used textbooks, charts, posters and pamphlets.

4.10.4 Teacher trainers' assessment on the adequacy of the HIV/AIDS syllabus content

It was important to teacher trainers' assessment on the adequacy of the HIV/AIDS syllabus content in order to make appropriate recommendations. Table 34 shows teacher trainers adequacy of the HIV/AIDS syllabus content.

Table 34: Teacher trainers' assessment on the adequacy of the HIV/AIDS syllabus content

Adequacy	very adequate		adequate		inadequate	
	f	%	f	%	f	%
Recommended topics	50	18.7	116	43.3	102	38.0
Coverage of content	20	7.5	99	36.9	149	55.6
Recommended teaching activities	30	11.2	109	40.7	129	48.2
Recommended teaching resources	31	11.6	94	35.1	143	53.3
Assessment methods	21	7.8	83	31.0	169	61.2
Time allocated	16	6.0	46	17.1	206	76.9

The results in the above table show that 116(43.3%) of the teacher trainers reported that the recommended topics were adequate while 102(38.0%) reported that the recommended topics were not adequate. Moreover, 149 (55.6%) of the teacher trainers reported that the coverage of the content was not adequate while 99(36.9%) reported that the coverage of the content was adequate. The results also showed that 129 (48.2%) of the teacher trainers considered recommended teaching activities as inadequate while 109 (40.7%) considered the same as adequate.

Further, 143(53.3%) reported that recommended teaching resources were inadequate while 169(61.2%) considered the assessment methods as inadequate and 206(76.9%) considered the allocated time as inadequate. Time allocated was considered to be most inadequate followed by assessment methods, coverage of the content and the recommended teaching resources. Table 35 below shows the opinion on adequacy of HIV/AIDS syllabus.

Table 35: Overall rating on adequacy of HIV/AIDS syllabus content

Opinion	f	%
Very adequate	73	27.2
Adequate	35	13.1
In adequate	160	59.7
Total	268	100.0

Overall, 160 (59.7%) of the teacher trainers reported that the HIV/AIDS syllabus content was in adequate while 73(27.2%) reported that content was very adequate. Table 36 below shows the views of teachers on HIV/AIDS syllabus.

Table 36: Teachers' views on HIV/AIDS syllabus

Views	strongly agree		agree		undecided		disagree		strongly disagree	
	agree								disagree	
	f	%	f	%	f	%	f	%	f	%
HIV/AIDS syllabus should be taught separately	84	31.1	71	26.5	57	21.3	29	10.8	27	10.1
HIV/AIDS is misplaced	11	4.1	31	11.6	66	24.6	57	21.3	103	38.4
No relation between my subject and HIV/AIDS	10	3.7	25	9.3	49	18.3	77	28.7	107	39.9
I find it easy to integrate HIV/AIDS education to my subject	54	20.1	88	32.8	57	21.3	43	16.0	26	9.7
It should be handled by pastors ,mum and other religious leaders	7	2.6	23	8.6	62	23.1	58	21.6	118	44.0
Everybody knows about HIV/AIDS so it is a waste of time teaching it	3	1.1	12	4.5	55	20.5	46	17.2	152	56.7
It is punishment of God to the sinful world so let the people reap what they planted	9	3.4	11	4.1	58	21.7	43	16.0	147	54.9
Let the people learn from the infected people	28	10.4	42	15.7	43	16.0	44	16.4	111	41.4

Table 36 shows that 155(57.8%) of the teacher trainers agreed that HIV/AIDS be separated with other subjects and be taught separately. Moreover, 160(59.7%) of the teacher trainers disagreed that HIV/AIDS is a misplaced subject and 184(68.6%) disagreed that there was no relationship between their subject of study and HIV/AIDS. Further, 142(52.9%) agreed that they find it easy to integrate HIV/AIDS syllabus to their subject while 176(65.6%) disagreed that the subject should be handled by pastors, mothers and other religious leaders. The results also showed that 198(73.9%) disagreed that everybody knew about HIV/AIDS and hence it was a waste of time teaching the subject. Finally, the results show that 190(70.9%) of the teacher trainers disagreed that HIV/AIDS is a punishment from God the sinful world so that people may reap what they planted and 155(57.8%) disagreed that the people should learn from the infected people.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the purpose of the study, research problem, methodology and major findings of the study. This chapter also presents conclusions, recommendations and suggestions for further research.

5.2 Summary of the study

The overall purpose of the study was to evaluate the implementation of HIV/AIDS syllabus in PTTCs. The objectives of the study were to establish the extent to which teacher trainers in PTTCs are equipped with relevant knowledge to enable them teach HIV/AIDS education syllabus, determine whether teacher trainers in PTTCs are equipped with the skills and attitudes to enable them teach HIV/AIDS syllabus, to identify the teaching methodologies employed by teacher trainers in teaching HIV/AIDS syllabus, establish HIV/AIDS syllabus assessment methods, determine student-teachers knowledge and attitude towards HIV/AIDS education, to establish the teaching materials / learning materials used by teacher trainers in teaching HIV/AIDS education syllabus, identify the challenges encountered by teacher trainers in implementing HIV/AIDS education syllabus in PTTCs, establish solutions / suggestions to problems experienced while implementing the HIV/AIDS syllabus and finally establish the adequacy of HIV/AIDS education syllabus.

The research design adopted for this study was evaluation study design. This study was conducted in 17 PTTCs. The respondents comprised of the teacher trainers and student teachers. There were 268 teacher trainers and 775 student teachers who participated in the study. The research instruments comprised of questionnaires and an observation schedule. Pilot study was conducted amongst thirty teacher trainers and forty student teachers in three PTTCs. The research instruments were validated using a pilot study whereby supervisors in the department examined the research instruments after piloting and made corrections in terms of relevance of the items which were used and indicated whether type of data collected was meaningfully analyzed in relation to the stated objectives and questions of the study. The research design of the study was an evaluation design. The study was both quantitative and qualitative. Descriptive statistics was used to analyse the data.

5.2.1 To what extent are teacher trainers in PTTCs equipped with relevant knowledge, skills and attitude to enable them teach HIV/AIDS education syllabus?

Teachers trainers were academically qualified since majority of them 172 (64.2%) of the teachers trainers had a first degree in education, 52 (19.4%) had a second degree in education while 32 (11.9%) had diploma in education. Further, 59.3% (159) of the teacher trainers had attended an in-service seminar/workshop on teaching while 40.7% (109) had never attended any in service teacher training. Among the teacher trainers who reported that they had attended an in-service training, 67.9% (108) reported that they did an in-

service course dealing with HIV/AIDS. About 69.2% of the teacher trainers who attended the in service training reported that the training changed their attitude towards teaching of HIV/AIDS syllabus. Results of the study also indicated that the attitude of the teacher trainers was positive 196 (73.0%) implying that there was a general positive attitude toward teaching HIV/AIDS syllabus among the teacher trainers. Teacher trainers were to some extent equipped with relevant skills to implement the syllabus because at least 59% had attended in-service training on HIV/AIDS syllabus.

Based on the findings teacher trainers were well equipped with knowledge on teaching HIV/AIDS syllabus since they either had first degree in education or second degree in Education. Further teacher trainers have not specialized in the area but can effectively teach the syllabus.

5.2.2 Teaching methodologies employed by teacher trainers in PTTCs in the implementation of HIV/ AIDS syllabus

Findings revealed that the most popular method of teaching HIV/AIDS among the sampled PTTCs was discussions which were reported by 56.7% of the teacher trainers. This was followed by questions and answer reported by 49.2% and lectures method reported by 43.7% of the teachers trainers. From the findings of this study discussions, question and answer and lecture method were the most commonly used instructional methods.

5.2.3 Assessment methods used by teacher trainers in the implementation of HIV/ AIDS syllabus

The results show that 154(57.5%) of the teacher trainers reported that essays were used as a mode of assessment on HIV/AIDS syllabus, 157(58.6%) assignments while 154(57.5%) reported the use of observation as a mode of assessment. Additionally, the results show that 157(58.6%) reported that oral tests were used as a mode of assessment while 148(55.2%) reported the use of all the combined methods of assessment. Based on the findings the commonly used methods of assessment were oral tests, assignments, essays and observation.

5.2.4 Student-teachers knowledge and attitudes towards HIV/AIDS

Student teachers knowledge about HIV transmission was considered high at 708(91.3%). However, it is important to note that there was low knowledge about the HIV transmission among 54(7.0%) among the student teachers. Student teachers attitudes towards the value of HIV/AIDS was high at 541 (69.8%) with only 68(8.1%) having a low score values and 166(21.6 %) having a negative attitude. Student teachers attitude towards enjoyment of HIV/AIDS education was positive with 590(76.1%) reporting positive enjoyment while only 156(20.1%) who had a negative opinion on the enjoyment of the HIV/AIDS education. Student teachers' attitude towards HIV and AIDS syllabus influenced its implementation.

5.2.5 Learning material / teaching resources available in the implementation of HIV/ AIDS syllabus.

Most popularly used teaching material / resources were KICD syllabus (96.0%), KICD publications (93.6%), textbooks (98.8%), use of resource persons (71.0%) and charts and posters (70.0%) respectively. Further (65.3%) of the teacher trainers reported that the supply of the learning resources for HIV/AIDS syllabus were inadequate. Additionally, 84 (31.3%) reported that the supply was adequate with only 9 (3.4%) reporting that the supply was very adequate. From the finding therefore the most commonly used teaching/learning resources were KICD syllabus, KICD publications and textbooks.

5.2.6 Challenges encountered by teacher trainers while implementing HIV/AIDS syllabus

Findings revealed that the main challenges teacher trainers were facing were in the implementation of HIV/AIDS syllabus were:

1. Time allocated
2. Syllabus demand
3. Integrating the syllabus
4. Preparing teaching Aids

5.2.7 Suggestions made to mitigate the challenges experienced while implementing the HIV/AIDS syllabus

The following suggestions were offered by the teacher trainers and the student teacher towards improving the implementation of the HIV/AIDS syllabus in PTTCs.

1. Increase of funding
2. Exposure of teacher trainers to HIV / AIDS syllabus
3. Teaching resources / learning resources
4. Review of the HIV/AIDS syllabus

5.2.8 Adequacy of HIV/AIDS education syllabus

About 160 (59.7%) of the teacher trainers reported that the HIV/AIDS syllabus content was inadequate while 73(27.2%) reported that the content was very adequate. Content therefore need to be more detailed as most teacher trainers assessed it as inadequate.

5.3 Conclusions

Based on the findings it was concluded that teacher trainers were well equipped with knowledge to teach HIV/AIDS syllabus since majority of them were qualified teachers academically and professionally. Teacher trainers were well equipped with requisite skills to teach the HIV/AIDS syllabus even though they had not specialized in the subject area. Teacher trainers were found to have positive attitude towards implementation of HIV/AIDS syllabus.

Based on the findings 69.2% of the teacher trainers who attended in-service training changed their attitude towards the implementation of HIV/AIDS syllabus. This implies that there is need to encourage the MOES&T to ensure that teacher trainers attend HIV/AIDS in-service workshops / seminars because they are important in providing them with needed knowledge and will influence their attitude.

Teacher trainers should use more of participatory teaching techniques which include role play, dramatization, role model, visits in addition to discussions in implementing HIV/AIDS syllabus.

About 65.3% and 3.4% of the teacher trainers reported that the supply of the learning resources for HIV/AIDS syllabus were either inadequate or very adequate respectively. Student teachers knowledge about HIV transmission was high at 91.3%. Globally, while knowledge about HIV and safer sexual behaviour among young people has improved, only 34% of young people have comprehensive and accurate knowledge of HIV/AIDS. Student teachers need to have access to accurate information and high quality HIV/AIDS education to enable them to develop the requisite knowledge, attitudes and skills before they reach an age where some of them might engage in risk taking behaviour and this will ensure that when they graduate they are able to disseminate accurate information to the primary school going children (UNAIDS, 2012).

Based on the findings, it is concluded that student teachers had a positive attitude toward HIV/AIDS syllabus since they scored 69.8% on the attitude

and 76.1% on the attitude towards the value of the HIV/AIDS syllabus. The HIV/AIDS syllabus was inadequate as reported by 59.7 % of the teacher trainers.

From the findings of this study it is apparent that the syllabus was worthy implementing in PTTCs since teacher trainers and student teachers had positive attitude and appeared to be enjoying teaching and implementing the syllabus.

Further the study concluded that although HIV/AIDS syllabus is being implemented through other subject it has been effectively implemented.

5.4 Recommendations

In light of the findings and conclusions of the study the following recommendations were made: -

- i. Teacher trainers' need specific in service courses pertaining to the use of the resources. They also need to be guided through syllabus guide which elaborately suggest the resources appropriate for each topic in the absence of in service courses.
- ii. That participatory teaching methods such as dramatization, role play, visits, use of resource persons, use of video in addition to discussions should be encouraged since HIV / AIDS syllabus is geared towards change of attitude and behaviour.

- iii. That the teacher trainers should be inducted on PTTCs teaching approaches since in the study it was found out that most of them came direct from teaching secondary schools.
- iv. It is strongly recommended that the MOES&T increase funds for the purchase of teaching resources such as textbooks, videos, posters among others to enable teacher trainers to have more innovative, stimulating and exciting teaching materials.
- v. That Kenya Institute of Curriculum Development (KICD) should avail teaching materials / learning resources which contain information on HIV / AIDS syllabus content.
- vi. It was strongly recommended that KICD need to urgently review the HIV/AIDS content.
- vii. That this model of teaching HIV/AIDS syllabus through other subject was effective and therefore it can be used to address other emerging issues of concern in the society such as drug and drug addiction and teenage pregnancy in schools.

5.5 Suggestions for further research

Taking into account the limitations and delimitations of this study, the following suggestions are made for further research.

- (i) Further research of similar nature need to be done involving other emerging issues in the society such as drug addiction and teenage pregnancy in schools and colleges.

- (ii) Research need to be conducted to assess the effectiveness of teaching HIV/AIDS syllabus in primary school by student teachers. Data from such research would give feedback on effectiveness of HIV/AIDS syllabus implementation at the PTTCs.
- (iii) An in depth analysis of the HIV/AIDS syllabus teaching materials should be done to establish their relevance and effectiveness in teaching the subject.
- (iv) Further research need to be done to determine the impact of the HIV/AIDS syllabus implementation on the teacher trainers.

REFERENCES

- Aggleton, P. (1996). Global priorities for HIV/AIDS invention research. *International journal of STDs*, 7 (sup. 2), 13-16.
- AIDS death among teachers worrying. (2005, 1st August). *The Standard.*, p. 14.
- Ajibola, M. A. (2008). Innovations and curriculum implementation for basic education in Nigeria: Policy priorities and challenges of practices and implementation, *Research Journal of International Studies*. Issue 8 (November, 2008) pp. 51-58.
- Allan, C. O., & Francis, P. H. (1988). *Curriculum: Foundations, Principles and Issues*. Boston: Allyn and Bacon.
- Amaro, O. (1995). *HIV/AIDS prevention program evaluation report*: Prepared for the Massachusetts Primary Prevention Group and the Massachusetts Department of Public Health.
- Ball, D., & Cohen, D. (1996). Reform by the book: What is - or might be - the role of curriculum materials in teacher learning and instructional reform? *Educational Researcher*, 25(9), 6-8, 14.
- Bandura, A. (1986). *Social Foundations of thought and action: a social cognitive theory*. New Jersey: Prentice Hall.
- Bankole, A. *et al.* (2007). Knowledge of Correct Condom Use among Adolescents in sub-Saharan Africa. *African Journal of Reproductive Health*, 11(3),197–220.
- Basch, C. E. (1984). Research on disseminating and implementing health education program in schools. *Journal of School Health*, 54, 57-66.

- Berg, K. E., & Latin, R. W. (2008). *Essentials of research methods in health, physical education, exercise science, and recreation*. Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins.
- Botvin, G. J., Baker E., Filazzola, A.D., & Botvin, E.M. (1990). A cognitive behavioral approach to substance abuse prevention: One year follow-up. *Addict Behaviour*, 15, 47-63.
- Buston, K., Daniel, W., Graham, H & Sue Scott. (2002). Implementation of a teacher delivered Sex Education Programme: Obstacles and Facilitating factors. *Journal of Health Education Research Theory and practice.*, 17(1), 59-72.
- Cameron, H. (1991). Effects of in-service training on implementation of a health curriculum in Nora Scotia, Canada. *Junior School Health*, 61, 131-135.
- Carless, D., (1999). Perspectives on the cultural appropriacy of Hong Kong's Target-Oriented Curriculum (TOC) initiative. *Language, Culture and Curriculum* 12 (3), 238–254.
- Central Bureau of statistics (CBS) [Kenya], & Ministry of Planning and National Development. (2005). *Economic Survey*. Government printer.
- Central Bureau of Statistics [CBS] {Kenya}, Ministry of Planning and National Development., Ministry of Health (MOH) [Kenya]., Kenya medical Research Institute(KEMRI)., National Council for Population and Development (NCPD)., ORC Macro International., et al. (2004). *Kenya Demographic and Health Survey, (2003)*. Calverton, Maryland: NCPD, MOH, and ORC Macro.
- Coombs & Kelly, M. J. (2001). “Trends cases: Education as a vehicle for combating HIV/AIDS.” *Prospects*, XXX1(3), 438-445.

- Coombs, A. W. (1962). *Perceiving, Behaving, and Becoming a new focus for education*. Washington D.C: Association for Supervision and Curriculum Development. D. L. Stufflebeam & A. J. Shinkfield (Eds.), *Systematic evaluation*
- Darling-Hammond, L. (2006). Instructional policy into practice: The power of the bottom over the top. *Educational Evaluation and Policy Analysis*, 12 (3), 339-347.
- Economic Commission for Africa, (2000) *HIV/AIDS and Education in Eastern and Southern Africa: The leadership challenge and the way forward*. Addis Ababa: For the African development forum.
- Edgar, T., Freimuth, V. S., & Hammond, S, L. (1988). Communicating the AIDS risk to college students: the problem of motivating change. *Health Education Research*, 3, 59-69.
- Eight girls quit school after falling pregnant. (2005, 1st November). *The standard*, p. 8.
- Family Health International (FHI). (2005), *Teacher Training: Essential for School-Based Reproductive Health and HIV/AIDS Education, Focus on Sub-Saharan Africa*. FHI, Youth Issues Paper 3. Research Triangle Park.
- Farrant, J.S. (1981). *Principles and Practice of Education*. United Kingdom
- Fennel, R. (1990). The impact of a credit course on AIDS at the collegiate level. *Journal of Health Education Research*, 3, 59-69.
- Fishbein., M., & Ajzen, I. (1975). *Belief, attitude, intention and behavioural introduction to the theory and research*. Wesley: M.A. Adison.

- Ford, H. H., Zimmerman, R. S., Anderman, M. E., & Lynda, B. W. (2001). Beliefs about the appropriateness of AIDS related education for sixth and ninth grade students. *A journal of HIV/AIDS Prevention and Education for Adolescent* , 4, 6-19.
- Freire, P. (1970). *Pedagogy of the Oppressed*. New York: Seabury Press.
- Fullan, M. (2001). *The new meaning of educational change*. Third edition. New York: Teachers' College Press.
- Fullan, M., & Miles, M. (1992). Getting educational reform right : What works and what doesn't . An article submitted to Phi Delta Kappan.
- Gachuhi D. (1999) *The Impact of HIV/AIDS on Education Systems in the Eastern and Southern Africa Region, The Response of Education Systems to HIV/AIDS: Education/Life Skills Programmes*. Nairobi: UNICEF/East and Southern Africa Region.
- Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Research Education: An Introduction* (5th edition ed.). New York: Longman.
- Gallant, M. and Maticka-Tyndale, E. (2004). School-based HIV Prevention Programmes for African Youth. *Social Science and Medicine*, 58, 1337–1351.
- Gay,L.R.; Mills, G.E.; Airasian, P.(2006) Educational research: Competencies from Analysis and Application (8th edition). Published by Pearson Merrill Prentice Hall, New Jersey, Columbus, Ohio.
- GoK/UNICEF, (1995). *Survey of non-formal education in Kenya*. Nairobi: Kenya Institute of Education.
- Grunseit A, Kippax S, Aggleton P, et al. (1997). Sexuality education and young people's sexual behavior: a review of studies. *Adolescent Research Journal of Education*, 12(4),421-453.

- Heininchi, R., Molendar, M., & Russel, J. D. (1999). *Instructional media and new technologies of instructions*. 2nd Edition, New York: Macmillan Publication & Company.
- Howie, S. (2002). *English language proficiency and contextual factors influencing mathematics achievement of secondary pupils in South Africa*. Doctoral dissertation. Enschede: University of Twente. Information Age Publishing in Education. Urbana, Ill.: University of Illinois, Unpublished doctoral dissertation, 1971.
- Hyde, K. A., Kiage. A. P., Barasa, C., & Ekatan, L. (1993). *The Impact of AIDS on Formal School in Uganda- Summary Report*. Kampala: Oxford University Press.
- IATT (2005). *Operational guide on gender and HIV/AIDS: A rights Based approach*. Geneva: UNAIDS.
- Irwin, A. Adams, A. & Winter, A. (2009). *Home truth facing the facts on children, AIDs and poverty: Final report of the joint learning initiative on children and HIV/AIDS*. Geneva: JLICA.
- Jennie Waiduo, Jane Willis (2000). *Health and education promotion: foundations for practice*. New York, Prentice Hall.
- Kavin, A. L., Andrew, E., Kiage, P., & Barasa, C. (2000). *A. M. R. Foundation*.
- Kealey, K. A., Peterson, A. V., Gaul, M. A., & Divoh, K. J. (2000). Teacher training as a behaviour change process: Principles and Results from a longitudinal study. *Health Education and Behaviour Journal*, 27, 64-81.
- Kelly, M. J. (2000). *The Encounter between HIV/AIDS and Education*. Lusaka: University of Zambia.

- Kinyua, A.K. (2001). *An Evaluation of the implementation of Environmental Education Integrated Curriculum in Primary Teacher Training Colleges in Kenya*. University of Nairobi, Nairobi.
- Kirby, D., & Coyle, K. (1997). School- based programs to reduce sexual risk-taking behaviour. *Children and youth services review*, 19, 415-438.
- Kirby, D., Laris, B.A. & Roller, L. (2005). *Impact of Sex and HIV Education Programs on Sexual Behaviors of Youth in Developing and Developed Countries*. Family Health International. Youth Research Working Paper No. 2. Research Triangle Park, Family Health International.
- Kirby, D., Obasi, A., & Laris, B. (2006). The Effectiveness of Sex Education and HIV Education Interventions in Schools in Developing Countries in Ross, D. *et al.* (eds) *Preventing HIV in Young People: A Systematic Review of the Evidence from Developing Countries*. Geneva, WHO and UNAIDS Inter-Agency Task Team (IATT) on Young People.
- Kiringa, N. G. (2003). *Secondary School teachers perceptions towards implementation of HIV/AIDS syllabus in public secondary schools in Nairobi province*. University of Nairobi, Nairobi.
- Krejcie, R. V., & Morgan, D. (1970). *Determining Sample Size for research activities*. *Education and Psychological Measurements*, Quoted in Mulusa T. (1988) *Evaluating Education and community development programmes*. Nairobi: Deutsche shifting fur internationale. Entwicklung and college of Adult and Distance Education, University of Nairobi.
- Levenson, G. P., & Hamilton, R. (1989). Evaluation of training effects on teacher attitude and concerns prior to implementing a human sexuality programme. *Junior School Health*, 59, 156-160.

- Li, D. (1998). “It’s always more difficult than you plan and imagine”. Teachers’ perceived difficulties in introducing the communicative approach in South Korea. *TESOL Quarterly* 32, 677–697.
- Lipson, L. M. & Brown, L. T. (1991). Do videotapes improve knowledge and attitudes about AIDS?. *Journal of American College health*, 39,235-243.
- Lockheed, Marlaine E., & Verspoor, A. (1991). *Improving Primary Education in Developing Countries*. New York: Oxford University Press for the World Bank.
- Lodiaga. (2000). *Youth HIV/AIDS and education sector priorities*. Paper presented at the Discussant at the national AIDS Council / Provincial administration, Office of the President ACU workshop to sensitize Provincial and District Commissioners on their role in the management and coordination of HIV/AIDS disaster response programmes, KIA.
- Loucks, S. F., & Lieberman, A. (1983). Curriculum implementation. In F. English (ed), *Fundamental curriculum decisions* (1983 Yearbook). Alexandria, Virginia: Association for Supervision and Curriculum Development (ASCD).
- Magnussen, L., Ehri, J.E., Ejere, H.O. & Jolly, P.E. (2004). Interventions to Prevent HIV/AIDS among Adolescents in Less Developed Countries: Are they effective? *International Journal of Adolescent Medicine and Health*, 16(4), 303–323.
- Majumdar, P.K. (2005). *Research Methods on Social Science*. Vinod Vasishtha.
- Malambo, R. M. (2002). “Teach them while they are young, they will live to remember the views of teachers and pupils on the teaching of HIV/AIDS in basic education: A case study of Zambia’s Lusaka and

southern provinces.” *Current issues in comparative Education*, 30 (1), 39-51.

Ministry of Education, Science and Technology (1999). *AIDS Education syllabus for schools and colleges*. Nairobi: Government printer.

MoE, (2011). *Alternate routes to basic primary education*. Addis Ababa: Commercial Printers

MoES&T (1999). HIV & AIDS syllabus for schools and colleges. KIE. Nairobi.

Morrison, F.J., Bachman, H. J., & Connor, C. M. (2005). Improving literacy in America: Guidelines from research. New Haven, CT7 Yale University Press

Moskal, R. J. (1991). Effect of a comprehensive AIDS curriculum on knowledge and attitudinal changes in northern Canadian college students. *Canadian Journal of Counselling*, 25, 339-348.

Motswiri, M. J. (2004). *Supporting chemistry teachers in implementing formative assessment of investigative practical work in Botswana*. (Unpublished Doctoral dissertation. Enschede: University of Twente.

Mumah, S. C. J. (2003). *HIV/AIDS: Relationship between knowledge, attitudes and sexual practices of primary school teachers in Rachuonyo district*. Kenyatta University, Nairobi.

Mungai, V. W. (1992). *An Investigation into the Availability and use of Resources for the Teaching and Learning in Primary School in Njoro Division Nakuru District*. (Unpublished M.Ed Thesis. Kenyatta University.

NASCOP. (2005). *AIDS in Kenya. Trends, Interventions and Impact*. Nairobi.

- NASCOP. (2014) *Kenya AIDS Response Progress Report, Towards Zero*. Nairobi.
- National AIDS Control Council (NACC) [Kenya] (2011). *Kenya HIV and AIDS Estimates 2010 and Projected Incidence and Prevalence 2011-2015*. Nairobi, Kenya.
- National AIDS Control Council (NACC) Kenya (2009). Kenya national strategic plan (111) 2009/10-2012/13) Nairobi, Kenya.
- Neal, G. (1971). *Implementing Organizational Innovations: Handbook of organizations*. New York: Allyn and Bacon.
- Njagi, W. L. (2003). *An Assessment of implementation of HIV/AIDS Education in secondary schools in Othaya Division Nyeri District*. University of Nairobi, Nairobi.
- Norris, N. (1998). Curriculum evaluation revisited. *Cambridge Journal of Education*, 28(2), 207-220.
- Nyamok, M. P. (1997). *The Role of Teaching Materials in Academic Performance*. Unpublished PGDE Research Project: Kenyatta University.
- Nzioka, C. Kurungo, A. & Nyine, R. (2007). Teachers training in an HIV and AIDS context: Experiences from Uganda, Kenya and Tanzania. International institute for educational planning.
- Oginga, E. A., Muula, J. M., Mwanja, J. M. (2014). The factors influencing the teaching of HIV/AIDS education in public primary schools in Kisumu, East District, Kenya. "International Journal of Education and Research 2(1).
- Oginga, E.A, Muola, J.M &Mwanja, J.M (2014) The factors influencing the teaching of HIV/AIDS education in public primary schools in Kisumu

East District Kenya. *International Journal of Education and Research*, 2(1).

Okorodudu, R. I. (2006). Refocusing teachers' personality dimensions as correlate of work attitude: *Implications for counselling teacher education in Nigeria. Journal of Education in Developing Areas (JEDA)*, 15: 1-10.

Olouch, G. P. (1992). *Essentials of a curriculum*. Nairobi. EAEP.

Omulando, S. J., & Shiundu, J. S. (1992). *Curriculum and Theory and practice in Kenya*. Nairobi: O.U.P.

Ornstein, A. C., & Hunkins, F. P. (1998). *Curriculum foundations, principles, and Issues*. (3rd ed.). USA: Allyn and Bacon.

Ornstein, A. C., & Hunkins, F. P. (2004), *Curriculum foundations, principle and issues*. Boston: Pearson, pp. 298-327.

Osakwe, R. N. (2009). *Understanding teaching profession*. Osasu Series in Education. Benin City: University of Benin.

Ouko, R. N. (2003). *The preparedness of National secondary school teachers in Nairobi province to implement HIV/AIDS Education curriculum*. University of Nairobi, Nairobi.

Ouma, D.N. (1987). *The Impact of Teaching Aids on Performance: A case of Selected Public and Private Schools in Kisumu Municipality* (Unpublished PGDE Project), Kenyatta University.

Oyoo, G. O. (2003). Impact of HIV/AIDS on Education in the sub-Saharan Africa. *East African Medical Journal*, Editorial, 609-610.

Paul-Ebhohimhen, V.A., Poobalan, A. and van Teijlingen, E.R. (2008). A Systematic Review of School-based Sexual Health Interventions to

Prevent STI/HIV in sub-Saharan Africa. *BMC Public Health*, Vol. 8, No.4, Pearson Education Limited.

Peters, L. W. H., KOK, G., Ten Dan, G.T.M., Buijs, G. J. & Paulussen, T. G. W. M. (2009). "Effective elements of School health promotion across behavioural domain: A systematic review of reviews " *BMC Public Health*, 9: 182-196.

Pinar, W. F., & Irwin, R. T. (2004). *Curriculum in a New Key. The Collected work of Ted T. Aoki*. Mahwah, New Jersey Lawrence Erlbaum Associates, Inc.

Plummer ML., Wight D., Obasi AI, Wamoyi J, Mshana G, Todd J., et al. (2006). A process evaluation of a school-based adolescent sexual health intervention in rural Tanzania: the MEMA kwa Vijana programme. *Journal of Health Education*.

Republic of Kenya, (1976) Report of the National Committee on Educational Objectives and Policies. Gachathi Report. Nairobi: Government Printers.

Republic of Kenya, (1988). Report of the Presidential Working Party on Education and Man Power for The Next Decade and Beyond (Kamunge report). Nairobi: Government.

Republic of Kenya (1994). Report of the Third Teacher Education Conference Nairobi: Government Printer.

Republic of Kenya, (1997). Sessional paper No.4 *AIDS in Kenya*. Nairobi: Government printer.

Republic of Kenya (1999). Report of the Commission of Inquiry into the education system of Kenya. Nairobi: Government Printer.

Republic of Kenya (2002). Economic Survey. Nairobi Government Printer.

- Resnicow, K., Cross, D., & Wynder, E. (1993). Know Your Body program: a review of evaluation studies. *Bulletin of the New York Academy of Medicine*, 70, 188-207.
- Rogan, J. M., & Grayson, D. J. (2003). Towards a theory of curriculum implementation with particular reference to science education in developing countries. *International Journal of Science Education*. 25(10): 1171-1204.
- Rogers, E. (1995). *Diffusion of innovations*. New York: Free Press.
- Ross, J. G., Luepeker, R. V., Nelson, G.D., Saavedra, P., & Hubbard, B. M. (1991). Teenage health teaching modules: Impact of teacher training in implementation. *Junior School Health*, 61, 31-33.
- Schaalma, H., Kok, G., Bosker, R., Parcel, G., Peters, L., Poelman, J., *et al.* (1996). Planned development and evaluation of AIDS/STD education for secondary school students in the Netherlands: Short-term effects. *Health Education Quarterly*, 23(4), 469-487.
- School's Tragedy. (2005, 18th July). *The standard*, pp. 14.
- Scott, F. B. (1994). Integrating curriculum implementation and staff development. *Clearing House*, 67(3), 157-161.
- Scriven, M. (1967). The methodology of evaluation. In R. W. Tyler, R. M. Gagne, & M. Scriven (Eds.), *Perspectives of curriculum evaluation*, 39-83. Chicago, IL: Rand McNally.
- Silva, M. (2002). The effective of school based sex education programs in the promotion of abstinent behaviour a *meta Analysis*, 17(4), 471-481.
- Smerdon, B. A., & Burkam, D. T. (1999). Access to constructivist and didactic teaching: who gets it? Where is it practiced? *Teachers College Record*, 101(1), 5-35

- Smith, P. B., Weinman, M. L., Buzi, R. s., & Benton, A. D. (2004). "An evaluation of a school based pregnancy prevention program aimed at young males: A one year follow up" North America. *Journal of psychology*, 6 (2), 281-292. (Adjust p. 51)
- Speizer, I.S., Magnani, R. & Colvin, C.E. (2003). The Effectiveness of Adolescent Reproductive Health Interventions in Developing Countries: A review of the evidence. *Journal of Adolescent Health*, 33, 324–348.
- St. Ledger, L. (1999). The opportunities and effectiveness of the health promoting primary school in improving child health – a review of the claims and evidence. *Health Education Research*, 14, 51-69
- Stenhouse, L. (1975). *An introduction to curriculum research and development*. London: Heinemann.
- Stufflebeam, D. L. & Shinkfield, A. J. C. (1986). Systematic evaluation. A self-instructional guide to theory and practice. Boston: Kluwer-Nijhoff Publishing.
- Stufflebeam, D. L. (1985). Stufflebeam's improvement-oriented evaluation. In
- Tanner, D., & Tanner, L. (1995). *Curriculum development: Theory into practice* (3rd ed.). Englewood Cliffs, NJ: Merrill
- Teacher Service Commission (2005). Total population of teacher trainers in Kenya. Nairobi.
- Thijs, A. (1999). *Supporting science curriculum reform in Botswana: The potential of peer coaching*. Doctoral dissertation. Enschede: University of Twente.
- Tijuana A. James-Traore, William Finger, Claudia Daileader Ruland, and Stephanie Saraviand (2004) Teacher Training: Essential for school-based reproductive health and HIV/AIDS education focus on sub-

Saharan Africa youth Issues paper 3: Family health international, youthnet program.

Treagust, R. F. (Ed) (1996). Improving teaching and learning in science and mathematics. New York: Teacher College Press. Change pp. 40).

UNAIDS (2004). *Report on the global AIDS epidemic 4th global report*. Geneva: UNAIDS.

UNAIDS (2005). *The AIDS epidemic update*. Geneva.

UNAIDS (2008). Report on the Global AIDS Epidemic

UNAIDS (2012). World AIDS Day Report.

UNESCO (2007). Adult and youth literacy. National, regional and global trends 1985-2015 . Institute for Statistics (UIS).

UNESCO (2008). *Institute for statistics. Global education digests 2006: Comparing education statistics across the world*. UIS, Montreal.

UNESCO (2009). Evaluation of the Teacher Training Initiative for Sub-Saharan Africa (TTISSA)

UNESCO (2011) Booklet 6: Pre-service teacher training. Good policy and practice in HIV/AIDS and education (Booklet series). Paris UNESCO

UNFPA (2006). Annual Report.

UNFPA. (2013). Annual report

UNICEF (1995) The state of world children. Oxford University Press.

UNICEF (2005). *A call to Action Children the missing face of AIDS*. New York.

UNICEF (2012) Progress for children, A report card on adolescents number 10.

- University of Zimbabwe. (1995). *Curriculum Implementation, Change and Innovation*. (Module EA3AD 303). Harare: Centre for Distance Education, University of Zimbabwe.
- Wang, M. C., Nojan, M., Strom, C. D., & Walberg, H. J. (1984). The utility of degree of implementation measures in program implementation and evaluation research. *Curriculum Inquiry*.
- Wasiche, J. L. (2006). *Teaching techniques that enhance students performance in mathematics in selected public secondary schools in Butere, Mumias district in Kenya*. (Unpublished M Ed thesis). Kenyatta University. Nairobi.
- Whitaker, J. (1995). *Curriculum implementation, change and innovation*. (Module EA3AD 303).
- White, D. M., & Ballard, D. J. (2001). The status of HIV/AIDS Education in the Professional preparation of pre-service elementary teachers. *Health Education*, 24(2), 68-72.
- Widdowson, H. G. (1993). *Teaching language as communication*. Oxford: Oxford University Press.
- Wight, D., & Abraham, C. (2000). From Pscho-Social theory to sustainable classroom practice: developing a teacher- based teacher - delivered sex education programme . *Health Education Research*, 15, 25-38.
- Worthen, B.R., Sanders, J.R., & Fitzpatrick, J.L. (1997). *Educational evaluation: Alternative approaches and practical guidelines*. (2nded.). White Plains, NY: Longman
- Zabin, L. G., & Hirsch, M. (1988). *Evaluating of pregnancy prevention programs in school*. Lexing: Context Lexington Books.

APPENDICES

APPENDIX A: LETTER OF INTRODUCTION

Grace N. Kiringa,
University of Nairobi,
Dept. of Educational Admin &
Planning,
P O Box 92,
Kikuyu.

Dear Sir/Madam,

Re: A questionnaire on the evaluation of implementation of HIV/AIDS syllabus in PTTCs in Kenya.

I am carrying out research on the implementation of HIV/AIDS syllabus in PTTCs in Kenya. The study is intended to find out the approaches used in teaching HIV/AIDS syllabus, resources available and teaching methodologies. It will also appraise the problems related to these aspects. This study is therefore very important because it will help improve the teaching of HIV/AIDS syllabus in PTTCs.

I will appreciate your co-operation and assistance in completing the questionnaires. Please answer all the questions, which follow as honestly as possible.

Thanking you in advance.

Yours faithfully

Grace N. Kiringa

APPENDIX B: QUESTIONNAIRE FOR TEACHER TRAINERS

Indicate with a tick (✓) against the information most applicable to you. Fill your answer/comment in the blank spaces. Some questions may have more than one answer.

(a) General information

1. What is your gender?

(a) Male ☐

(b) Female ☐

2. What is your age?

20-29 years ☐

30-39 years ☐

40-50 years ☐

50 and above ☐

3. What is your marital status?

Married ☐

Single ☐

Widowed ☐

Divorced ☐

Separated ☐

Section II

Indicate with tick (✓) in the boxes against the information most applicable to you or fill your answer/comment in the blank spaces provided.

Training and experience

4. What is your highest level of academic education?

‘O’ level ☐

‘A’ Level ☐

An undergraduate degree ☐

Postgraduate Degree ☐

Other (specify) _____

5. What is your professional teaching qualification?

Diploma in education ☐

Diploma (others) ☐

First degree in education ☐

Master of education ☐

6. Did you initially train in the subjects you are teaching?

Yes ☐

No ☐

7. Did you join college?

Direct from university? ☐

From teaching in a secondary school? ☐

From teaching in a primary school? ☐

Any other? (specify) _____

8. On joining the college were you given an induction course on primary teacher training approaches?

Yes ☐

No ☐

9. Have you attended in-service seminars/workshop or course on the teaching of your specialized subject in the last five years?

Yes ☐

No ☐

10. Who organized the in-service course(s) seminar/workshop or course you attended?

(a) _____ c) _____

(b) _____ d) _____

11. Did any of the in-service courses, seminars or workshops you attended deal

With the teaching of HIV/AIDS syllabus?

Yes ☐

No ☐

12. Comment on the information you got from the seminar;

(i.) Conflicted my cultural believes ☐

(ii.) It was not interesting ☐

(iii.) It didn't meet my expectation ☐

(iv.) It changed my attitude ☐

Section III

Answer all the questions in this section as accurately as possible.

Teaching methods/techniques and problems encountered

13. In your opinion does the teaching of HIV/AIDS syllabus require a different approach from the other subjects?

Yes ☐

No ☐

If yes explain

14. How adequate do you consider the following methods/techniques suitable in preparing student teachers to teach HIV/AIDS syllabus?
(Put a tick in the appropriate box)

Methods/technique	very adequate	adequate	inadequate
Lecture			
Discussion			
Dramatization			
Activity approach			
Question and answer			
Field trip			
Use of resources persons			
Project work			

15. How do you derive your lesson objectives for HIV/AIDS Integration?

- i.) From the syllabus
- ii.) KIE teachers' guide
- iii.) Text book
- iv.) Own construction
- v.) Other (specify) _____

16. Is the time adequate to cover the HIV/AIDS syllabus to your satisfaction?

Yes ☐

No ☐

17. What mode of assessment do you use to examine the students?

Teaching resources

18. State the resources (teaching aids) available in your college (or in the neighbourhood) for teaching HIV/AIDS syllabus?

(a) _____

(b) _____

(c) _____

(d) _____

(e) _____

19. a) Specify how your college acquire learning resources for HIV/AIDS syllabus

buys ☐

made by teacher trainers ☐

- made by students teachers ☐
- donation ☐
- borrowed ☐
- others specify ☐

b) If the learning resources are donation specify from whom?

c) If they are borrowed specify lender. _____

20. Indicate the extent to which the supply of learning resources for HIV/AIDs syllabus is adequate

- Very adequate ☐
- Adequate ☐
- Inadequate ☐

21. What challenges do you encounter in your department in acquiring learning resources for teaching HIV/AIDS syllabus?

22. What criteria do you use in the selection of learning methods for HIV/AIDS syllabus? (Indicate with a tick where applicable)

- Lesson objective ☐
- Nature of syllabus topic ☐
- Time available ☐
- Class size ☐
- Age of students ☐
- Ease of availability of resources ☐

23. What types of audio-visual resources do you actually use in teaching HIV/AIDS Syllabus?

chalkboard ☐

posters ☐

newspaper/magazines ☐

maps ☐

diagram ☐

radio ☐

films ☐

real objects/situations ☐

others (specify)_____

Challenges

24. Do you encounter any challenges while implementing HIV/AIDS education?

Yes ☐

No. ☐

25. Do you find any relationship between your teaching subject and HIV/AIDS education?

Yes ☐

No. ☐

26. What are the major challenges facing the teaching of HIV/AIDS syllabus in your college?

i.) Complexity of HIV/AIDS content ☐

ii.) Syllabus demands ☐

iii.) Preparing teaching aids ☐

iv.) Integration ☐

27. What suggestions would you offer to remedy the situations in your college?

Attitude

Indicate with a tick (✓) whether you Strongly Agree (SA), Agree (A), Undecided (U) Disagree (D) Strongly Disagree (SD) against the statement indicated below.

	SA	A	U	D	SD
28. I feel easy and comfortable when teaching HIV/AIDS education					
29. I feel scared and restless when teaching HIV/AIDS education					
30. I feel irritated and impatient when teaching HIV/AIDS education					
31. I feel mentally stimulated when teaching HIV/AIDS education					
32. Teaching HIV/AIDS is fun					
33. Let HIV/AIDS be a separate subject and be taught and examined separately.					
34. I find it easy to integrate HIV/AIDS education to my subject					
35. Everybody knows about HIV/AIDS so it is a waste of time teaching it					
36. I feel easy when teaching HIV/AIDS education					

APPENDIX C:
QUESTIONNAIRES FOR STUDENT-TEACHERS

(a) General information

1. What is your gender?

(a) Male ☐

(b) Female ☐

2. What is your age?

Below 21 years ☐

21-25 years ☐

26-30 years ☐

31-35 years ☐

3. What is your marital status?

Married ☐

Single ☐

Widowed ☐

Divorced ☐

Separated ☐

b) Knowledge and attitude of student teachers towards HIV/AIDS syllabus implementation

Indicate with a tick (√) whether you Strongly Agree (SA), Agree (A), Undecided (U) Disagree (D) Strongly Disagree (SD) against the statement indicated below.

Knowledge	SA	A	U	D	SD
1. Mosquito bite is one possible cause of HIV infection					
2. Infected blood can transmit the virus					
3. Sexual intercourse with an AIDS person is a possible transmission route					
4. Living in the same house with an AIDS person is a possible transmission route					
5. Shaking hands with an AIDS person is a possible transmission route					
6. Living in the same room with an AIDS person is a possible transmission route					
7. Sharing a swimming pool with an AIDS person is a possible transmission route					
8. Sharing the same toilet with an AIDS person is a possible transmission route					
9. Sneezing and coughing are possible routes for AIDS infection					
10. Mother to foetus infection is a possible transmission route					
11. AIDS is a viral infectious disease					
12. There is no effective treatment					
13. There is an effective vaccine					

Knowledge	SA	A	U	D	SD
14. Patients have particular appearances					
15. People immediately show signs of sickness after infection of HIV/AIDS					
16. AIDS is a life threatening disease					
17. I am confident in my ability to protect myself from HIV/AIDS					
18. I would consider avoiding dental checkups for fear of catching HIV/AIDS from dental instruments.					
19. I know that HIV/AIDS is most common among homosexuals and drug users.					
20. AIDS death is not big problem as media suggests.					
c) Student attitude towards the value of HIV/AIDS education					
1. HIV/AIDS education is important in everyday life					
2. HIV/AIDS education is needed virtually in all aspects of life					
3. HIV/AIDS education is an essential subject in everyday life					
4. I can advise the to take HIV/AIDS education as part of their life skis					
5. There is nothing interesting in HIV/AIDS education					
6. I belief HIV/AIDS education is not helpful to learners					
7. I can get perfectly well in everyday life without HIV/AIDS education					

Knowledge	SA	A	U	D	SD
8. I belief the society can develop well without HIV/AIDS education					
9. I enjoy reading HIV/AIDS education in my free time					
10. I am willing to integrate HIV/AIDS education outside school in my day to day activities					
d) Student teachers' attitude towards enjoyment of HIV/AIDS education					
1. I have never enjoyed studying HIV/AIDS education in school					
2. I have always enjoyed studying HIV/AIDS education in school					
3. I would like to develop my HIV/AIDS education in school					
4. I am interested in acquiring further knowledge of HIV/AIDS education					
5. HIV/AIDS education is an interesting topic because it leaves room for personal opinion					
6. I appreciate reading topic on HIV/AIDS education more that for the subject					
7. I desire to learn more on HIV education					
8. I find it easier to understand HIV/AIDS education than other subjects					
9. I always appreciate HIV/AIDS assignments					
10. I wish to be asked a question about HIV/AIDS education by the teacher					

Appendix D: Observation schedule

A) General

1.
 - a) Name of college _____
 - b) Class: _____
 - c) Teaching area: _____
 - d) Lesson topic: _____
 - e) Objectives
 - i) _____
 - ii) _____

Methods/techniques used:

Approaches	when used	in lesson
Technique		
Discussion		
Drama		
Question and answer		
Lecture technique		
Guest- speaker		
Project work		
Group work		
Demonstration		
Field –work		
Story telling		
Simulation		
Games		
Debates		
Pupils prepared exhibits		

Teaching resources

2. List the teaching aids used

a) _____

b) _____

3. List /comment on points at which the learning materials were used.

a) Introduction _____

b) As a lesson progress _____

c) End of lesson/summary _____

d) Others (specify) _____

Appendix E: The Provincial distribution of PTTCs*

	Province	college	location	total no.
1.	North Eastern	Garissa	Asal	1
2.	Central	Kamwenja	Hpa	4
		Thogoto	Hpa	
		Muranga	Hpa	
		Kilimambogo	Asal	
3.	Eastern	Machakos	Asal	6
		St. Marks	Hpa	
		Meru	Hpa	
		Egoji	Hpa	
		Chuka (Rubate)	Asal	
		St. Augustine	Asal	
4.	Rift Valley	Mosoriot	Hpa	6
		Kericho	Hpa	
		Baringo	Hpa	
		Tambachi	Asal	
		Narok	Hpa	
5.	Western	Eregi	Hpa	2
		Kaimosi	Hpa	
6.	Coast	Shanzu	Urban	1
		St. Mary's Bura	Asal	
7.	Nyanza	Asumbi	Asal	4
		Migori	Hpa	
		Bondo	Asal	
		Kamagambo (SDA)	Hpa	
		St. Paul's (Catholic)	Hpa	
		Nyanchwa (SDA)	Hpa	
8.	Nairobi	International Teaching & Training College	Urban	1

* At the time the study was conducted the administrative structure of the Country had not changed.

Appendix F: Research authorization letter

REPUBLIC OF KENYA



NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telegrams: "SCIENCETECH", Nairobi
Telephone: 254-020-241349, 2213102
254-020-310571, 2213123
Fax: 254-020-2213215, 318245, 318249
When replying please quote

P. O. Box 30623-00100
NAIROBI-KENYA
Website: www.ncst.go.ke

Our Ref: **NCST/5/002/R/486/5**

Date: **18th June 2009**

Grace Ndegi Kiringa
University of Nairobi
P.O. Box 30197
NAIROBI

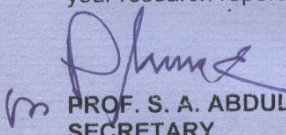
RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on, ***implementation of Hiv/Aids Syllabus Primary Teacher Training Colleges In Kenya ;An Evaluation Study.***

I am pleased to inform you that you have been authorized to carry out research in primary teacher training college country wide for a period ending 31st December 2010.

You are advised to report to the Principals of the Colleges you will before embarking on your research project.

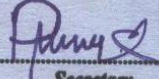
On completion of your research, you are expected to submit two copies of your research report/thesis to this office.


PROF. S. A. ABDULRAZAK PH.D, MBS
SECRETARY

Copy to:

The principals
Primary teachers training colleges

Appendix G: Research Permit

PAGE 2 THIS IS TO CERTIFY THAT: Prof./Dr./Mr./Mrs./Miss.....GRACE NDEGI KIRINGA of (Address).....UNIVERSITY OF NAIROBI P.O.BOX 30197 NAIROBI has been permitted to conduct research in..... Location, ALL.....District, ALL.....Province, on the topic.....IMPLEMENTATION OF HIV/ AIDS SYLLABUS IN PRIMARY TEACHER TRAINING COLLEGES IN KENYA: AN EVALUATION STUDY for a period ending.....31ST DECEMBER 10.....20.....	PAGE 3 Research Permit No......NCST/5/002/R/ 486 Date of issue.....18.6.2009 Fee received.....KSHS.1000.00   Applicant's Signature  Secretary National Council for Science and Technology
--	---