

CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND TO THE STUDY

HIV (Human Immune Deficiency Virus) and AIDS (Acquired Immune Deficiency Syndrome), is one of the biggest health and education challenges since its appearance in the early 1980s. The gravity of the problem of HIV and AIDS infection cannot be underestimated. HIV and AIDS has affected many people, institutions and the various sectors of the society and the economy. According to Kawilila (2004) in Macwangi and Phiri (2007:114), “Zambia ranks as the world 14th poorest nations and has Africa 6th highest HIV/AIDS prevalence.” However, this scenario changed by 2009 where Zambia now ranks the 7th among the countries heavily infected by the pandemic. The Ministry of Health (MoH) and the National AIDS Council (NAC) Biennial Report submitted to the United Nations General Assembly in 2010 says Zambia is seventh among the countries experiencing the effects of a mature and generalized Hyper-endemic. The report further reveals that the national prevalence rates reduced from 16% in 2001 to 14.3 % in 2010. The impact of HIV and AIDS on the education sector is so grave that it affects the supply, demand and the curriculum. According to Akapelwa (2005), the Fifth National Development Plan for 2006- 2010 notes that to improve the economy and the welfare of the people, there would be need to overcome HIV and AIDS among other key areas to be improved such as agriculture, mining, energy, health, housing, youth empowerment and gender etc. As part of the main focus that has been identified to be addressed, HIV and AIDS poses a great threat to the national economy.

The Ministry of Education and Community Health and Nutrition, Gender and Education Support2 (MoE/CHANGES 2 (2007:24) observe that “the epidemic’s grip on Africa has been by far the deadliest but no part of the world is immune. UNAIDS (2009) reveals that, 33.4 million people are living with HIV and AIDS in the world. Of these, 67% live in the Sub-Saharan Africa. Sub Saharan Africa in which Zambia is found also counts for the highest HIV infections among children with 91% and the highest AIDS related deaths of 72%. This is too high for a region that accounts for only 10% of the world’s population. MoH/NAC (2010) observed higher prevalence rates among young women than young men of the same age. “Young women between the ages

15-19 years are more likely to be infected with an HIV prevalence of 5.7 per cent as compared to young men of the same age group at 4.7 per cent. For the age group 20-24 years, this gap widens with young women showing HIV prevalence of 11.8 per cent which is twice that of young men of the same age group at 5.2 per cent, reflecting their specific vulnerability in sexual relationships”. (MoE/NAC 2010:24). These statistics reveal that the school age group is not spared from HIV and AIDS.

The MoH/NAC (2010) , revealed the following statistical prevalence rates according to ZDHS (2007) for provinces as; Central 17.5%, Copperbelt 17%, Eastern 10.3%, Luapula 10.3%, Lusaka 20.8%, Northern 6.8% North Western 6.9%, Southern 14.5% and Western 15.2%. The Times of Zambia Newspaper edition of 28th May 2008 quoted the then Ministry of Health Minister Dr Chituwo saying “the prevalence among men aged between 15 and 49 decreased from 12.9 per cent to 12.3 per cent while among women of the same age the percentage had dropped from 17.8 to 16.1 per cent”. In any case, girls are more at risk than boys. CHANGES/MoE (2006:56), observes that “girls aged between 15-24 years are 6 times more likely to be infected with HIV than boys of the same age.” This according to CHANGES/MoE is because girls and women often do not have the power to refuse sex or insist on condom use. The age group in danger is the adolescent age group in secondary schools, including special schools for the hearing impaired under study. The MoH/NAC (2010) reveal that 14.6 % of the young women and men aged between 15- 24 years get involved in sexual intercourse, a main mode of HIV transmission before the age of 15.

However, among all the above statistics, the disabled population is portrayed as if they are immune to the virus that causes AIDS. This is to say the figures are very silent on how many children, women, and men among the disabled population are infected with the virus. That there are no statistics about HIV and AIDS prevalence among the deaf is retrogressive on this population. Several quotas of society have raised concerns over the lack of statistics about HIV and AIDS prevalence among persons with disabilities. A Times of Zambia reporter in (2005) quoted Chief Nondo of the Lungu people of Northern Province as saying persons with disabilities were the most affected, infected and afflicted by the HIV and AIDS pandemic due to lack of information on the disease. “Although I do not have statistics to support my assertion, I

strongly feel that citizens with disabilities are the most affected, infected and afflicted by the HIV/AIDS pandemic,” he said. The chief may actually have expressed the extent to which the disabled are marginalised in matters of HIV and AIDS. Kawilila (2004) also painted the same picture. He said “we hypothesise that the marginalisation of persons with disabilities and the endemic risk of HIV/AIDS in Zambia may be synergistic, creating a desperate vulnerability in this population. Persons living with disabilities in Zambia are disempowered, facing a lifetime of social stigma and associated risks. To date, no published data is available evaluating HIV/AIDS risk in disabled Zambians”. This scenario is a serious threat to the disabled community who look prone to risks such as rape and sexual cleansing due to beliefs that the disabled provide cure when an HIV positive person has sexual intercourse with them. This was also noted by Kelly (2000, 2008) and Kawilila and Katuta et al, (2004) in Macwang’i and Phiri 2007). In a research conducted by Katuta, Kamwengo, Lubungu et al, in 2004, it was discovered that sexually abused (defiled) children do not come in the open, because most of their defilers are their guardians. It was also found that there was lack of adequate programmes that seek to increase access to information that help the young to break the chains of silence against sexual abuse (defilement). (See Katuta et al 2004 in Macwang’i and Phiri 2007). If the silence cannot be broken among the none disabled, what about the deaf? It can be suggested that abuse which may lead to HIV contraction may be higher among this group because they lack information about HIV and AIDS, and skills to protect themselves. Such insinuations need research in order to fill in the gaps through which HIV continues to leak. Herlily, Thibeault and Meyers et al, (2005) in Macwang’i and Phiri (2007:19) lament that “cultural assumptions of low HIV risk for disabled persons result in a lack of targeted educational materials and outreach services”. Though no statistics are available, it is common knowledge that the disabled are also infected and affected in highly risk endemic areas like Lusaka, Copperbelt and Central provinces which currently stand at 20.8, 17.0 and 17.5 per cent respectively. (Zambia Demographic and Housing Survey 2007).

It is quite known that children of school going age are no longer spared by the pandemic that is claiming brutally the lives of many people. According to MoE (2007:88), there is a total of 170 084 learners with special education needs and 28 888 are hearing impaired. We do not know how many are infected and how information on HIV and AIDS prevention reaches them. The hearing impaired are those learners whose ability to perceive sound is either completely or partially restricted by circumstances that may be congenital or acquired to such an extent that their

learning is limited to other senses other than the sense of hearing. Hearing is one of the very important channels for learning. The lack of hearing limits the learning abilities of the learners affected, though they may have normal intelligence like any other learner. This means they can learn but with difficulties because of the loss or partial loss of one of the very important sense organs; the ear. Learners with hearing impairments therefore learn more through sight and or visual representations, sign language and through the other senses that may not be impaired. The teaching of HIV and AIDS prevention, like the teaching of any other school curriculum content requires serious attention from classroom practice, through school environment to policy making.

MoE (1996: xi) in its *Educating Our Future National Educational Policy* mission statement stated that, “ the mission of the Ministry of Education is to guide the provision for all Zambians so that they are able to pursue knowledge and skills, manifest excellence in performance and moral uprightness, defend democratic ideals, and accept and value other persons on the basis of their personal worth and dignity, irrespective of gender, religion, ethnic origin, or any other discriminatory characteristic.” If this population does not receive HIV and AIDS information, there will be a substantial population remaining unprotected yet they have the right to life. The MoE reiterated its commitment to the rights of all citizens by saying, “education is a right for each individual. It is also a means of enhancing the well-being and quality of life for the entire society. The government’s role in education arises from its overall concern to protect the rights of individuals, promote social well-being and achieve a good quality of life for every person through all embracing economic development. The government must therefore, seek to promote and support the conditions within which education can realise its potential in society” (MoE 2005: 9). The United Nations Declaration on Human Rights article 26(1) also says “everyone has the right to education”. This right cannot be realised in the midst of the deadly pandemic HIV and AIDS. It would be meaningless to provide education that has no protective information for children or learners with hearing impairments. The Fifth National Development Plan (FNDP) of 2006-2010 (2006:15), states that “ the vision for Disability and Development is people with disabilities enjoying equal opportunities that are generally available in society and are necessary for the fundamental elements of living and development by 2030”. The objectives of the plan do not show any HIV and AIDS policy to be addressed by 2030 with regard to the disabled. The

goal is to attain full participation, equality and empowerment of persons with disabilities during the plan period”. This is positive. An HIV and AIDS free environment is one of the definite conditions for the fundamental elements of living and development by 2030. The FNDP (2006:21) also states the vision for HIV and AIDS as “a nation free from the threat of HIV/AIDS by 2030”. The 6th MDG would not be attained without protecting the disabled people from HIV and AIDS. The plan has showed vaguely that there will be increased funding and legislation among other recommendations.

While HIV and AIDS has affected many sectors of the economy, it has not spared the MoE. The MoE is also adversely affected. Teachers and pupils are either infected or affected and since they are part of the wider community, the community is also infected and affected. Education is an important vehicle for disseminating information. Thus schools should be used to teach people about the dangers of HIV and AIDS so that people protect themselves from the scourge. It is for this reason that the MoE developed a training manual on methodologies (Interactive Methodologies Manual for HIV and AIDS Prevention in Zambian Schools) to incorporate HIV and AIDS education in the curriculum. The target was to train teachers on methodologies that would equip learners with skills and information on HIV and AIDS so that children are able to protect themselves from the scourge and also protect others in the wider community through a multiplier effect in that peers and parents would be the end recipients of this information.

Despite the MoE having a very good HIV and AIDS policy, it does not state how best to address HIV and AIDS education for learners with hearing impairments bearing in mind that such learners deserve special modification of teaching strategies and techniques for teachers to accomplish their goals.

The Interactive Manual on Teaching Methodologies for the Prevention of HIV and AIDS does not cover strategies of teaching and disseminating prevention lessons to the hearing impaired. This leaves behind the special education needs category from learning about cross cutting issues such as HIV and AIDS. During a visit to the Zambia Central Statistical Office (CSO) information dissemination room on Thursday 22nd January 2009 to collect statistical data on current HIV and AIDS prevalence rates, it was discovered that the office did not have HIV and AIDS prevalence rates on people with disabilities. The office was only able to provide us with

HIV and AIDS figures for the general population. CSO had data on HIV and AIDS for the general population but why it did not have specific data for persons with disabilities is a matter of concern. CSO is a national department that conducts research and provides vital statistical information on vital issues affecting the country such as poverty, housing, disease etc. It is equally their responsibility to have data on disabilities. The lack of statistics is a sign that the disabled are marginalized and sidelined in research studies and indeed their welfare. The hearing impaired learners in particular are more disadvantaged. The nature of disability they have makes them find difficulties accessing HIV and AIDS education. No studies in Zambia have been undertaken to find out how many hearing impaired people are HIV and AIDS positive and how many have died from the scourge. However, learning from other countries like the United States of America, The American Social Health Association (2001) estimates showed that between 8 000 and 40 000 deaf and hard of hearing were living with HIV in the United States. This takes into consideration care for the disadvantaged. Though this was a positive development, the American Social Health Association (2001) further observed that studies on HIV and AIDS among the hearing impaired were limited and said because studies on the deaf and hard of hearing were limited; it was unclear exactly how many people within this sub-population were living with HIV/AIDS. It was discovered that there was a continued communication gap in delivering culturally competent care to the deaf and hard of hearing and this problem perpetuated misunderstandings about health risks and preventive practices. Further, in the United States of America, the prevalence rate of HIV and AIDS among the deaf and hard of hearing is greater than among the general population. As early as 1992, experts estimated that the American deaf population was behind by eight years in HIV knowledge and awareness. This is according to the US Health Resources and Services Administration (2001). This is a lesson we should learn from that investment in information dissemination about HIV and AIDS among the hearing impaired people is dearly needed, lest the hearing impaired face extinction.

The right to information is universal but if information is denied, the right is meaningless. The deaf population equally has the right to protection against diseases. Kelly (2008:61) notes that “HIV/AIDS may be impairing the right of every child to an education of good quality, regardless of the health status of the family or the child”. The MoE through its 1996 Educating our Future Policy document emphasises equality of educational opportunities, education of particularly good quality and effective monitoring of special education to children with special education

needs. These cannot be realized if this population remains unprotected. HIV and AIDS education is needed by children with disabilities as well. Education denied is rights deprived. Children with special education needs need HIV and AIDS education in order to ensure their right to life like any other citizen.

It is against this background that a study of this nature is vital to establish the implementation of HIV and AIDS interactive methodologies in teaching the hearing impaired learners.

1.2 STATEMENT OF A PROBLEM

The Interactive Methodologies have been in use since 2003 in teaching HIV and AIDS prevention in schools. There has been no research undertaken to evaluate the implementation of Interactive Methodologies in the teaching of HIV and AIDS particularly to learners with hearing impairments, hence the inspiration for this study.

1.3 PURPOSE OF THE STUDY

HIV and AIDS prevention has been integrated into the school curriculum. Private schools, special schools and government schools are expected to teach HIV and AIDS education. The study was meant to assess how the interactive methodologies were being implemented in teaching HIV and AIDS prevention to learners with hearing impairments. It was also meant to further suggest ways and means of disseminating this information to the disabled population in an effective manner. The study was also meant to find out teachers suggestions and recommendations on better ways of teaching HIV and AIDS information to children with hearing impairments. To achieve the purpose, the study employed a case study method of two secondary schools for the hearing impaired learners in the North Western and Copper belt provinces of Zambia.

1.4 OBJECTIVES

The main objective of the study was to find out how teachers were implementing Interactive Methodologies in teaching HIV and AIDS prevention to learners with hearing impairments.

1.4.1 Specific objectives

The objectives of the study were;

- To find out how teachers were implementing the Interactive Methodologies in teaching HIV and AIDS prevention to learners with hearing impairments.
- To find out which Interactive Methodologies teachers found effective in teaching HIV and AIDS prevention to the hearing impaired learners.
- To find out which Interactive Methodologies teachers found challenging in teaching learners with hearing impairments.
- To find out which Interactive Methodologies learners found effective in learning HIV and AIDS.

1.5 RESEARCH QUESTIONS

The questions used in the study were;

- How are the teachers using Interactive Methodologies to teach HIV and AIDS prevention to learners with hearing impairments?
- Which Interactive Methodologies do teachers find effective in teaching learners with hearing impairments?
- What Interactive Methodologies do teachers find challenging when teaching learners with hearing impairments?
- Which Interactive Methodologies do learners find effective to learn about HIV and AIDS?

1.6 SIGNIFICANCE OF THE STUDY

This study aimed at the protection of the hearing impaired population from HIV and AIDS infection. This group of the Zambian population lacks one of the very important communication tools. This is ‘speech’ in which humans mostly communicate in and in which most of our literature is written. Due to the incapacity to communicate using speech, the hearing impaired

learners lack effective communication skills that would protect them against HIV and AIDS infection. The skill of communication helps in decision-making and assertiveness.

It was hoped that the study would help improve the methods of teaching and information dissemination to not only the learners with special education needs but also the learners without special education needs.

Furthermore, the study was important because it would ensure that information about prevention of HIV and AIDS would reach everyone thereby filling all gaps through which HIV and AIDS continues to spread. Several measures had been put in place but the disease continues to spread. This could be because certain groups of people do not receive from the teaching, methods, resources and other newly introduced instruments of information dissemination. The hearing impaired learners are taught in a language that is not their mother tongue; English as a national official language used as a medium of instruction in Zambian schools. English becomes the third language for the hearing impaired learners to learn, first being sign language, and the second being the parents language. The study will therefore suggest strategies for effective information dissemination to the hearing impaired learners.

1. 7 THEORETICAL FRAMEWORK

This research study was influenced by many pedagogical experiences in teaching theories. Scholars have come up with several ways they think better learning can be achieved. The constructivism theory is one such very influential theory related to this study. Constructivism is derived from Jean Piaget's constructivist psychology of how children acquire knowledge. Piaget's theory asserts that individuals actively build or construct their own notions of reality out of their experience. These constructions gradually create broader ideas that constitute knowledge into a more coherent and complex understanding of the world. In that sense, knowledge is what children and other people create or construct out of elements of information, feelings, experience rather than something that is absorbed. Segal and Cocking (1977:226) say "the world is not fed to us which we can ingest passively ingest, rather, we ingest it through actively reaching out and taking it in, we build a conception of our reality through our experience with it. Participation and engagement in the learning event is the active bases from which a construction of the particular is developed and from which meaning is extracted, a meaning shared in part with others"

If we believe that knowledge is actively constructed by the child, then education should consist of providing opportunities for children to engage in activities that fuel this constructive process. Pappert (1991) says that better learning will not come from finding better ways for the teacher to instruct but from giving the learner better opportunities to construct.

Many other psychologists have discussed the constructivism. Vygotsky (1978) and Luria (1976) emphasised that knowledge is a social construction which is developed and learned through social interaction. Donalds et al (1997: 48) quoted Vygotsky, a Russian psychologist saying “from infancy onwards, children are engaged in constructing shared meanings through their interactions with parents, peers, teachers and others in their particular social contexts. Children progressively develop new and adapted meanings and knowledge through building up space between what they currently understand and what confronts them in social interactions.”

According to Piaget (1953) and Bruner (1964) in Child (2000), knowledge is not passively received. They say knowledge is not simply taken in by people. It is actively built up (constructed) and developed to progressively higher levels in each learner. Through engaging in activities, experiences and discussions which challenge them to meaning in their social and physical environment, learners are actively engaged in building progressively more complex understanding of their world.

The Interactive Methodologies certainly follow the theories above because methods such as debates, discussions, role play, drama, give a lot of chances to learners to have experience with the learning environment, which leads to better understanding.

1.8 LIMITATIONS OF THE STUDY

At the time of the study, there were four special high schools for the hearing impaired learners spread across the country. Due to financial constraints the study was restricted to a case of two secondary schools for the hearing impaired learners only. The other limitation was that the researcher could not manage to secure a tape recorder instrument for recording interviews due to financial constraints. At the time of the research plan, the researcher was under the sponsorship of M.J.Kelly Bursary but this sponsorship was withdrawn during the second part of the researcher’s course. This made the researcher to depend on manual recording. However, the use of triangulation covered un-anticipated loss of facts in the absence of a recorder.

1.9 OPERATIONAL DEFINITIONS OF TERMS

The following operational definitions of terms were used;

Challenges - Difficulties that stand on the way of implementing something planned.

Special Needs Child - Child with a disability such as hearing, mental, physical or any other needing special help.

Hearing Impairment – Loss of hearing which may be partial or complete.

Deaf - Complete loss of hearing.

Ordinary Child - Those children without disabilities.

Ordinary school - Not a special school.

Interactive methodologies - Borrowing MoE (2003) definition, these are methods such as role plays, stories, games, discussions, debates, outdoor visits and video presentations.

CHAPTER TWO

2.0 LITERATURE REVIEW

This chapter reviewed the literature relevant to this study. Literature review was a very important component in this research because it opened up gaps in knowledge about studies that had already been done. This gave the researcher an opportunity to study a problem that has not been studied before. According to Bless and Achola (1988:22) one of the purposes of literature review is “to familiarize the researcher with the latest development of knowledge in the area of research as well as in related areas”. Due to scarcity of literature on the how the hearing impaired access information on HIV and AIDS, much literature on the challenges of implementing the Interactive Methodologies comes from studies of mainstream schools and not special schools for the hearing impaired. However, the review showed information related to this study.

2.1 METHODS USED IN TEACHING HIV and AIDS PREVENTION

Generally, methods or strategies of teaching the hearing impaired learners should be those that allow learners to see. The loss of the sense of hearing makes them lose out on any information that is auditory. Because of this, sight becomes compensatory and methods that allow use of sight would be very helpful to the learning of learners with hearing impairments. A teachers’ notes book for grades 1 to 9 for the hearing impaired learners shows that discussion, demonstration, observation and visits were widely used in teaching activities for daily living for the hearing impaired children from grade 1 to 9. However, the teaching of HIV and AIDS prevention has brought in other methods, the Interactive Methodologies.

The MoE has adopted the Interactive Methodologies in the teaching of HIV and AIDS in schools. MoE (2003:iv) says, “Interactive or participatory methodologies refer to the same methods of teaching whereby learners play an active role in the learning process. This approach or methodology has been discovered to be very effective in imparting life skills because it empowers learners with assertive skills, skills of confidence and self esteem that would help them object to sexual abuse. The features of role play, discussions, debates, videos, stories, outdoor visits can be done in class, in the community or through visiting places where HIV and AIDS Patients are kept.

The question this research still has to answer is, how are teachers implementing HIV and AIDS prevention to learners with hearing impairments? Scholars have written on methods of teaching HIV and AIDS prevention but they seem not to have suggested methods for the hearing impaired, who may not benefit from some of the above methods.

2.2 CHALLENGES OF IMPLEMENTING INTERACTIVE METHDOLOGIES IN TEACHING HIV and AIDS EDUCATION

Several challenges have been observed by researchers about the implementation of HIV and AIDS education in the education curriculum. The integration of HIV and AIDS education in existing subjects of the school curricula is one approach used to implement the teaching of HIV and AIDS in Zambian schools. According to Malambo (2000), the MoE regards HIV and AIDS as a cross cutting issue to be addressed in all subject areas. In 1993 MoE adopted an integrated approach to the teaching of HIV and AIDS. In both colleges of education and schools, HIV and AIDS is integrated in subject areas such as Education studies, Literacy and Languages Education, Social, Spiritual and Moral Education, Mathematics and Science Education, Creative Arts and Technology Studies in the case of training colleges.

However, some schools of thought are advocating that HIV and AIDS education should be taught separately to allow for good attention to its teaching. The idea is good but it comes with its own challenges and disadvantages. Such thought requires teachers to be trained to specifically handle HIV and AIDS education. Another challenge that comes with such a thought is that of timetabling HIV and AIDS as an independent subject which may bring about organisational and planning crises. The other challenge is that of assessment. If a subject becomes separately taught, it may require being examined or else its value would be underrated. An issue of resources may also come whereby as an independent subject, it would require its own books and other resources.

The current practice of teaching HIV and AIDS prevention has been questioned by some critics that it is not delivering to the intended expectations. It has been discovered that teachers do not attach greater importance to teaching HIV and AIDS education as they attach to the examinable and timetabled subjects. Teaching HIV and AIDS within the existing subjects has therefore been seen to have little impact. Scholars like Kelly; (2008:96) strongly propose a 'stand alone' kind of

approach to the teaching of HIV and AIDS education. He says “.....sexual and reproductive health and life skills education must be fully integrated across the curriculum and into the education system. This is not an optional, an extra or add on. It is not something that can be picked up in spare moments of a biology or social studies lesson. It is a crucial stand alone area that requires separate timetabling, the support of appropriate materials, and the provision of all the backup guidance, training, teacher support structures, monitoring and evaluation that other subjects receive”. Kelly seems to express the urgency of addressing the problem at hand; HIV and AIDS is spreading at alarming rates, drawing back economies, claiming lives regardless of race, disability or any differences in status. Thus according to Kelly (2008), an overhaul of the curriculum seems inevitable.

The United Nations Educational, Scientific and Cultural Organisation (UNESCO, 2006), reports that the Zambian Education system through colleges of education has considered HIV and AIDS and Life Skills as a cross-cutting issue, to be dealt with in all six study areas. One other major challenge observed by UNESCO is that despite the introduction of Interactive Methodologies Manual developed in 2003 for the prevention of HIV and AIDS in schools; it has been difficult to have all teachers trained. This challenge raises questions in this study as to whether teachers teaching the hearing impaired are trained to teach HIV and AIDS prevention in special schools for the hearing impaired learners. The MoE has shown commitment to addressing this scourge through education. MoE (2001) says “teachers should help children learn life skills that enable them to develop health relationships with others, and reduce chances of children being taken advantage of.” This can only be realised when teachers are trained in effective delivery methodologies like the Interactive Methodologies which are learner centered in approach. The hearing impaired are at risk of being taken advantage of due to the gap that is there in acquiring relevant information and skills of protecting themselves from the scourge, hence the need for life skills which are acquired through Interactive Methodologies.

Kelly, (2000:53), notes that, “it seems certain that HIV/AIDS has motivated older men, especially the ‘sugar daddy’ type, to turn to young girls for sex, in the belief that they are HIV-free.....there is also a belief that some are turning to sex with young uninfected girls in the false belief that such an encounter would provide a cure for HIV infection.” Such practices put girls at

risk and at more risk are the hearing impaired who may be abused for lack of knowledge on HIV and AIDS.

The HIV and AIDS education programme, though genuine seems to receive an amount of negative attitude in that teachers take it as a burden of curriculum choking or overload. UNESCO (2006), observed that HIV and AIDS is resisted by a number of factors such as lack of high level commitment from teachers and other stake holders, curriculum congestion as (Siamwiza 1999) was also quoted by the U.S Agency for International Development (2002) and inadequate training of trainers. The U.S Agency for International Development, 2002 quoting Gachuhi, (1999) and Kelly, (2008) reveal that many teachers lacked confidence and training to use participatory methodologies, continuing to lecture rather than allow students to discuss and practice skills building. A matter of concern is ‘what methods do teachers for hearing impaired learners use when teaching HIV and AIDS prevention?’ Siatontola (2004) in his research on roles of teachers in HIV/AIDS education in Southern Zambian schools revealed that HIV/AIDS was taught as an extracurricular activity and not as a core curricula and that it was not even timetabled. This attitude makes the implementation of HIV and AIDS difficult in schools. This study will find out if this occurs in special schools for hearing impaired also. The study by Siatontola (2004) centered on role of teachers in HIV/AIDS education in Southern Zambian schools. He did not observe the teachers for the hearing impaired learners. However, his findings are significant in this study because he has provided the approaches of teaching HIV and AIDS prevention in schools. Similarly he found out the emphasis schools place on teaching HIV and AIDS.

A research conducted by Malambo, (2000) in five schools in Lusaka to find out how HIV and AIDS prevention was being taught in schools showed that “although the MoE has a clear policy on the integration of HIV/AIDS into basic schools and colleges curricula, it is not foolproof. There were no teaching/learning materials provided and teachers were not trained.” It was also found out that the training manual was not being used. Further, Malambo’s research found out that teachers received inadequate training in preparing them for teaching HIV and AIDS. Teachers also cited shortage of time and rare opportunities to go into detail when teaching HIV and AIDS in class and that very few teachers attended seminars and workshops on HIV and AIDS. The study by Malambo (2000) in five schools in Lusaka was to find out how HIV and

AIDS prevention was being taught in schools. Malambo's study did not focus attention on special schools for the hearing impaired learners. Perhaps Malambo is not from a special education background. This makes a difference between Malambo's study and this one. However, some of the challenges Malambo found may equally apply to the hearing impaired though issues to do with learning and teaching materials certainly differ because the hearing impaired learners need different materials from the hearing learners. The challenges the hearing impaired face are not the same as those the hearing face. Malambo's literature was therefore worth reviewing as it provides a building ground for the challenges of teaching HIV and AIDS. More challenges with regard to teaching HIV and AIDS prevention to learners with hearing impairments are expected. The hearing impaired learners and the hearing may not face the same challenges. Their needs are also different and vary from individual to individual.

Another challenge in the implementation of HIV and AIDS education to learners with hearing impairments is misinterpretation of information as a result of sign language limitation. Sleek, (1998) cited Marcus, pointing to various reports about deaf people's lack of knowledge about HIV/AIDS. Messages are likely to be misinterpreted by the hearing impaired. Scott Sleek (1998) at <http://www.apa.org/monitor/oct98/hiv.html> observed how the deaf misinterpret HIV and AIDS information. He observed that when you "tell a deaf person in sign language that she is HIV positive, you may see her smile. Many deaf people interpret the signed word 'positive' as something good and don't recognise it as a diagnostic term." Although this information is not Zambian originated, this can be a serious challenge in the teaching of HIV and AIDS prevention. It is not known whether the Zambian sign language used by Zambian hearing impaired learners lacks certain words about HIV and AIDS. If this is the case in Zambian schools for the hearing impaired learners, then it is a serious challenge to teachers teaching learners with hearing impairments because information about HIV and AIDS may not be reaching them in correct form. This study of how the interactive methodologies are being implemented in Zambian special schools for the hearing impaired will establish whether sign language limitation is equally a challenge.

Further, lack of support materials and pupils learning materials may also be a challenge in teaching HIV and AIDS prevention to learners with hearing impairments. In a survey on awareness of HIV and AIDS for pupils, teachers, Head-teachers and other stakeholders

conducted by the Examinations Council of Zambia on behalf of Basic Education Sub Sector Implementation Programme (BESSIP) in 2001, it was found that “there were not enough teacher support materials and pupils learning materials on HIV/AIDS” though teaching materials on HIV and AIDS were available in schools. (MoE 2001:53 & 51). In contrast, another research conducted by the MoE in 2003, found that teaching and learning materials for teaching HIV and AIDS education were available in schools, more especially in rural schools. To be explicit, MoE (2003) says, “teachers were further asked about what teaching and learning materials on HIV and AIDS were available at school. It was interesting to note that about 66.7 % (rural teachers) said they had videos while 99.5% (urban teachers) said they did not have videos. The availability of books on HIV and AIDS was evident with 50.1% of teachers in rural areas and 49.9 % of teachers in urban areas indicating that materials were available....while videos were a popular resource in rural schools, posters and charts were popular in urban schools”. Lack of support materials for teachers and learning material for learners on HIV and AIDS can be a serious challenge if this is the case with special schools for learners with hearing impairments. Teachers for learners with hearing impairments need support material to help them relay information to learners with hearing impairments well. Computers, sign language Videos, pictures, story books, sign language books on HIV and AIDS are just but a few support materials that teachers for hearing impaired learners would need to use to teach HIV and AIDS prevention. It is not known what and how much materials on HIV and AIDS special schools have.

The other challenge is that even when efforts have been made by MoE to provide material to teach HIV and AIDS in schools, such material is not applicable to the teaching of hearing impaired learners. For example; the Primary Diploma, which is provided through distance learning has a specific module on life skills, and the Primary Reading Programme (PRP) has introduced HIV and AIDS related texts (Willems, 2002). Several books have been produced, printed and are being distributed to help teachers to integrate HIV and AIDS in their lessons. In 2008, a Tutors’ Guide ‘Teaching in the Window of Hope’ was published to prepare student teachers to comfortably face the challenges of delivering effective lessons which integrate HIV and AIDS messages to learners, (MoE: 2008). The issue still remains that the books in existence do not categorically state how learners with hearing impairments would be taught. Because of the nature of the disability the deaf and hard of hearing have, they need teaching and learning

materials that are modified to their disability. The reading materials should not be the same as those provided to the ordinary children because the reading levels with hearing impaired are different. The deaf are behind at reading because they start correlating symbols to language very late. Sleek, (1998), quotes Marcus saying research shows that the average deaf person reads at a fourth- or fifth-grade level, often because sign language is so structurally and grammatically different from written English.

Teachers are also said to feel inadequately prepared to teach HIV and AIDS prevention to learners with hearing impairments. Kelly (2008:63) revealed that, “unhappily, teachers’ related stress is aggravated by the expectation that they will incorporate education about HIV and AIDS (possibly in the form of reproductive and sexual health education) into their teaching. Many feel poorly equipped to do so, saying they have not received the necessary training or support materials to enable them teach in this area.” The challenge of lack of training for teachers in teaching HIV and AIDS was also echoed by MoE. MoE, (2008) revealed in a 2006 survey among student teachers that student teachers were not comfortable or well prepared to teach HIV and AIDS prevention in the classroom but indicated that HIV and AIDS education be integrated in the curriculum in order to prepare them to teach HIV and AIDS in an effective and integrated way in the basic school. The MoE encourages teachers to make use of capacity building meetings to enhance continuous professional development. One such strategy in place is to reach teachers with in-service training for HIV and AIDS. Teachers’ group meetings in the School Programme of In-Service of the Term (SPRINT) share HIV and AIDS information and methodology. SPRINT is a school-based system that delivers in-service through a cascade model, involving heads of schools, Zonal Resource Centers and District Resources Centers.

This research will also find out if the teachers for hearing impaired are well prepared to teach HIV and AIDS education to the hearing impaired learners. We will also find out what in service trainings have been conducted to equip teachers for the hearing impaired on teaching HIV and AIDS education.

Culture is another challenge to the teaching of HIV and AIDS prevention. The integration of HIV and AIDS receives a small share in teaching due to the fact that culture plays a significant influence. The Zambian culture seems for a long time unbreakable especially where naming of

sexual organs in the teaching of HIV and AIDS is concerned. This is a serious taboo and insult to the elders of the Zambian society. The U.S Agency for International Development (2002), observed that even as education ministries formally integrate HIV prevention into curricula, teachers and parents are often wary, frequently believing that providing young people with sexuality education would increase sexual activity. Further, while commending teachers on disseminating HIV and AIDS information to learners in the 2001 survey of HIV awareness, MoE, (2001: 50) and Kelly, (2008) also confirm that there were cultural and traditional barriers to discussing matters pertaining to sex in Zambia. Furthermore, a research by Moonga, (2000) in five schools in Lusaka to find out how HIV and AIDS prevention was being taught revealed that some teachers were against certain teaching approaches which showed ways of putting on condoms. She said “this is largely because in Zambian society, it is inappropriate to discuss sex with younger people”.

The aspect of culture is a very big challenge to the teaching of HIV and AIDS using the Interactive Methodologies. Interactive Methodologies entail that teachers and learners interact and talk about HIV and AIDS without any inhibitions. However, according to CHANGES/MoE (2007:25), “one of the reasons that HIV/AIDS has spread so rapidly is that people do not talk about it”. Teachers have been said to be very effective tools in the education of HIV and AIDS. CHANGES2/MoE (2007:25) observed that “teachers can play a role in reaching out to community members as well as pupils and colleagues, encouraging everyone to discuss and address the factors that leave them vulnerable to infection”. It has been observed that as long as we remain silent from talking about HIV and AIDS due to various reasons which may include culture, the young generation is destined for extinction as a result of AIDS. CHANGES2/MoE observes that teachers can help prevent this by talking openly with learners about HIV and AIDS. This is what brings the concept of Interactive Methodologies which engage open discussions between teachers and pupils to find solutions to the scourge. An Interactive Methodologies Manual for the prevention of HIV and AIDS in Zambian Schools was published in 2003 to train and equip teachers with skills and methods of teaching HIV and AIDS prevention so that learners are able to protect themselves from the scourge. The manual according to MoE (2003: iv) is aimed at “providing teachers and other HIV/AIDS educators with guidance on how to develop and implement an effective topic based programme for education on HIV prevention”. The Interactive Methods have been said to be effective because they impart

skills, values, knowledge and attitudes into learners by actively discussing, debating, and role playing the problems of HIV and AIDS and how it can be overcome. It is believed by educationists that children acquire these skills in their early life as they go through school. Learners are expected to learn skills that can help protect them from acquiring HIV and AIDS by developing skills such as self-awareness, assertiveness, decision making, effective communication, negotiation, interpersonal relationships, problem solving, coping with emotions and stress and empathy (MoE: 2003). According to the U.S Agency for International Development Bureau for Africa (2002), the life skills young people deserve to acquire are ability to cope with peer pressure, attitudes of compassion, self esteem, tolerance and knowledge about HIV transmission among others already mentioned by MoE (2003) above. “These are best learned through “ experiential” and “ learner-centered” methodologies designed to help young people examine attitudes and practice skills”, Gachuhi, (1999) quoted by U.S Agency for International Development Bureau for Africa (2002: 13). Interactive teaching techniques allow discussion of social pressures relating to relationships and opportunities to practice negotiation, communication, and refusal skills (USAID, 2001) Quoted by U.S Agency for International Development Bureau for Africa (2002). Children with hearing impairments here would develop skills to make sound judgments early in their lives, to say ‘NO!’ to practices that are likely to harm them. It is said ignorance has no defense but the defense in this case is education. Education should never leave anyone ignorant about HIV and AIDS.

Teachers therefore, through the Interactive Methodologies Manual are expected to acquire HIV and AIDS teaching skills and methods that should bring learners into reflecting and talking about HIV and AIDS thereby breaking the traditional bonds, beliefs and taboos that prohibit talking about HIV and AIDS sexual issues. The hearing impaired learners are expected to acquire skills that will help them overcome certain myths that endanger their health with HIV. Kelly (2008) observed that there is growing tendency by African communities, the Caribbean and other parts of the world that the cure of HIV and AIDS can be found by having sexual intercourse with a young person with a physical or mental handicap. Several other traditional practices such as inheriting a spouse of deceased relative and sexual cleansing activities after someone has lost a husband or wife are practiced within the country in some cultures in the midst of HIV and AIDS. These are the myths and practices that endanger the disabled. It is for such reasons that the

hearing impaired learners need skills and knowledge that can make them say “NO!” to certain myths and practices that endanger their lives.

MoE (2003: iv) says “the manual provides different learner based and fun methods of teaching life skills and HIV/AIDS topics within the classroom.” The methods used are role play, stories, games, discussions, debates, outdoor visits and video presentations. Such methods of teaching whether in ordinary classrooms or in teaching HIV and AIDS education, provide an opportunity for actively engaging learners in the learning process. MoE (2003: ix) strengthens this ideology by saying “ interactive methods of teaching avoid excessive use of lecturing and giving information on HIV/AIDS but try to help learners become partners in seeking information, analysing and discussing the epidemic and ways to prevent infection.” Thus children are accorded an early opportunity to analyse and differentiate between right and wrong when their opinions and decisions are heard and shared. The teacher in the Interactive Methodologies Manual is a facilitator, one who makes easy learning opportunities available to learners. The manual also equips learners with information on gender and reproductive health, sexually transmitted infections, alcohol and substance abuse, HIV and AIDS lessons and advocacy. The above information and skills are vital for learners with special education needs as well, for the sake of this study, the hearing impaired. Children with hearing impairments are likely to be more prone to infection of HIV and AIDS because they are disadvantaged by a number of skills such as communication, negotiation and the other skills restricted by an inability to hear and communicate clearly their thoughts about sexual relationships. Kelly, (2008:79) proposes that teaching methodologies require adjustment so that they can promote greater flexibility for all learners, with more emphasis on independent and self initiated learning so that in their subsequent life, students will be better equipped to take over roles and responsibilities from those whom AIDS is removing from the workforce”. It is not known whether the existing methods of teaching HIV and AIDS prevention are flexible to meet the needs of the hearing impaired learners. They may be applicable to the ordinary learners in ordinary schools and not to the hearing impaired learners in special schools.

2.3 THE STUDY'S CONTRIBUTION TO EXISTING KNOWLEDGE

The challenges reviewed are mainly those that affect teachers in mainstream schools where the studies were done and not special schools for the hearing impaired learners. This makes this study unique in that it brings in literature on the access the hearing impaired have to learning about HIV and AIDS prevention in special schools. The hearing impaired learners need information on HIV and AIDS prevention. We cannot assume that the challenges that the ordinary learners face in schools are the same as those that the hearing impaired learners face. We cannot presume that the challenges teachers for hearing impaired learners face are the same as those teachers for ordinary learners face in teaching HIV and AIDS prevention. The learning needs for learners with hearing impairments required to comprehend HIV and AIDS information when presented must adapted to their needs. They cannot benefit from the same learning materials provided for ordinary learners. The teaching methods and strategies for teaching HIV and AIDS prevention to learners with hearing impairments may not be the same as those used to teach the ordinary learners. This study therefore becomes distinct as it addresses concerns of teaching HIV and AIDS prevention among the hearing impaired learners. From a wider perspective, other categories of special education needs such as the visually impaired, the intellectually challenged, learners with communication disorders and others require extensive studies to establish how they access information on HIV and AIDS. Teaching methods for learners with special education needs is a critical area especially where teaching HIV and AIDS prevention is concerned.

This research therefore, makes a distinct and original contribution to the understanding and knowledge of how the Interactive Methodologies have been implemented on the hearing impaired learners.

CHAPTER THREE

3.0 METHODOLOGY

This chapter explains the nature of the study, how it was carried out and the instruments that were used in collecting data. It further explains how the data was collected and the population that was targeted for study. The sampling procedure, how the data was analyzed and interpreted and ethical considerations have also been explained in the chapter.

3.1 RESEARCH DESIGN

This study was qualitative. Qualitative study means that the kind of information collected was not numerical but words that expressed feelings, perceptions and attitudes of the respondents. According to Shuttleworth (2008) at <http://www.experiment-resources.com/qualitative-research-design.html>, qualitative research is research involving detailed verbal descriptions of characteristics, cases, settings, people or systems obtained by interacting with, interviewing and observing the subjects. The study used a case study design in its approach. Keeves (1997) says the term case study “is a generic term for the investigation of an individual, group or phenomenon” and highlights that “while the techniques used in investigation may be varied and may include both qualitative and quantitative approaches, the distinguishing feature of the case study is the belief that human systems develop a characteristic wholeness or integrity and not simply a loose collection of traits.” This study was a case of two secondary schools for the hearing impaired learners in the North Western and Copper belt provinces of Zambia. Though the study reflects some quantitative information as Keeves has indicated as ordinary, most of the data collected in this study was qualitative. Data that had quantitative qualities came from questionnaire questions that required confirmation of whether an aspect was conducted in the school or not. Much as it is recognized that there are differences between qualitative and quantitative data, the differences should not be exaggerated because at times like it was in this study, the two traditions worked together to supplement each other. Keeves (1997: 296) observed that “the difference between quantitative and qualitative data lies in the level of abstraction and the extent of simplification”, quoting Kaplan (1964) who argued that “quantities are of qualities” and claiming that “the view that one method is antithetical or alternative to the other is misconceived”. This argument was further augmented by Denzin and Lincoln (2008:9) who said

qualitative research does not belong to one single discipline. Nor does qualitative research have a distinct set of methods or practices that are entirely its own. Qualitative researchers use semiotics, narratives, content, discourse, archival and phonemic analysis, even statistics, tables, graphs and numbers.” In this case study therefore, simple statistics were used to strengthen the quality of the data.

3.1.1 Triangulation

The study used methodological triangulation to strengthen the depth, validity and reliability of its results. Keeves (1997) defined triangulation as “the application and combination of several research methodologies in the study of the same phenomenon”. According to Denzin and Lincoln (2008), the use of multiple methods or triangulation reflects an attempt to secure an in-depth understanding of the phenomenon in question. The combination of multiple methodological practices, empirical materials, perspectives, and observers in a single study is best understood, then, as a strategy that adds rigor, breadth, complexity, richness, and depth to any inquiry.” This study collected data using questionnaires, interviews and checklists. No method can collect all the data required in a study and the use of triangulation overcomes this lapse. Keeves (1997) was in this line of thought that the use of multiple methods or measures is so as to overcome the weaknesses or biases in a single method.

Triangulation in this study worked very effectively in that data from questionnaires was supported by data from interviews and the checklist. This means that methodological triangulation was applied. Certain questions asked in the questionnaires for teachers were also asked in learners’ questionnaires and this helped ensure validity of the responses. For example, the implementation of the Interactive Methods in teaching HIV and AIDS prevention in the two schools was investigated from the teachers, learners and the administrators’ points of view. Interviews provided in depth understanding of the prevailing situation in teaching HIV and AIDS in schools. Some of the responses teacher respondents gave in interviews added color, depth and clarification to what was given in the questionnaires. The checklist also helped the researcher to see how responsive the school environments were to teaching HIV and AIDS in the schools and the revelations from the checklists in some cases agreed with what respondents reported. Due to the use of triangulation, the study gathered enough in-depth information for analysis.

3.1.2 Research instruments

Questionnaires: The main tool by which data was collected was questionnaires. There were two types of questionnaires administered. There was a questionnaire for teachers and another for learners. Teachers' questionnaire focused on the whether they were implementing the interactive methodologies in teaching HIV and AIDS prevention to learners with hearing impairments. It was also meant to find out which methods they found effective, the challenges and recommendations for teaching HIV and AIDS prevention to learners with hearing impairments. The learners questionnaire focused on whether they were learning HIV and AIDS prevention in school, class, what methods were used in teaching them and which ones they found effective in learning about HIV and AIDS prevention.

Interview guide for teachers: This guide was used after questionnaires were answered. It came up after observing certain concerns that were raised in questionnaire responses. The nature of data collected from the guide was to ascertain the extent to which some of the challenges revealed in the questionnaires inhibited the effective implementation of Interactive Methodologies in teaching learners with hearing impairments. This helped the researcher collect more detail that was not provided in questionnaire responses by respondents.

Interview guide for head teachers: Interview guides collected data from head teachers in their capacities as school administrators. They were required to provide information from an administrative point of view with regard to how they supported HIV and AIDS prevention activities and programs in the schools.

The checklist: This was a supplementary instrument that gave the researcher the impression about the implementation of HIV and AIDS education in the schools. It was aimed at ascertaining the extent to which each school as a learning environment was conducive for teaching HIV and AIDS education.

3.2 PRE TESTING OF THE INSTRUMENTS

The research instruments were pre tested on serving specialist degree and masters' students that were studying special education at the University of Zambia. This helped the researcher to

modify some questions on the questionnaires and interview guides. During the pre testing, it was discovered that the same data would be collected from questionnaires and interviews.

3.3 POPULATION TARGET

The main targets of the study were teachers of learners with hearing impairments at two secondary schools for the hearing impaired learners in the North Western province and Copper belt provinces. It also targeted learners with hearing impairments and head teachers at the two schools.

3.4 SAMPLE

The study targeted sixty five (65) respondents in the two schools. Only legible secondary school learners were purposefully sampled for the study. Twenty nine (29) teachers present at the time of research, two (2) head teachers for the two (2) schools and thirty four (34) learners with hearing impairments were involved in the study. The distribution was sixteen (16) teachers and twenty one learners (21) at Kameho Special School while there were thirteen (13) teachers and thirteen (13) learners at Nyowe Special School.

3.5 SAMPLING PROCEDURE

People with information about the implementation of Interactive Methodologies are the teachers and pupils in schools. In this case, the sampling procedure employed in this study was purposive. According to Kombo and Tromp (2006:82), purposive sampling is a method where “the researcher purposefully targets a group of people believed to be reliable for the study.” All the twenty nine teachers present at the time of the study answered the questionnaires and some responded to follow up interviews. The head teachers also answered interview questions in their capacities as administrators. Pupils were also purposefully sampled by virtue of being the recipients of HIV and AIDS information.

3.6 DATA COLLECTION TECHNIQUES

Data was collected by the use of questionnaires, interviews and checklists. There were two questionnaires designed for the research; a questionnaire for teachers and another for learners. Questionnaires were answered by teachers at school during periods when they were not teaching. The questionnaires for learners were administered by the researcher in the presence of the class

teacher. The class teacher helped to purposefully chose learners that were able to read and write legibly. Interviews were also used to collect data. There were two interview guides; for teachers and the head teachers at the two sites of research.

Answers to interview questions were recorded in a research note book. During interviews, respondents were encouraged to be open and assured of confidentiality of their responses as the study depended on them since they were the implementers of education policies in the classroom situation.

The checklist was used throughout the period at each research station. The researcher was however on guard against prejudice through proper administration of the other tools. Responses to observed aspects of the research were ticked in the check list and any other aspects that did not make up part of the checklist were added. Data collection continued even after the formal research days at the schools using a cell-phone to respondents and revisits to the sites when there was need for clarity of data. This continued up to report writing.

3.7 DATA ANALYSIS

Data analysis was both qualitative and quantitative. Quantitatively, simple figures, percentage, pie charts; tables were used to explain the qualitative data. Denzin and Lincoln (2008:9) said that qualitative researchers use semiotics, narratives, content, discourse, archival and phonemic analysis, even statistics, tables, graphs and numbers.” Most of the data was however qualitative. Respondents’ responses were taken and explained using words. The views of the respondents were described according to their understanding and conclusions were drawn from the available data. The frequency of certain responses was taken into consideration as a basis for drawing certain themes and conclusions. Frequent responses were tallied and tabulated into tables, pie charts and percentages. Open ended questions responses were described and explained. In some cases, responses from various respondents were compared and contrasted. Thematic analysis was used where major and minor themes helped to categorise the data.

3.8 DATA INTERPRETATION

The interpretation of data was done using descriptions and explanations of respondents’ responses. Most frequent responses were coded into themes. Major and sub themes were identified and data was grouped according to the identified themes. Some of the data was interpreted using tallies to show the frequency of a response from various respondents. The

tallies were totaled and both tallies and figures were tabulated in simple tables. Some similarities and differences were also noted during interpretation.

3.9 ETHICAL CONSIDERATIONS

One of the very important considerations in conducting a research is confidentiality of the respondents. Kvale and Brinkmann (2009: 272) say, “in order to protect the subjects’ privacy, fictitious names and sometimes changes in subjects characteristics are used in the published results. This requires altering the form of the information without making major changes of meaning.” At the time of conducting the interviews and administering the questionnaires, respondents were assured of confidentiality so that genuine results could be collected for the study. This report therefore respected the ethical principle of confidentiality in that the names of the schools and the respondents were not mentioned. Like Kvale and Brinkmann (2009: 273) have noted, “it may be difficult for a researcher to anticipate the potential ethical and political consequences of an interview report”. Therefore, the pseudonyms (Nyowe and Kameho Special Schools for hearing impaired learners) are used for the special schools where the study was conducted. During the study, respondents were not forced into interviews and answering questionnaires. Ethical considerations in conducting research further require that the researcher does not force or bribe respondents to answer questions when they are not willing. All respondents were willing to answer the questionnaires except for one who agreed but never answered the questionnaire. Information had it that he was not trained in special education though he was at the special school.

CHAPTER FOUR

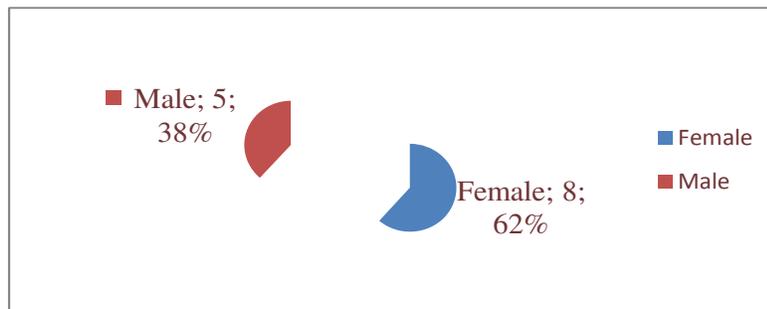
4.0 PRESENTATION OF RESULTS

This chapter presents the results as collected from the field. The results are presented according to themes that emerged in questionnaire, interview and checklist data. Questionnaires were administered to teachers and learners at both research sites. Thirteen (13) teachers were available during the period of research at Nyowe Special School for the hearing impaired learners and 16 teachers were available at Kameho Special School for hearing impaired learners. Nyowe ran from grade one (1) to eleven (11) and Kameho ran from grades one (1) to twelve (12) at the time of the study.

4.1 TOTAL NUMBER OF TEACHER RESPONDENTS ACCORDING TO SEX

(Figure 1) Teacher Respondents at Nyowe Special School

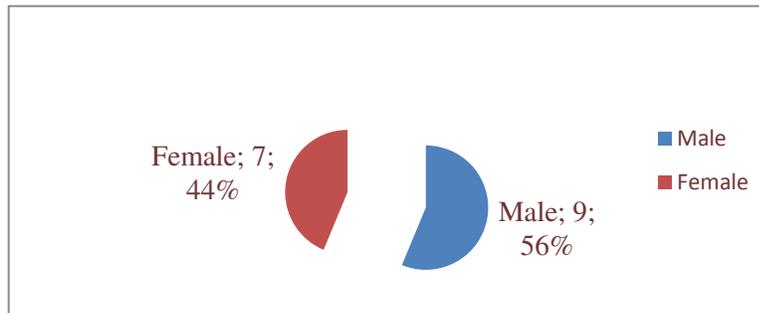
N= 13



Teacher respondents at Nyowe Special School for the hearing impaired were five (5) males representing thirty eight per cent 38% and eight (8) females representing sixty two per cent (62%).

(Figure 2) Teacher respondents at Kameho Special School

N=16



Teacher respondents at Kameho Special School for the hearing impaired were sixteen (16) with seven (7) females representing forty four per cent (44%) and nine (9) males representing fifty six (56%) per cent. The total number of teacher respondents was twenty nine (29).

4.2 IMPLEMENTATION OF INTERACTIVE METHODOLOGIES IN CLASSROOM TEACHING

(Table 1)

N (Nyowe= 13) / N (Kameho =16)

SITE	Yes	%	No	%
Nyowe	11	85%	2	15%
Kameho	16	100%	0	0
TOTALS	27	93%	2	7%

Teachers at Nyowe Special School agreed to using Interactive Methodologies in teaching HIV and AIDS prevention to learners with hearing impairments representing eighty five per cent (85%) while two (2) disagreed representing fifteen per cent (15%). At Kameho Special School, sixteen per cent (16) teacher respondents representing hundred per cent (100%) agreed to using Interactive methodologies in teaching HI and AIDS prevention. This means that at the two sites of research, twenty seven (27) representing ninety three per cent (93%) agreed using interactive methodologies in teaching HIV and AIDS prevention to learners with hearing impairments while

two (2) representing seven per cent (7%) did not use interactive methodologies in teaching HIV and AIDS prevention to learners with hearing impairments.

4.3 EFFECTIVE INTERACTIVE METHODOLOGIES CONSIDERED AT EACH SITE

The table below shows how teachers rated the effectiveness of Interactive Methodologies they used.

(Table 2) Methods considered effective at Nyowe

SITE	ROLE PLAY	STORIES	GAMES	DISCUSSIONS	DEBATES	OUT DOOR VISITS	VIDEOS
Nyowe	8 (62%)	3 (23%)	4 (31%)	9 (69%)	2 (15%)	1 (8%)	5 (38%)

At Nyowe Special School, teachers rated role play and Discussion methods as more effective than the rest in the table. The highest rated was discussions with sixty nine per cent (69%) followed by role play with sixty two per cent (62%).

(Table 3) Methods considered effective at Kameho

SITE	ROLE PLAY	STORIES	GAMES	DISCUSSIONS	DEBATES	OUT DOOR VISITS	VIDEOS
Kameho	14 (88%)	8 (50%)	7 (44%)	11 (69%)	3 (19%)	1 (6%)	4 (25%)

At Kameho Special School, teachers rated role play, stories, games and discussions as more effective interactive methods in the teaching of HIV and AIDS prevention to learners with hearing impairments than the rest in the table. The highest rated was role play with eighty eight per cent (88%), followed by discussion at sixty nine per cent (69%). Stories were at fifty per cent (50%) and games were at forty four per cent (44%).

This means that both Nyowe and Kameho Special Schools rated role play and discussion methods as most effective interactive methods in teaching HIV and AIDS prevention to learners with hearing impairments.

4.4 METHODS LEARNERS CONSIDERED EFFECTIVE

Learners however listed stories, games, drama, discussion, videos, songs, outdoor visits and debates as methods they enjoyed when learning about HIV and AIDS. They stated that stories were good because they shared a lot with friends and games helped them to learn easily. Drama and video were good and enjoyable because they were able to see what goes on and it helped them to understand better and discussion helped them to share what they did not know with friends. Songs made them enjoy, outdoor visits helped them make their own observations and conclusions that would strengthen their knowledge on HIV and AIDS, discussion and debates were clear.

4.5 LEARNERS VIEWS ON LEARNING HIV/AIDS

Tables four (4) and five (5) below show learners views on whether they learned about HIV and AIDS in school, in class and whether they felt shy discussing issues to do with HIV and AIDS in class or not.

(Table 4: Nyowe)

N=13

LEARNERS VIEWS ON;	Yes		No	
Learning HIV/AIDS in school	13	100%	0	0%
Learning about HIV/AIDS in class	8	62%	5	38%
Feeling shy when discussing HIV/AIDS	3	23%	9	69%

At Nyowe Special School, all learners agreed that they learned about HIV and AIDS prevention in school. However, eight (8) representing sixty two per cent (62%) agreed that they also learned about HIV and AIDS prevention in class while five (5) representing thirty eight per cent (38%) said they did not. On whether the learners were shy discussing issues of HIV and AIDS

prevention in class, nine (9) representing sixty nine per cent (69%) said they did not feel shy while three (3) representing twenty three per cent (23%) agreed.

(Table 5: Kameho)

N=21

LEARNERS VIEWS ON;	Yes		No	
Learning HIV/AIDS in school	21	100%	0	0%
Learning about HIV/AIDS in class	11	52%	10	48%
Feeling shy when discussing HIV/AIDS	7	33%	14	67%

At Kameho Special School, all learners agreed that they learned about HIV and AIDS prevention in school. Further, Eleven (11) of the learners representing fifty two per cent (52%) agreed that they also learned about HIV and AIDS prevention in class whereas ten (10) representing forty eight per cent (48%) said they didn't. And fourteen (14) representing sixty seven per cent (67%) did not feel shy discussing issues of HIV and AIDS prevention in class while seven (7) representing thirty three per cent (33%) said they felt shy.

This entails that results from the two research sites showed that nineteen(19) representing fifty six per cent (56%) of the learners indicated that teachers taught them HIV and AIDS in class while fifteen (15) learners representing forty four per cent (44%) said teachers did not teach them HIV and AIDS in class. This data gives a glimpse of some teachers not teaching HIV and AIDS in class. On whether learners felt shy discussing issues of HIV and AIDS in class ten (10) of the learners representing twenty nine per cent (29%) said they felt shy discussing issues of HIV and AIDS in class while twenty three (23) learners representing sixty eight per cent (68%) said they did not feel. One learner respondent did not answer this question.

4.6 DIFFICULTIES LEARNERS FACED DISCUSSING HIV AND AIDS ISSUES

Learners stated that they faced difficulties discussing issues to do with HIV and AIDS in class. Some revealed that they felt shy to discuss HIV and AIDS issues with friends and teachers in

class, a challenge that was also given by teachers. Others said they feared to be laughed at by their friends, also a challenge that teachers indicated restricted the use role plays because some learners didn't want to be used as models in role plays. Learners further revealed that they lacked resources such as story books. They also indicated that they faced communication problems and that it was difficult to explain some terms like vagina and penis (culture restrictions) and that they obtained insufficient information.

4.7 METHODS USED BY TEACHERS ACCORDING TO LEARNERS

According to learners from the two special schools, teachers used role play and discussions frequently in teaching HIV and AIDS prevention than other methods. The table below shows the frequency a method used by teachers was written by learners.

(Table: 6)

ROLE PLAY	STORIES	GAMES	DISCUSSIONS	DEBATE	OUT-DOOR VISITS	VIDEO
22 (75%)	11 (37%)	11(38%)	20 (69%)	5 (17%)	2 (0.1%)	9 (32%)

The data from learners to some extent agrees with teachers who indicated that they taught HIV and AIDS mostly through role play and discussion.

4.7.1 Other ways through which learners learned about HIV and AIDS

The other ways learners learned about HIV and AIDS, were through pictures, T-shirts bearing HIV and AIDS messages that teachers wore on Fridays, charts, at world AIDS day and occasionally through talks from medical staff.

4.8 CHALLENGES OF USING THE INTERACTIVE METHODOLOGIES –TEACHERS

Teachers reported a number of challenges in the implementation of Interactive Methodologies. The following were the challenges according to each method;

4.8.1 The use of discussion

Though the discussion method was said to be the most effective method in teaching the hearing impaired, both schools indicated that language barrier was a big hindrance in the implementation of discussion as an interactive method in teaching HIV and AIDS prevention. They said some terms could not be well explained due limited sign language vocabulary. Some respondents stated that terms such as ‘deficiency’ and ‘syndrome’ were difficult to sign. Shyness on the part of learners was also reported to limit the use of discussion as an interactive methodology. The two sites reported that sometimes pupils were shy to sign certain sexual related words during discussions. Teachers further revealed that some learners had problems using sign language during discussions because they came with different signs for words from their homes. They said even though the discussion method was widely used, it was not the best in the absence of pictures since their learners learned better through sight. It was also revealed that teachers lacked proficiency in sign language.

4.8.2 The use of video presentations

Both schools teacher respondents indicated that the use of videos was restrained by lack of video tapes on HIV and AIDS and video players. They also indicated that pupils missed out greatly from audio information on televisions and radio because they only depended on scrolled messages on the television. Television sets were also limited and restricted to the boarding section. Classrooms had no television sets.

4.8.3 The use of role plays

The use of role plays also faced challenges despite being one of the methods that teachers used most in teaching HIV and AIDS in class at the two schools. Some pupils didn’t like to be used in role plays for fear of stigma and that they felt shy to be used as models of HIV and AIDS infected persons. Both schools indicated that pupils feared stigma when they role played. The aspect of limited sign language also came out from the two schools as a prohibiting factor in the

effective use of role plays in teaching HIV and AIDS to learners with hearing impairments. The word CD4 count was cited as an example of a difficult word to sign. Both schools reported that the use of role play was time consuming because pupils often forgot their roles and it took time for a lesson to end because learners with hearing impairments have problems following instructions. Another point that came out was that it was difficult to emphasise points during role play because signs were too direct in that if demonstrated, one needed to point to the organs, an act some teachers said brought shame to their integrity.

4.8.4 Stories

The two schools reported lack of story books on HIV and AIDS and limitation of sign language as challenges to the effective implementation of the interactive methodologies in teaching HIV and AIDS prevention. Other challenges that were observed were that teachers' lacked of proficiency in sign language, differences in sign languages among learners of different backgrounds and forgetfulness among learners. These hindered the effective implementation of the stories as an interactive method. Teachers also stressed that learners never took stories seriously and thought stories were meant to scare them.

4.8.5 Games

Both schools revealed that it was difficult to formulate mind capturing games for pupils and that pupils had difficulties following instructions. Teachers also said that pupils were not creative to design their own games and that there were no resources for games on HIV and AIDS.

4.8.6 Outdoor visits

Outdoor visits required that learners were taken out to other schools to share information on HIV and AIDS with other learners or visiting hospitals and homes where patients and people living with HIV and AIDS were. Both schools revealed communication problems as a result of hearing impairments and differences in sign language among learners and the hearing impaired in the community. Lack of transport was also cited as a problem that hindered the use of outdoor visits.

4.8.7 Debates

Language barrier came out as a major challenge in the use of debate as an interactive methodology at both schools. Pupils found difficulties in signing certain terms. Both schools also indicated that pupils felt shy discussing sexual related issues.

4.8.8 Sign Language as a medium of instruction

A general concern that was a challenge for some teachers in both schools was sign language. At Nyowe Special School, out of the thirteen (13) teachers involved in the study, seven (7) representing fifty four per cent 54% said sign language was a big hindrance to their effective teaching of HIV and AIDS prevention to learners with hearing impairments. Six (6) representing forty six per cent 46% did not raise this point as a challenge. At Kameho Special School, Eight (8) teachers representing fifty per cent 50% indicated that they had no problem with sign language; seven (7) representing forty four per cent 44% indicated that they had problems with sign language. One representing six per cent 6% did not raise this point as a challenge.

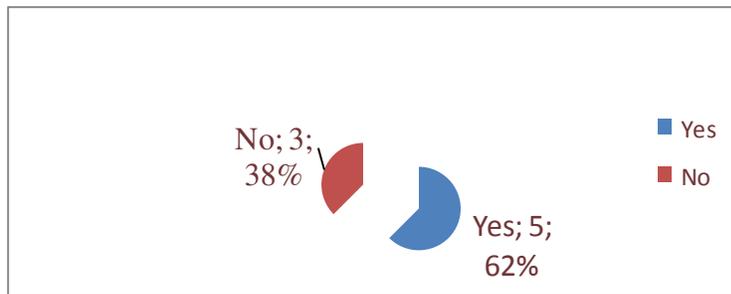
It was further revealed that sign language was diverse i.e. it was both local and international and in most cases, learners mixed up signs to use. They said there existed the Zambian sign language and the American Sign Language and learners usually confused the two in communicating to each other and to teachers. Teachers explained that their incompetence in sign language hindered the natural flow of lessons when they were teaching.

4.8.9 How at ease teachers were teaching about HIV and AIDS prevention in class

How at ease teachers felt teaching HIV and AIDS to learners with hearing impairments was also a challenge. The figures below distribute female and male feelings about how at ease they felt teaching HIV and AIDS prevention to learners with hearing impairments.

(Figure 3): Female teachers at Nyowe Special School

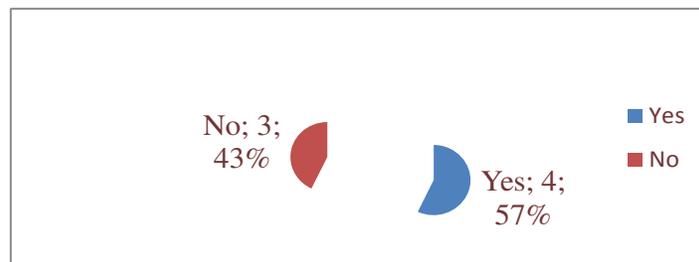
N=8



At Nyowe Special School, three (3) representing thirty eight per cent (38%) of the female teacher respondents did not find it ease teaching HIV and AIDS prevention to learners with hearing impairments while five (5) representing sixty two per cent (62%) were at ease.

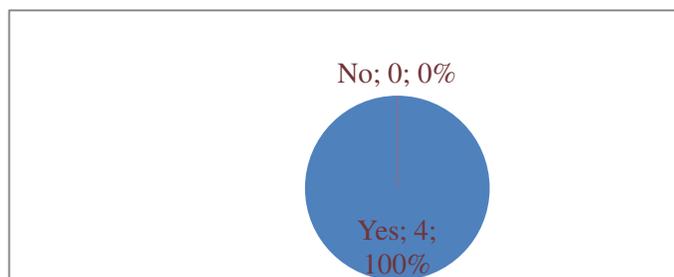
(Figure 4): Female respondents at Kameho Special School

N=7



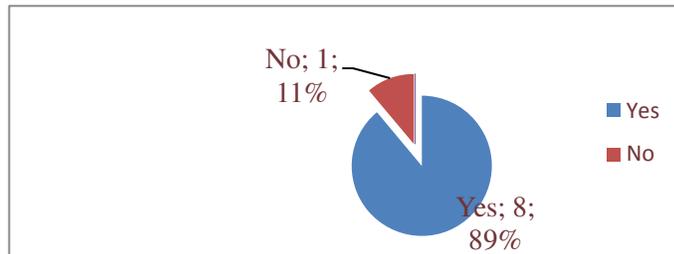
At Kameho Special School, three (3) representing forty three per cent (43%) of the female respondents were not at ease to teach HIV and AIDS prevention to learners with hearing impairments while four (4) representing fifty seven per cent (57%) felt at ease.

(Figure 5): Male respondents at Nyowe Special School



All male respondents at Nyowe Special School were at ease to teach HIV and AIDS prevention to learners with hearing impairments.

(Figure 6): Male respondents at Kameho Special School



At Kameho Special School, only one (1) male representing eleven per cent (11%) was not at ease to teach HIV and AIDS prevention to learners with hearing impairments while eight (8) representing eight nine per cent (89%) were at ease to teach HIV and AIDS prevention to learners with hearing impairments.

Therefore, out of the total number of teacher respondents at the two schools, six (6) females representing forty per cent (40%) said they were not at ease to teach HIV and AIDS prevention to learners with hearing impairments. However, nine (9) representing sixty per cent (60%) of the females said they were at ease to teach HIV and AIDS prevention to learners with hearing impairments. The reasons those that were not at ease to teach HIV and AIDS prevention to learners with hearing impairments were that certain terms were too direct to demonstrate to learners since such terms demanded that one should point to the sexual organs in order for the learners to understand. The other reason was that it was a taboo to discuss sexual issues with learners whom they considered as their own children. The male respondent said it was a taboo to teach young learners sexually related material. He said doing so was tantamount to exposing them to sexual activities early.

4.9 THE CHALLENGES OF TEACHING HIV AND AIDS- HEAD TEACHERS' PERSPECTIVES

The following were the head teachers' views on the challenges of implementing HIV and AIDS prevention teaching in the schools. They did not have resources on HIV and AIDS for learners

and teachers to read and refer to respectively. When asked whether they had the Interactive methodologies manual for 2003 for teaching HIV and AIDS prevention in schools, they said they did not have and could not remember ever hearing about such a manual. They reported that they did not have magazines, and books on HIV and AIDS. “Of course schools have many challenges, funds are not there for everything we want. Teachers want flip charts, manila paper, markers etc but these may not be available at all times due to lack of finances, we encourage teachers to prepare their needs early for budgeting” said one of the head teachers.

Other challenges reported by head teachers were taboos in the discussion of sexually related terms. Language barrier was one of the challenges. Head teachers said learners with hearing impairments do not learn easily. They said teachers only knew vocabulary in their own subjects and said since HIV and AIDS education was more scientific, teachers for Religious Education found it difficult to sign science words. The problem of sign language did not only restrict the teaching of HIV and AIDS prevention but also other subjects. However, they said the hearing impaired learners had enough information on HIV and AIDS from their teachers but they were worried about the deaf in the community whom they said were more likely to be abused due to lack of knowledge about HIV and AIDS. The head teachers also revealed that some teachers who were brought to the school to teach the deaf learners did not know sign language and that they had to learn it from the learners in school. He said, ‘Universities and colleges that train teachers whether special or not do not provide sign language so we depend on the learners’.

Head teachers proposed having seminars occasionally to help teachers develop sign language. They also suggested that when books recommended for use in schools are published, there should be training to review new terminologies and adopt signs for new words.

However, despite the challenges, the head teachers at the two research sites revealed that the implementation of HIV and AIDS prevention was done through lesson integration by teachers. They reported that HIV and AIDS prevention was also taught to learners with hearing impairments during assembly. One of the head teachers who had no training in special education said he depended on teachers who knew sign language to interpret what he said to the learners during assembly. The head teachers said there were HIV and AIDS prevention talks and sketches during assembly. They also stated that drama and clubs was one of the ways through which HIV and AIDS was taught in school. One of the head teachers further explained that HIV and AIDS

prevention at her school was taught through clubs and not in class. Both head teachers stated that the school administration supported the teaching of HIV and AIDS by sending teachers for seminars where they learnt how to teach the subject matter and such teachers would in turn train other teachers through in house workshops organised within the school. One of the head teachers stated that she involved other organizations in the sensitization of pupils on issues of HIV and AIDS and gave examples such as CHAZ and the Rotary Club of Kitwe being some of the organizations that were visiting the school to teach learners with hearing impairments about HIV and AIDS. She said she also involved a community counselor who was a long serving member in the community to help learners in the school. They reported that they supported the teaching of HIV and AIDS prevention by printing ‘T’ shirts labeled HIV and AIDS messages which teachers wore on Fridays. This was also confirmed by learners in their report of other ways through which they learned about HIV and AIDS in the school. The head teachers further said the MoE was also supportive with posters bearing HIV and AIDS messages sent to the schools. The church, the hospital funded by CHAZ also helped with material. The checklist results however, showed that posters were evident at one of the research sites. The other research site had neither posters nor wall printings.

4.10 THE SCHOOL AS A LEARNING ENVIRONMENT FOR HIV AND AIDS

The school as a learning environment also posed challenges in learning about HIV and AIDS prevention to learners with hearing impairments. It is said, “Things are easier said than done”. The checklist for the school environments’ conduciveness for teaching HIV and AIDS prevention revealed two different scenarios in the two schools where the study was conducted. There were two extreme opposing appearances. Kameho Special School proved that there was teaching of HIV and AIDS through the way the school environment looked. A brief description of the school which for ethical reasons, Kameho was used, had a writing ‘HIV/AIDS is DANGEROUS’ and a red ribbon drawn on the wall. The head teacher’s office was very well equipped with posters. The deputy head and the senior teacher’s office equally had numerous posters on HIV and AIDS. The staffroom had two posters. The timetable however did not show days for anti aids clubs and HIV and AIDS was not timetabled. In most of the classrooms were several posters pinned on the HIV and AIDS corner and the notice board in some cases. Some of the posters seen in the classroom were entitled ‘Life Saving Boats in an AIDS flood’, basic facts

on HIV/AIDS, The Myths about contracting HIV and AIDS, Good leaders keep their promises, no matter...., beyond ABC, protect your young people talk to them about HIV /AIDS, you can't tell by looking etc and the senior classes had cut extracts of HIV and AIDS information from newspapers and magazines and pasted them on their classroom notice boards. In one of the classrooms, a lesson on HIV and AIDS was seen where a teacher wrote the meaning of HIV and AIDS, the immunity system, white blood cells etc. Some classrooms had evidence of work produced by pupils such as a poem on HIV and AIDS. Magazines and newspapers were the learning resources that were available for learners. Neither textbooks nor readers on HIV and AIDS were seen. There were no teachers' handbooks on HIV and AIDS, video tapes were also scarce, videos and television sets were only seen at the dormitories. Sign language dictionaries were scarce and learners had no access to the few that were in the staffroom.

Nyowe Special School had no posters and bill boards bearing HIV and AIDS messages. There was one poster only that was seen at the main entrance to the main school and no writings were seen at the unit. The only writing on the gate was entitled "Positive Living prolongs Life." The walls could not talk at all and staff rooms and offices both at the unit and at the main school were silent. HIV and AIDS was not timetabled even as an extracurricular activity or club and club schedules were not seen. The boarding section equally had nothing about HIV and AIDS written on the walls. Neither learners' text books nor videos on HIV and AIDS were seen. There were however two television sets at the hostels, one in the dining room and another in the girls dormitories and nothing at the classes. Video players, tapes and CD cassettes were not available at the unit.

4.11 WAYS RECOMMENDED TO TEACH HIV AND AIDS PREVENTION

Teacher respondents recommended that there should be enough pictorial material, videos, video tapes and real objects for use in teaching the hearing impaired learners about HIV and AIDS prevention. They further recommended that it was an effective practice to invite guest speakers to talk to learners about HIV and AIDS prevention. Guest speakers here meant doctors, nurses and hearing impaired people living with HIV. The use of picture charts was also recommended as an effective strategy and technique. Both schools further observed that learners could learn to be responsible if they got involved in presentations and peer education projects. It was noted that

peer education programs omitted the hearing impaired learners. The use of outdoor visits was therefore said to be an effective strategy by the two schools if it was supported.

It was further recommended that if video presentations were in sign language, learning about HIV and AIDS would be easier for learners with hearing impairments. The use of artificial sexual organs in teaching so that learners see objects that were near to real objects was recommended. For example, rubber penis, wood carved penis and real objects like condoms could be used. They said using such teaching aids would enhance better demonstrative strategies. The teachers also recommended the use of cartoons in sign language and that teachers themselves also could role play for the pupils.

Teachers further recommended changes in teaching approaches in order to overcome stigma if one method was used at all times during learning. They said television programmes on HIV and AIDS in sign language at specific times like the Zambian 'TAONGA' market radio programme should be introduced. The 'TAONGA' market programme is a radio educational programme offering lessons at various basic school grade levels through radio to communities in Zambia that have no schools so that community teachers provide access to education to children in those communities. They also recommended the use of story books on HIV and AIDS. Other techniques recommended were giving many examples, use of the devil's advocate and use of quiz competitions that are rewarding to winners. The use of pre and post lesson talks was also recommended as a technique in teaching HIV and AIDS prevention. T shirt and wall printing with HIV and AIDS messages gave opportunities to learners with hearing impairments to learn on their own. Visits to other units and special schools was said to provide an avenue for exchange of HIV and AIDS information among learners. Problem solving puzzles was also one of the recommended strategies and technique to learning about HIV and AIDS prevention.

From the recommendations, teachers know exactly what is needed for their learners to learn HIV and AIDS prevention. Their recommendations are somewhat in line with the constructivist perceptions of a learning environment.

4.12 INTERVIEWS WITH TEACHERS

The interviews were used to clarify and gather some in depth information that were not addressed by the interviewees when they answered the questionnaires. Some teachers who agreed were interviewed.

A female teacher interviewed reported that teaching of HIV and AIDS prevention to the hearing impaired learners was a big challenge. She said culture was a big challenge to teaching HIV and AIDS prevention to learners with hearing impairments when it came to demonstrations. She said learners with hearing impairments demanded that the teacher demonstrates for them in order to understand. This way the teacher was forced to demonstrate aspects which were against culture. However, she stated that the demonstration method was an effective method because in the absence of sight material, teaching HIV and AIDS became very difficult. She said demonstration worked very well in some instances but failed in others. “The demonstration method is good but sometimes it is difficult to demonstrate for example it is easy to demonstrate putting on a male condom but the female...” She explained that HIV and AIDS prevention was integrated in subjects such as integrated science and home economics in topics such as diseases and family planning.

Another female teacher said sign language was too strong when used to sign certain words in HIV and AIDS prevention. She said the word ‘penis’ was ‘too strong’ when signed than when said because when signing the word penis, one has to also point at the position where the organ is found. She said the ‘vagina’ sign is protested against by girls when a teacher signed it. In this case the teacher had to draw the parts on the board or on a chart. She said that she had problems signing certain words and so she resorted to finger spelling. The learners who knew the word would help to sign it. She also noted that some signs were confusing. For example; signing the word condom may be misunderstood if one did not observe the hand movements properly and one may get a different meaning such as ‘wearing a hat’, head teacher, or others if an explanation did not accompany the word.

The **third female teacher** interviewed reported that HIV and AID prevention was taught as integrated in some subjects like science, social development studies and creative technology. The method mostly used according to the teacher was discussion, not because it was the best but

because it was most available method. She said use of role play was difficult because it needed time to train learners to follow guidelines of role play and coordination was difficult due dependence on sight. Further, she said even fluent communication was difficult due to lack of signs for certain words. Stories are also restricted by language barrier. As for cultural barriers, the teacher said this had been broken because teachers were trained to teach sex education in their subjects as well. She however said learners themselves do not feel comfortable when a teacher signs the words 'vagina' or 'penis'. When the interviewer asked the teacher to sign the word 'vagina' and the 'penis', she was only able to sign the word 'vagina' and said that she had forgotten the sign for a 'penis'. The teacher said she learnt some of the words from the pupils e.g. the sign of word 'circumcision' was learnt from the pupils. She said that teaching certain topics fully was restricted by lack of adequate sign language vocabulary. On the use of outdoor visits, the teacher said this was one challenge because sign language differed. " Pupils from different schools have different sign languages and so communication is difficult when the learners are mixed with others from other schools". She recommended frequent interaction of learners from different places in order to learn from each other different signs and develop their vocabulary.

A male teacher interviewed said teaching HIV and AIDS needs a lot of skills in order to get the intended information across to the learners. He said he felt shy when demonstrating the word condom. To demonstrate how the condom is worn, he used a stick to assume that it is a penis. He said even though he explains, learners laughed while he was explaining and that made him feel as if he was compromising his morals and that learners may end up misunderstanding him. He further explained that terms signed needed to be explained fully. If the term is just written, it gives different meanings to learners. The explanations consume a lot of time for straight forward terms which are just supposed to be said. Every word requires to be explained. He gave an example saying; "In a passage where you start talking about HIV and AIDS and later use the word "it" you have to refer the 'it' to the HIV and AIDS. 'It' on its own is meaningless to a learner with hearing impairment unless the 'it' is explained".

He also said there were some words that teachers found difficult to sign. However, he was unable to give some of the words that were difficult to sign.

Another teacher revealed that all teachers were aware that it was their responsibility to teach HIV and AIDS at lesson introduction for five minutes or at the end of the lesson. He however noted several challenges in the way learners with hearing impairments learned about HIV and AIDS. He reported that the Hearing Impaired learners depended on sight so that they see what was being taught. The discussion method therefore depends on what the learners see. Another challenge was that the Hearing Impaired learners were left out in HIV and AIDS campaigns. He observed that there were no peer group sensitizations on HIV and AIDS for the hearing impaired learners.

Another challenge noted was that medical words were difficult to explain in sign language. “Sometimes they are telegraphic and not grammatical in the way they are taught” said the teacher.

He further noted that signing sexual organs or activities was culturally acceptable to the learners with hearing impairments. There is no shyness because that is their mode of communication. He said learners with hearing impairments could not be shy because sign language was their mode of communication adding that if trained as advocates, they could do better themselves than the teachers. He however said the cultural aspect constraints teachers and not the learners but should this be the case, teachers should use pictorial materials in their teaching. The Guidance and Counseling teacher also noted that there were no books on HIV and AIDS for learners to read and teachers to use to teach. He recommended that if books were to be written, they needed more pictures to help the hearing impaired learners benefit from reading. The guidance and counseling teacher reported that the school had no video and teachers were forced to use their own home equipment to teach HIV and AIDS prevention. He observed that the hearing impaired learners can learn better using videos because they follow the video flow very carefully and accompanied with explanations, the hearing impaired learners can learn very much about HIV and AIDS.

The guidance and counseling teacher further said stories could also be used but with a lot of coaching and guidance because the hearing impaired lack the imaginative aspect. He recommended that HIV and AIDS prevention should not be taught as a separate subject but having a unit for it would make a big improvement.

Further interviews revealed a science teacher testifying that sign language vocabulary was limited in explaining ideas and it would be easy when concrete material were available. He also stated that cultural connotations restricted full demonstrations and explanations of certain words about HIV and AIDS. He said it was not easy to make full use of stories, debates and outdoor visits because of limited sign language vocabulary. To him, the word 'defile' and 'syndrome' had no sign in sign language. He however admitted that he was trained in interactive methodologies.

A teacher with a different view said he did not feel shy or restrained by cultural barriers to talk about HIV and AIDS. "After training from FAWEZA, no cultural barriers to talk about HIV and AIDS although as a human being sometimes I feel guilt to talk about condoms, we Catholics teach abstinence. The teacher said he had no limitations with sign language because he was brought up with the hearing impaired children and so sign language was like his second mother tongue.

The last interviewee who was female said some terms were difficult to sign unless a real object or picture was brought to the sight of the pupils. She said it was difficult for her to sign some science words such as 'condom', 'defile' 'penis' and 'vagina'. She stated that some information on HIV and AIDS lacks in the learners due to a limitation in sign language vocabulary. The teacher also said she felt uncomfortable to sign the words 'penis' and 'vagina' to learners and stated that even learners themselves were uncomfortable with signing of such words.

She revealed she was only nine months old at the school and sign language posed a big problem for her in teaching.

A general discovery when teachers were asked to sign words such as vagina, penis, sexual intercourse, defile, syndrome, HIV, AIDS, and condom, most did not know how to sign the words. They stated that the words were easy to explain and not to sign. Teachers relied on one dictionary (ZNAD 2001 Dictionary) and an American Sign Language photocopied book placed in the staff room for everyone's access but the books could not give signs for some words. For instance, the word 'syndrome' is not found in ZNAD (2001) dictionary. Learners do not even have dictionaries for sign language. The Joy of signing by Riekehof L.L (n.d) did not have words such as the vagina, penis and sex.

CHAPTER FIVE

5.0 DISCUSSION OF FINDINGS

This chapter discusses the findings of the study. The discussion was done according to emerging themes. The themes that emerged were the implementation of the Interactive Methodologies in the schools for hearing impaired learners, the teaching and learning strategies that were used by teachers in teaching HIV and AIDS prevention and the methods that teachers considered effective in teaching HIV and AIDS prevention to learners with hearing impairments. Under the methods that teachers considered effective in teaching HIV and AIDS prevention, the challenges have also been discussed. Other themes that emerged from the study were how conducive the learning environment in the two schools was, the learners' choice in learning about HIV and AIDS and the traditions, customs and taboos that existed in the classroom.

5.1 IMPLEMENTATION OF INTERACTIVE METHODOLOGIES

It was evident from the results that learners with hearing impairments need information on HIV and AIDS prevention. From the age ranges among the grade nine (9) to twelve (12) learners, it is common sense to deduce that the learners with hearing impairments are of sexually active age. For example, the age ranges of the learner respondents from grades nine (9) to twelve (12) was sixteen (16) to twenty seven (27) years at both schools. At Nyowe Special School, the grade nines were aged between sixteen (16) and twenty one (21) years old while the grade elevens (11) were between eighteen (18) and twenty four (24) years old. At Kameho Special School, the grade nines (9) that participated in the study were between sixteen (16) and seventeen (17) years, the grade tens (10) were between seventeen (17) and twenty (20) years, the grade elevens (11) were eighteen (18) to twenty (22) years old and the grade twelve were eighteen (18) to twenty seven (27) years old. Adolescents begin to engage in sexual activities earlier than sixteen (16) years. To support this, Dyk (2001) wrote "there is wide spread evidence that adolescents are becoming more and more sexually active and that they are becoming sexually active at a younger and younger age than they previously did". There is need for a serious devotion amongst teachers towards the teaching of HIV and AIDS regardless of the cultures and subjects they teach. The age group of learners at the two research sites of this study falls within the risk ages, i.e. 15-24 years among girls according to CHANGES2/MoE (2006).

These ages are already aware of sexual issues. Sex education coupled with HIV and AIDS education should be taught to them. The results also showed that the majority of the learners in both schools were not shy to discuss sexual issues with their teachers and other learners in the class. This was evidenced by simple statistics at Nyowe where nine (9) learners out of the thirteen (13) were not shy to discuss sexual issues while at Kameho, fourteen (14) out of twenty one (21) learners said they did not feel shy to discuss issues pertaining to HIV and AIDS in class. This shows the readiness among the Hearing Impaired learners to learn about HIV and AIDS prevention. The few that indicated that they were shy to discuss issues with regard to HIV and AIDS show that the classroom environment is still faced with challenges that need to be overcome by bringing every learner on board.

From the results, it is clear that the teaching of HIV and AIDS was going on in the schools but the use of Interactive Methodologies was not being implemented according to the guidelines of the training manual for 2003. For example, Kameho emphasized teaching HIV and AIDS through clubs such as the SAFE club and anti AIDS clubs. This leaves many questions as to whether the life skills intended for learners to prevent them from contracting HIV and AIDS were being imparted. This is because the manual provided guidelines through which the intended skills should be imparted to the learners in full time teaching and not through clubs alone. The manual's objectives were that life skills such as self awareness, assertiveness, self esteem, ability to make relationships, decision making and problem solving are attained by learners in order to prevent themselves from the scourge. The interactive methodologies *per se* were used in teaching but as ordinary methods of teaching they acquired from various colleges and universities of their professional training not teach HIV and AIDS prevention.

5.2 TEACHING AND LEARNING STRATEGIES

The pedagogical practices involved in a classroom have a very important value in determining learning. Teaching here is likened to a business involving a seller and a buyer in which the seller would want his or her commodities to be bought. The teacher in this case would be the seller and the learner is the buyer. In this situation, teachers have to advertise the goods they have (i.e. knowledge) to the learners and the learners should be attracted to the goods (knowledge) teachers want them to buy. Thus the buyers (learners) have to determine whether the goods (knowledge) are of value or not. This example gives us the notion that the way knowledge is presented to

learners matters a lot. The methods, strategies and techniques teachers use in general teaching and the teaching of HIV and AIDS prevention matters a lot to the way knowledge is constructed by the learners. If the teaching of HIV and AIDS prevention is to be effective and taken seriously by the learners, it should be presented in ways that interest them. Donalds et al (1997:40) revealed the works of Piaget (1953) and Bruner (1963) in which they said “knowledge is not simply taken in by people. It is actively built up (constructed) and developed to progressively higher levels in each learner. Through engaging in experiences, activities and discussions which challenge them to make meaning of their social and physical environments, learners are actively engaged in building progressively more complex understandings of the world.” Learners with hearing impairments are social beings like any other human beings. It does not therefore help them in the development of their cognition if they are not exposed to social interactions through teaching methods and strategies such as outdoor visits as found in the study (see tables 2, 3 and 6). Learners need to see and interact with the wider community, and with infected people. They need to learn for themselves from the infected people they come into contact with. They need to interact and learn the experiences of the sick themselves than being told by the teachers always.

The use of videos, televisions, cartoons, charts, outdoor visits and all visually related approaches has greater advantages for learning of the hearing impaired learners. Duplesis et al (2002), provide teachers with a Chinese adage which says “when I Hear, I forget, when I see, I remember and when I do, I understand”. This adage emphasizes the use of methodologies that encourage active participation and motivation among learners and discourages the use of lecture methods where forgetfulness becomes the feature among learners. Methods such as videos presentations, use of television, outdoor visits, debates, songs, games, stories and all other approaches that involve seeing and doing, are activity, experience and social interaction based especially when done in sign language would benefit the hearing impaired learners. MoE (2003) reiterated that classes for HIV and AIDS should be recognised as different and explained that the application of multiple media (e.g. role plays, stories, games, discussions, debates, outdoor visits and video presentations) provides an opportunity for actively engaging learners in the learning process. Since learners with hearing impairments have no sense of hearing, they can benefit very much from methods that involve sight and doing. The use of discussions and role play by teachers in the two schools is good but learning has to be varied through use of other multimedia strategies.

5.3 EFFECTIVE METHODS IN TEACHING HIV AND AIDS

Illustrations in (tables 2 and 3) show the overall perceptions of teachers at the two schools for hearing impaired learners towards the methods they considered effective in teaching HIV and AIDS prevention to learners with hearing impairments.

The results showed that in general teachers at the two research sites considered role play and discussion as the most effective methods in teaching HIV and AIDS prevention to learners with hearing impairments. Methods such as stories, debates, songs and outdoor visits were also ticked as effective but did not score higher tallies in the results. This is a result of the several challenges the use of the methods posed. For example, in an interview with one of the female teachers at Nyowe, said the discussion method was mostly used not because it was the best method but because it was the most available method. There is no method among the interactive methodologies that may be more effective as long as each method has the ingredients for its effective implementation. Each of those methods meets the learners' needs in different ways. The use of videos in the schools was restrained by lack of video players and tapes. This gives one of the reasons for teachers not using the other methods. The school had no video players and video tapes but teachers discovered through improvisation that video presentations were very effective if used. Some teachers used initiative at certain times to sacrifice their home video players and borrowed video tapes on HIV and AIDS to avail the Hearing Impaired learners an opportunity to learn HIV and AIDS information. One teacher said the amount of interest the hearing impaired learners have in watching videos. She said; "one day I borrowed a video player and a tape entitled "the silent pandemic", for the learners, ye e! The Hearing Impaired Learners are good at watching videos with maximum attention.

With videos used in teaching, this strength could be capitalized on in the teaching of HIV and AIDS to learners with hearing impairments. Their dependence on sight is a compensatory strength to the hearing loss. Even though videos were seen to have the strength, teachers still noted that there was need to explain certain terms to the learners. They suggested that video tapes were better in sign language than in ordinary audio and video format. This disadvantages the learners with hearing impairments because they do not get everything from the video. The use of videos was supported by Karen (2006) who recognized that the use of improved sign language; visual aids such as video material and posters; and persuasive communication does

positively impact communication with this population. Further, Pollar (1993) observed that deaf children who use ASL (American Sign Language), printed texts can be supported with sign language video (or movie) dictionaries. He elaborated that the videos can include facial expressions, head tilts, eye borrow raises, and body movements by simply pressing a button and the person who can even be the teacher would appear explaining the word in sign language. The use of multimedia in teaching is very effective and appealing to learners. Teachers in Mexico reported that their students enjoyed using the sign language videos with English print. (Pollar, 1993). The use of videos motivates and stimulates learners' curiosity to learn from watching. All that is needed is having the necessary electronic media available and accessible to both teachers and learners. This is supported further by Kirk and others (2009:352) who report that, "computer technology has advanced to such an extent that special word processing systems can be used to translate written English into graphic finger spelling signed and written English. The computer enables the student with severe hearing losses to practice both signed and written English." The software is available. All that is needed is buying computers and the software. The teaching of HIV and AIDS prevention would even be made easier and the traditional barriers would be shelved out if HIV and AIDS lessons are computerized. The role of the teacher in this situation would be to facilitate the learning process.

5.3.1 Stories Method

Though stories were not rated as one of the most effective methods in teaching HIV and AIDS, learners stated that it was one of the methods they liked to use to learn. The reasons teachers found stories not to be effective were the limitation of sign language and lack of story books. Stories are an effective way of teaching HIV and AIDS prevention especially if they are varied in the ways they are presented to learners. Having story books is one way learners can be attracted to what happens when one is infected or affected. But there are several other ways of using stories in teaching HIV and AIDS prevention. Andrews and Jordan (1998) say CD-ROM stories raised the learners' awareness of their home family's native language. This was in language teaching but CD-ROM stories can still do more in HIV and AIDS teaching. Learners can become aware of HIV and AIDS through CD-ROM stories. This can help learners read for themselves words signed out of CD-ROM stories. Stories bring about an intrinsic worth of the way things happen and learners enjoy learning through methods such as these which bring their

emotions and feelings into reality. They then would reflect on what would be best for themselves in the advent of HIV and AIDS. One of the principles of the designers of constructivist learning environments according to Wilson (1996:11) is that pedagogy should “provide experience in and appreciation for multiple perspectives. Problems in the real world rarely have one correct solution. There are typically multiple ways to think about and solve problems. Students must engage in activities that enable them to evaluate alternative solutions to problems as a means of testing and enriching their understanding”. Stories are just one of the methods that can be presented in different ways, through story books, through the learners and through the CD-ROM videos. After stories are presented or read by learners, they are given chance to evaluate the stories and relate the experiences they would have read to themselves as members of the community. One of the responses that was given by teachers was that some learners thought stories were intimidating. This depends on the way the story is presented. If teachers do not facilitate and guide the learners in a congenial manner before they watch or read a story, learners would regard such as threatening.

5.3.2 Discussion and Debate methods

These methods involve learners expressing themselves by sharing ideas, arguing and defending their lines of thought. Though teachers reported that learners were shy to discuss HIV and AIDS issues in class, the results from learners showed that the learners were willing to share with others and teachers through discussions on issues of HIV and AIDS prevention. The Interactive Methodologies Manual of 2003 provides learners with assertive skills that promote confidence and self esteem. Learners feeling shy or fearing that they would be laughed at by the peers means they lack confidence and self esteem. Sanders (1988: 63-64) observed that, “unless students feel self confident or have a good sense of self esteem, they will not be motivated to learn. Deaf children often come to school with very little self confidence. This means that teachers should help them acquire feelings of achievement and success.” Deaf children are disadvantaged because of the limitation they have in oral language and their only way of communication is sign language. If teachers feel shy discussing HIV and AIDS issues with deaf children, then they are reinforcing the already low state of self esteem that deaf children have. Teachers should not therefore be in the forefront inculcating a sense of shyness in the learners. If teachers are not shy, there would certainly be no need for the learners to be shy. The results already show that if

teachers took an advantage of openly discussing sexual issues with learners, learners would benefit more because they are not shy at discussing sexual issues. Discussions provide learners with a sense of understanding issues, developing explanatory abilities and a sense self esteem. This way, learners would be in a position to protect themselves from sexual abuse because they would be able to portray assertive skills towards people who approach them with sexual requests or those that would want to abuse them. Some people have indicated that “knowledge is power”, but it can even more powerful with a positive self esteem and positive self concept. If learners were fully exposed to a variety of interactive methodologies, even the few that said they felt shy discussing issues of HIV and AIDS would not be shy because the manual provides training in such life skills. The Manual would be a basis for training all teachers who are new and retraining old teachers in in-house workshops.

5.3.3 The use of Charts, Pictures, and Demonstrations methods

The use of charts to illustrate how to put on condoms was seen as appropriate and effective for the hearing impaired learners by teacher respondents from the two sites of this study. This is depicted in the suggestions for better strategies for teaching learners with hearing impairments and in the challenges teachers faced in using some methods they found to be effective. Learners indicated that they learned better through charts, pictures and role plays. Teachers stated that in the event that they felt shy to sign sexual organs and acts, they resorted to using charts, pictures and demonstrations. They said even when discussions were effective methods in teaching HIV and AIDS to learners with hearing impairments, pictures, charts and demonstrations were still needed because learners with hearing impairments learn better when they see pictures, charts and demonstrations. While agreeing with a research by Moonga, (2000) in five schools in Lusaka where she found out that some teachers were against certain teaching approaches which showed ways of putting on condoms as taboos, the use of pictures, charts and demonstrations was seen as a strength in the teaching of learners with hearing impairments. On recommendations for better strategies for use in teaching HIV and AIDS prevention, demonstration was one of the recommended strategies. Teachers indicated that demonstrations posed challenges when it came to pointing at specific sexual organs. But they stressed that demonstration was a very effective method because learners with hearing impairments depended more on sight and demonstrations provided visual learning to the hearing impaired learners. Demonstrating how to use equipment

presents particular problems for deaf students because they can only concentrate on one aspect at a time since demonstration and explanation happen at the same time.

According to http://www2.wlv.ac.uk/teachingdeafstudents/science_engeering, in such situations, “first explain the equipment and what you are going to do with it, then say it again while actually doing the demonstration”. In the teaching of HIV and AIDS prevention, the consecutive teaching technique would be very effective if employed by teachers. For example, when it comes to explaining the use of the condom, teachers first explain what the condom is used for and then a demonstration of how it is used is done. Sanders (1988) applauds teachers who are sensitive to the needs of hearing impaired learners when they employ a variety of visual aids to assist in the comprehension of abstract concepts by providing concrete support. He gave examples of graphics, charts, posters, photographs, films, transparencies, books and student made materials as some of the very beneficial teaching materials teachers should improvise when teaching the hearing impaired learners.

The local environment is rich and has most of the teaching and learning aids. The use of the local environment is critical in learning. While it is true that we need modern teaching and learning aids in our teaching, it is also necessary to utilise the means available. For example, the use of a stick to represent a penis to demonstrate the wearing of a condom that one teacher at Nyowe reported using in his teaching would even be more concrete if the stick is well carved to a shape of a penis so that learners easily recognize the item during demonstration, thereby bringing near reality in learning. Learners as well could be given opportunity to make and draw several imaginative and real experiences about HIV and AIDS that would be pasted in their classrooms. In a learning environment where computers are part of the learning process, graphics would be made by imaginative pupils on HIV and AIDS and these are stuck on the classroom notice boards to enhance pupils understanding of HIV and AIDS issues. If anything, learners become more proud of what they produce themselves and especially if the product is appreciated and praised by the teachers. The use of charts can be extended to learners to draw what they think about HIV and AIDS. Sanders (1988: 188) also recognized this idea and said, “Students enjoy opportunities to show off their learning. Opportunities to discuss experiences, along with effective correcting, prompting, and modeling techniques, aids academic understanding and

learning without damaging students self concept.” In such a learning environment, learners take control and responsibility of their own learning and learning becomes productive.

5.3.4. Inadequacy of sign language vocabulary

According to ZNAD (2001: v), “ sign language is defined as a gestural visual language in which speakers express or communicate ideas by the movement of hands, fingers, head, facial features and body. In other words, sign language is gestural produced along with the moving elements of the hands, head and non manual facial expressions”. Sign language is a form of communication, a medium of communication through which information is supposed to be disseminated. However, teachers in the study reported that sign language was inadequate in its vocabulary to enable them fully teach about HIV and AIDS prevention. The response that sign language was inadequate was prominent in questionnaires and interviews. Some learners also highlighted this as an impediment where they said they had problems in communication and that it was difficult for them to explain certain concepts related to HIV and AIDS. One learner even stated that he did not get enough information on HIV and AIDS. The researcher then looked up in the sign language books teachers were using for some words that they reported as difficult to sign. *The signed English Starter* by Harry Bornstein (n.d) did not have the words ‘sex’, ‘condom’ ‘syndrome’ and HIV and AIDS. This was one of the books one of the teachers used as a reference book for sign language. However, *ZNAD (2001) Dictionary* had the words sex, sexually, condom, AIDS but did not have the word ‘syndrome’. A book called *The Joy of Signing 2nd ed* by Lottie .L. Riekehof (n.d) did not have the words ‘vagina’, ‘penis’ and ‘sex’. Since the copies for *ZNAD Dictionary (2001)* were only two in the schools, teachers opted to use other resources they came across like *The signed English Starter* by Harry Bornstein. There were no recommended books made available to teachers for reference. One word that teachers failed to sign was the word ‘defile’. The word ‘defile’ could not be traced in the *ZNAD Dictionary of (2001)* and in *The Joy of Signing*. While some dictionaries had certain words that teachers failed to sign, teachers also lacked in sign language.

A rich vocabulary is essential in the delivery of information or communication in general. When vocabulary is limited, communication becomes incomplete and information does not reach the intended targets in the manner it was designed and desired. The teaching of HIV and AIDS therefore faces a major challenge with regard to learners with hearing impairments who are

already disadvantaged by limitation in oral language. It leaves much to be desired if sign language vocabulary is limited in teachers, learners and dictionaries. Language is dynamic; a feature that entails that language develops just as society develops. Society is faced with new words every time they come across new ideas and words are made for such ideas. Though this aspect is technical and peculiar to linguists or language specialists, a common person can still notice that a big gap lingers in sign language, posing a challenge to teaching HIV and AIDS prevention. Perhaps, the major question for scholars, linguists and specialists is, “is Sign Language a language or an alternative?” If it is a language of which ‘I’ contend it is, because it is a means of communication and not mere signs representing some ideas and that the hearing impaired people depend on it, then it must grow and be rich in vocabulary in order to respond to the current demands and challenges of life. Language is one of the tools for national development and aids development. With the many technological changes occurring from day to day, with diseases and other disasters affecting our society almost daily, sign language needs to develop in order to provide answers to the national and personal challenges since it is a form of communication through which societal challenges can be understood. With developed sign language, teachers and learners would not find problems communicating to each other effectively on issues of HIV and AIDS as a current national challenge that needs to be addressed by all.

5.3. 5. Teacher competence in sign language

One major hindrance to the full exploitation of the Interactive Methodologies was the aspect of limited sign language among teachers. Language is a medium of communication. The use of the recommended methods can only be effective when teachers and learners are competent in language. Chiyayinga (2008:34) observed that ‘the ability to communicate is essential to the success of any undertaking and an important factor in the achievement of its objectives.’ Teaching of HIV and AIDS prevention success depends on the ability to communicate. If communication becomes a barrier, the objectives of teaching HIV and AIDS prevention strategies to learners with hearing impairments will not be realized.

This study revealed that most teachers at the two research sites were not competent in sign language. This came out clearly in the responses of the questionnaires and interviews as a big challenge to the implementation of the Interactive Methodologies. It was reported that teachers

had to learn sign language from the school when they were posted or transferred. Those that were trained in special education also had to learn sign language from schools because colleges and universities offering special education did not offer sign language as a course at the time. As a result, teachers graduated without sign language and had to learn it from learners in the special schools they were posted to. Furthermore, not all teachers teaching the hearing impaired learners went through special education course. Some of the teachers were sent to the special schools on transfers had no background of special education training and had to learn sign language from the school. Kirk et al (2009: 341) quoted Luetke-Stalman et al (2000) saying that “ the teacher’s and parents’ abilities to sign will not only aid the child in developing a communication system but also will enhance the child’s academic success and his or her social skills, peer interaction, and play”. Teachers’ inadequacy in sign language means a lot to the general academic progress of the learners with hearing impairments. This challenge does not only retrogress the learning of HIV and AIDS prevention information but also the general academic learning of learners with hearing impairments. When teachers are not competent in sign language, learners will formulate their own language or use signs that they earlier developed from their homes. As a result, each learner will have his or her own sign for a word and communication becomes difficult. The response from participants that learners had a variety of sign languages zeros in to imply that this is partly a result of teachers’ incompetence in sign language.

5.3.6. Diversity of sign language

Another common challenge that came from both questionnaires and interviews showed that there was no universal sign language. Teachers said learners had their own signs for words they came with from their homes and those are the signs they opted to be using. As a result, misunderstandings occurred during communication. Teachers had tough time to learn the signs learners new that teachers did not know.

5.3.7. Reference books

The lack of competence in sign language is further compounded by lack of reference books. The only four reference books (which were individual teachers’ properties except for ZNAD dictionary) at the two schools were not sufficient. Learners do not even have access to the reference books. The dictionaries are placed in the staff room for use by teachers. Teachers

require reading even at home as they prepare for their lessons but the lack of these materials jeopardizes preparation. Worse about it was that the dictionaries that were seen at Nyowe were photocopied and not clear, e.g. *The Joy of Signing* and *the American Sign Language Book* though the *Zambian Sign Language Book* was original but only two copies were available at each of the research sites. A sign language dictionary is supposed to be one of the teacher's handbooks. Its scarcity makes preparation for teaching difficult. There cannot be effective implementation of the interactive methodologies in the teaching of HIV and AIDS prevention especially to learners with Hearing Impairments without teacher competency in sign language.

Schools also reported that they did not have the Interactive Methodologies Manual for 2003 which provides the life skills that learners require to protect themselves from the scourge of HIV and AIDS. Yet it is admitted that the Ministry of Education working in conjunction with cooperating partners have developed several materials for reference by teachers on how they could integrate HIV and AIDS education in their teaching subjects. The materials however are not reaching the teachers who are supposed to apply HIV and AIDS prevention in class. This is evidenced by teachers' acknowledgement that they did not have books. Head teachers and coordinators for HIV and AIDS in the two schools also said they did not have the Interactive Methodologies Manual for HIV and AIDS Prevention in Zambian Schools, a manual produced in 2003 by the MoE to equip teachers with strategies of teaching HIV and AIDS prevention in schools. According to MoE (2003), the Manual is supposed to have a resource package with it comprising cards, sample quizzes, picture codes and resource books to help teachers in facilitation. The topics and processes described in the manual were intended to apply at various levels of the Zambian education system from grade one (1) to twelve (12) and teacher training level. The psychosocial skills required to be imparted in the learners according to the Interactive Methodologies Manual for 2003 were:

Self awareness: the ability to recognize your own shortcomings. The recommended lesson on this skill amounts to fifty (50) minutes.

Assertiveness: defined by MoE (2003) as to be straight forward and honest with oneself and with people about what you need and want. This skill requires that one learns how to communicate his or her feelings and reasons without putting down other or

making them feel bad. The recommended time for a lesson on this skill is forty five minutes.

Decision Making: ability to make wise choices and set goals in life. The recommended time for a lesson for teaching this skill is fifty (50) minutes.

Other skills are the ability to make personal relationships and Empathy with a recommended lesson period of ninety (90) minutes and sixty (60) minutes respectively, negotiation, problem solving, effective communication and coping with emotions and stress all with a recommended lesson period of fifty (50) minutes each. (Information from MoE 2003)

The above skills require that teachers have the manual to refer to as they prepare lessons whether to teach in and outside class. The absence of this manual in special schools therefore means teachers' teaching of HIV and AIDS is done haphazardly, out of discretion and not out of obligation.

Another example is that MoE published a book written by Dominic Eastham entitled *The Mathematics of HIV/AIDS*. This book has a lot of tips on how teachers can integrate HIV and AIDS in various topics in various subjects at secondary school level. But teachers do not have this book in the special schools of this study. There have been good intentions by the MoE and cooperating partners to produce books but fail to distribute these to the intended targets. There are several other books that CHANGES2 has helped to produce in conjunction with the MoE but these books are not found in the schools. For example; the book entitled *SPRINT, a Teacher's Guide for School Based Continuing Professional Development*" is a very good resource for not only trainee teachers but also teachers who are already trained and serving in schools to use to teach HIV and AIDS and other issues affecting the curriculum. Another resource entitled *Teaching in the Window of Hope; a Tutor's Guide* is a very good resource not only for tutors and students in colleges but also for teachers that are fulltime serving in schools. These are only but a few resource books relevant in the teaching of HIV and AIDS. This came as a challenge where teachers stated that they lacked material for reference in the teaching of HIV and AIDS.

5.4 THE LEARNING ENVIRONMENT

Even if teachers have the knowledge that the strength of the hearing impaired learners' effective learning depends on sight, very little or nothing in some cases is done to their learning

environment to ensure that they learn HIV and AIDS content using the available resources. The classroom environment and the general school environment at Nyowe Special School, as the checklist revealed was a matter of concern. The walls lack of 'speaking' and 'talking' at Nyowe Special School was a matter of concern to the implementation of the interactive methodologies. What learners see generates discussion, what they develop themselves in form of drawings also generates discussion and debate. Such discussions and debates generated are a source of learning and consequent assimilation of ideas for learners with hearing impairments. However, the lack HIV and AIDS messages on the walls and notice boards denies the learners several learning opportunities. If learners with hearing impairments are to be creative, they require an environment that is conducive and stimulating. If learners are to produce their own works, teachers must facilitate, they must provide an environment.

The role of relevant education bodies such as the MoE and Curriculum Development Centre (CDC) in creating constructivist learning environments cannot be overemphasized. Responsible education bodies such as the MoE and the CDC should support the school learning environments to enhance effective construction of learning experiences by learners. Wilson (1996: 3) defined a learning environment as "a place where people can draw upon resources to make sense out of things and construct meaningful solutions to problems." He further observed that, "an environment wherein students are given "room" to explore, and determine goals and learning activities seems an attractive concept. students who are given generous access to information resources-books, print and video materials etc- and tools-word processing programs, email, search tools, etc- are likely to learn something if they are also given proper support and guidance." Schools are learning environments, embracing the concept that both learning and instruction take place in the school. For a school to allow for construction of knowledge, to allow for effective learning to take place, it should be equipped with necessary materials that support learning. More traditional in 'our' schooling system up to date is the thinking that the teacher should be an instructor, the omniscient, the omnipresent and omnipotent classroom overseer, terms describing a teacher as one who knows it all, who should always be present and in control of learning. This is a traditional concept coming from 'our' ancestors of the African race who believed in absolute respect for elders, even when they were wrong (elders never go wrong was the thinking) and this crops up even in today's classroom learning situation where only the teacher should talk and teach and the learners listen, questioning nothing on their teacher who

happens to know it all, an authority figure. And so even 'our' Governments have taken it that they should train a teacher and the teacher will teach and provide all the knowledge necessary to the learner, without making the learning environments conducive with necessary material for the teacher and the learners in the teaching learning process. Giving the teacher all the knowledge on how to teach without the tools for teaching and learning is like training a soldier and commanding him or her to go to war with a gun without ammunition. The study simply reveals what is happening in schools today. Schools have been built; teachers have been trained but have neither the resources nor the means to create the resources necessary for learners' effective construction of information.

Beyond the teacher in the learning environment is the learner whose responsibility to learn is his or her own. The learner in the learning environment has a major role to play i.e. making meaning out of the environment in which he or she operates lives and learns. If the environment is 'bare', has no learning resources, no stimulation, the learners mind becomes docile, creativity, imagination and intelligence development are undermined. To think that the teacher should perform wonders to transform a learner wholly is purely illusionary because human development is complex and requires a rich stimulating environment.

Another critical aspect in a learning environment is communication. The language of instruction in Zambian schools is a colonial master's weapon of continued colonization. Though considered a unifying factor in a multilingual society, it works against the principles of constructivism. Even if respondents did not bring this out as a challenge, the fact that sign language was one of their major challenges tells it all to say that the language of instruction is a matter of concern in teaching and learning. The learners with hearing impairments are more disadvantaged with this factor of learning through English because it means they have to learn three languages, i.e. their mother tongue (sign language), the second language (a Zambian Language) and then English. For a learner with hearing impairments, especially the deaf, forced to learn through a language that is not his or her own is overloading his or her learning with unnecessary and irrelevant activities. Even their cognition is punished by the many channels of translating ideas into meaningful units. The longer we sit on this perceived problem of the medium of instruction without addressing it makes history a judge of our education policies. Wilson (1996:5) says constructivist learning environments are places where groups, of learners learn to use tools of

their culture- including language and the rules for engaging in dialogue and knowledge generation. Dialogue in a mother tongue makes construction of ideas easier. The problems of not using debate, discussion, and stories effectively in teaching HIV and AIDS prevention have a lot more connection with this aspect of mother tongue instruction. This is not to say we should avoid learning other languages. We are not detached from the international world. Other languages can be taught as subjects at later levels. This could be one of the reasons we have remained underdeveloped for years. Research has shown that learners perform better when they learn in their mother tongues. Bishop (1985), revealed a research that discovered that learners in Zambian schools performed better in Mathematics when they were taught in their mother tongue than those who were taught in English.

5.5 LEARNERS CHOICE IN LEARNING

In the construction of knowledge, the manner in which an activity is to be learned should not leave out the choice of the learners. This is a tradition that current teachers have clung to, taking sole responsibility of determining the learning of the learners, what they should do and how they should do. There is too much direction and command in the classroom. The learning of HIV and AIDS cannot be fruitful with directive and commanding approaches. If a learner is to feel that he or she is the sole responsible controller of his or her learning, he or she should be given chance to explore his environment, he or she should be given opportunity to exercise choice of what to learn and how to learn such tasks. A constructivist learning environment, according to Wilson (1996:1) is a place where “students take primary responsibility for determining the topics or subtopics in a domain they pursue, the methods of how to learn, and the strategies or methods for solving problems. The role of the teacher is to facilitate this process”. This is one pedagogical goal for a constructivist learning environment. It may sound as giving the learner too much power to control the teacher. However, learning is not for teacher, the teacher is the facilitator for learning and must create an environment where learners have the freedom to manipulate the environment around them. This is why this study considered learners views in the learning of HIV and AIDS prevention. With choice of what tasks learners should take in a particular learning theme, learners will carry it with amount of energy and effort it requires to be fulfilled. Where for example, the teacher assigns roles in a role play so that a learner acts, the learner may not be willing to conduct such a role given to him for various reasons.

Teachers should show congeniality when handling learners especially in the teaching of HIV and AIDS. Persuasiveness is crucial in the learning process especially for learners with hearing impairments.

Some of the learners are so talented that they can be used as teachers of other learners. This principle respects diversity in learning. The learning of HIV and AIDS requires multipurpose approaches in order to succeed. Using learners themselves would empower them even more. The giving of learners such responsibility is recognition of their worth and developing their self esteem and explanatory abilities. It is through involving learners in teaching others that leadership skills have been imparted. Some of the learners have massive artistic talents to lead others in singing, drawing, dancing and acting about HIV and AIDS or any other. Such talents should be exploited.

5.6 TRADITIONS, CUSTOMS AND TABOOS IN THE CLASSROOM

Another very important aspect to consider seriously of a learning environment is the provision of a liberal mind to a learner. The school should be considered a learning environment and not only as instructional environment. In an instructional environment, the learning is dictated and controlled in strict ways as opposed to a learning environment where learning is fostered and supported. There is a greater need to break through some cultural barriers that inhibit creativity, imagination and intelligence development of our learners. This can be possible with a creation of a learning environment that is free of taboos, myths, customs and traditions that are repressive to the learners reasoning. It takes longer periods of time to change cultural beliefs but we might be taking too long. To think that talking about issues related to sex with learners is a taboo in a world of HIV and AIDS is agreeing to sentence all our adolescents to death. The results from teachers showed traces of cultural aspects inhibiting the teaching of HIV and AIDS at the two stations of research. The reasons were mainly that sign language was too strong to be used to sign sexual organs because it required pointing at the organs or signing sexual terms which were considered traditionally as insults. Thus there was still a cultural barrier to discussing, demonstrating and pointing at sexual organs. This agrees with Moonga (2000) in her research of Lusaka teachers in ordinary schools where she discovered that some teachers were still restrained by culture to discuss issues related to sex with learners whom they considered their children.

Culture is therefore a challenge in the teaching of HIV and AIDS. It restrains the flow of a lesson as one has to evaluate what to say and how to say it in the presence of learners. However, evaluating the pace at which HIV and AIDS is spreading, it would not help to keep up to certain cultural beliefs that inhibit information dissemination about HIV and AIDS. It is important that all teachers take the responsibility and put behind their cultural bonds in order to fight HIV and AIDS. The hearing impaired learners even need this information more and in many forms because of the deficiency they have to perceive sound. Learning by common sense therefore may be difficult for them hence the need that teachers teaching them should put behind cultural barriers to the teaching of HIV and AIDS prevention. There is in fact an advantage on the age ranges of the learners with hearing impairments in schools. The study discovered that the learners from grade nine (9) to twelve (12) ranged between sixteen (16) and twenty seven (27) years old. The majority learners according to the results of this study indicated that they did not feel shy to discuss issues of HIV and AIDS in class with their teachers and other learners. This gives an opportunity for teachers to exploit the age advantage and teach the hearing impaired learners HIV and AIDS prevention so that this population and the general population is protected. In fact Dyk (2001:1) quoted Pies (1988) that “the period during early adolescence may be the best time for conveying information about sex, for instilling values and encouraging critical thinking because young adolescents don’t feel the strong emotions (such as shame, fear and embarrassment about sex and sexuality that many adults do”. The hearing impaired adolescents like other adolescents at the ages discovered in this research are already involved in sexual activities and are not immune to contracting the HIV. This is not a subject centered issue. It must be taught in all subjects. It is a responsibility for all teachers, a responsibility for the MoE and the general public.

Times are changing and the problems that come with changing times require change in attitudes and beliefs that work against us and the emerging future leaders, the learners. Much as we would like to preserve ‘our’ culture, we should take note of taboos that work against us and do away with them. A constructivist learning environment knows no ‘taboos’, for ‘taboos’ are unquestionable and repressive to imagination and creative thinking. In a constructive learning environment, learners should question the sexual taboos, myths and other cultural abominations. This can be done through open debates between learners and teachers on how to handle sexual issues.

CHAPTER SIX

6.0 CONCLUSION

This chapter presents the summary of the major findings of the study. It also relates the role of education in the prevention of HIV and AIDS to the study and gives the recommendations that would help resolve the problems the study identified.

The study discovered that HIV and AIDS prevention was being taught to learners with hearing impairments at the two secondary schools. The study discovered that HIV and AIDS prevention was taught through clubs with little emphasis on classroom teaching to learners with hearing impairments. The two sites of research had similar challenges. For example, sign language was a barrier to effective implementation of the interactive methodologies. Both stations had problems with reference books in sign language and other material such as, HIV and AIDS story books, televisions, videos, tapes and other HIV and AIDS teaching material. However, in terms of posters, Kameho tried their best to source and make use of magazines and newspapers (improvisation) articles than was the case at Nyowe Special School. Kameho was also able to some extent involve learners in generating HIV and AIDS messages through poems and extracting HIV and AIDS articles from newspapers than was the case at Nyowe Special School.

Teachers found discussion and role play methods as effective methods in teaching HIV and AIDS in the current state of scarcity of materials that made the other methods not to work. They said the other methods were also effective but difficult to use in the absence of teaching and learning materials. For example, for a discussion method to succeed there must be an ingredient to generate discussion such as a poster, a video clip, a text story, materials that lacked in the schools. This was in agreement with the learners' data about what methods teachers used most in teaching HIV and AIDS.

The study also revealed that there was still a proportion of teachers who were restrained by taboos to discuss HIV and AIDS sexual related issues with learners. Most of those that were restrained by taboos were women. Although questionnaires revealed that most teachers were at ease to teach HIV and AIDS prevention to learners, interviews revealed that there were still teachers that were shy to discuss HIV and AIDS issues with learners.

All the interactive methods were ticked by learners as effective. The study revealed that though some learners had cultural challenges, the majority (see table 5) were not shy to discuss issues pertaining to HIV and AIDS contrarily to teachers assertions that learners' shyness prohibited effective implementation of the interactive methodologies.

Further, the study discovered that effective implementation of the interactive methodologies in teaching the hearing impaired learners required teaching materials of various kinds, improved teaching techniques, approaches and strategies which could be acquired through training, developed sign language, access to improved technology that provides signed HIV and AIDS messages on electronic media, computers and cartoons, review seminars for books approved by CDC for teachers to come up with new signs for new words and through having all teachers for the hearing impaired trained in sign language.

6.1 THE ROLE OF EDUCATION IN HIV AND AIDS PREVENTION

It has been observed that one of the most effective tools of overcoming this scourge is by investing in education. CHANGES/MoE (2007:24), says that "the experience in a number of countries has taught that HIV infection can be prevented through investing in information and life skills development for young people". Education is therefore a vehicle through which HIV and AIDS information is better disseminated to the population in order that the population protects itself from infection. The first Republican President of Zambia quoted by Kelly, (2008) describes education as a social vaccine in the absence of a scientific vaccine. He said, "given the right educational opportunities, support and values, the young people of this world need never become infected with HIV. Through the work of schools, teachers and education systems, they can learn to live responsible lives and to protect themselves against infection." The former Zambian President Kenneth Kaunda expressed the value of teachers and education in imparting values and dissemination of HIV information in order to make the young generation safe from the scourge (Kelly 2008). With education across all people with varying needs, the deaf would benefit because they would be able to protect themselves from the scourge.

The role of teachers in information dissemination cannot be overemphasized. In a survey by the MoE in 2003 to determine how pupils in schools obtained HIV/AIDS information, it was discovered that "from the responses obtained on HIV/AIDS, 70.3 % in 2003 (66% in 2001) of

the pupils indicated that they got their information from the teacher and 59% (2001: 52%) of the pupils said they learnt about HIV/AIDS through radio,” (MoE 2003:78). This supports the need to use teachers to effectively disseminate information on HIV/AIDS. Statistics show some steady reduction in HIV infection prevalence rates, which can be attributed to education. The ZDHS report of 2001-2002 quoted by Chisumpa (2004/2005), the Council Statistical report of 2004 and MoH/ NAC (2010) Biennial Report submitted to the United Nations General Assembly in show reduction in HIV/AIDS prevalence rates in all the nine provinces between 2001/2002 , 2004 and 2010 with the highest (Lusaka) reducing from 22% in 2001/2002 to 20.7% in 2004 and 20.8 in 2010 and the lowest (Northern) reducing from 8.3% in 2001/2002 to 8.0% in 2004 and 6.8% in 2010. According to MoH/NAC (2010), other provinces have seen HIV and AIDS prevalence rates dwindle to 17.5% for Central, 17% on the Copperbelt, 10.3% in Eastern, 10.3% in Luapula, 6.9% North Western, 14.5% Southern and 15.2% Western Provinces, bringing a national prevalence rate of 14.3% as compared to 16% in 2001/2002. Siamwiza (1999) quoted by the U.S Agency for International Development Bureau for Africa (2002) observes that schools help to manage shape social norms, values, and behaviour among a large proportion of young people especially at the early primary level. The role education plays in dissemination of information cannot be underestimated. The figures above show change due to the amount of education invested in HIV and AIDS through several instruments such as televisions, radios, newspapers, magazines, journals, open forums, seminars, classroom teaching and so many other instruments.

In this respect, the following recommendations will help, policy makers, curriculum designers, schools and teachers disseminate information about HIV and AIDS to learners with hearing impairments.

6.1.1 Recommendations

- There should be review workshops for teachers to update themselves on new vocabulary in sign language. This is because language is dynamic. Sign language must equally be changing and developing.
- The MoE should train more specialist teachers to cater for special schools including the hearing impaired.

- The MoE should therefore have a policy to employ assistive technology in the education for learners with hearing impairments and other categories. Kirk and others (2009:352) who report that, “computer technology has advanced to such an extent that special word processing systems can be used to translate written English into graphic finger spelling signed and written English. The computer enables the student with severe hearing losses to practice both signed and written English.” We are living in a computer age now where learning for every category of learners should be easier with computers..
- Teacher training in new programmes such as the Interactive methodologies should cater for all teachers in all special schools and units. This will help overcome the problem where some teachers especially in units are left out of training in new programmes such as the Interactive Methodologies.
- During material distribution, units and special schools should be planned for independently so that they receive their own consignments. This would ensure even distribution of materials to special schools and in particular the hearing impaired schools.
- The MoE should spearhead the introduction of sign language in particular as part of the curriculum in all colleges of education and universities training teachers. This will overcome the problem of posting teachers without sign language skills to schools and units for the hearing impaired learners.
- HIV and AIDS prevention programmes in schools should be well funded so that all interactive methodologies are well executed by teachers.
- The Government of the Republic of Zambia should consider cochlea implantations as a solution to improving the hearing abilities for learners with hearing impairments.
- Non-governmental organizations and the general community should support the fight against HIV and AIDS amongst the hearing impaired through information dissemination.

REFERENCES

- Andrews, J and Jordan, D.(1998), *The Tract and the Wise Stones: 2 Mexican American Folktales retold in American Sign Language, English and Spanish*. A CD-ROM :Larma University, Beaumont,TX 77710 at http://www2.wlv.ac.uk/teachingdeafstudents/science_engeering
- Bless, C. and P. Achola, (1988), *Fundamentals of Social Research Methods, An African Perspective*. Government Printers: Lusaka.
- Bliss Family Magazine*, (September/October 2008), (Article title) Activities of the Mother of Mercy Hospice, ACM and Associates: Lusaka.
- Bishop, G. (1985), *Curriculum Development: A Textbook for Students*, Macmillan Publishers: London.
- Bornstein, H. (n.d), *The Signed English Starter: A beginning book*, Signed English.
- CDC, (1996), *Activities for Daily Living for Hearing Impaired Children*, Teacher's Notes (Grades 1- 9). Zambia Educational Publishing House, Lusaka.
- CHANGES 2, (2007), *Sprint, School Program of In-service for the Term, A Teacher's Guide for School Professional Development*. New Horizon Printing Press: Lusaka.
- Child, D. (2000), *Psychology and the Teacher*, Rinehart: New York.
- Chisumpa, V.H. (2006), HIV/AIDS: A Challenge to Zambia's Development, *Zango*, Journal of Contemporary Issues, UNZA Press, Vol 25 number 15, p2.
- Chiyayinga .B.M (2008), *The Effectiveness of the communication strategies of a rural development project: A case study of the North Western Bee Products in Kabompo*, MCD Dissertation, UNZA, Lusaka.

Denzin N.K and Lincoln , Y.S. (2008), *The Landscape of Qualitative Research 3rd ed.* SAGE Publishers, London.

Donalds, D. et al; (1997), *Educational Psychology in the Social Context.* London: Oxford University Press.

Du plesis, et al (2002), *In My Classroom, A Guide to Reflective Practice.* USAID, Bureau for Africa/Office of Sustainable Development/ Education Development, American institute for Research, USA.

Dyk, V.A (2001), *HIV/AIDS Care and Counseling, A Multidisciplinary Approach.* Pearson Education: South Africa.

Eastham,D.(n.d), *The Mathematics of HIV/AIDS.* A Teacher's Guide. VSO for MOE

Integrated Regional Information Network, (2008),*Burundi. HIV Policy ignores the Disabled,UN.*
<http://www.theinterpretersfriend.com/ndj/dcoew/Burundi.html>.

Karen (2006), *U.S GOV Website. Kenya: Teaching HIV prevention through Sign Language*
<http://www.perfar.gov/press/84656.htm>

Keeves, J.P. (1997), *Educational Research, Methodology and Measurement: an international handbook 2nd ed.* Cambridge University Press, U.K

Kelly, M.J. (2008), *Education: for an African without AIDS.* Paulines Publications Africa: Nairobi, Kenya.

Kelly,M.J. (2000), *Planning for Education in the Context of HIV/AIDS.* UNESCO: Paris.

Kirk, S. et al (2009), *Educating Exceptional Children.* 12th Ed, Houghton Mifflin Harcourt Publishing Company, U.S.A

Kombo, D.K. and Tromp D.L.A. (2006), *Proposal and Thesis Writing, An Introduction.* Paulines Publication Africa: Nairobi Kenya

- Kvale, S. and S. Brinkmann (2009), *Interviews: Learning the craft of qualitative research interviewing*. SAGE, U.K.
- Macwang'I, M. and Phiri, B. (2007), *Annotated review of studies on HIV/AIDS, STIs and TB 2001-2007, Zambia*. Lusaka: National AIDS Council.
- Malambo, R.M. (2000), *Teach them while they are young, they will live to remember, current issues in comparative education* Volume 3, Number 1
December 1, 2000, *UNAIDS Documents*. [On-line]. Available:
<http://www.medguide.org.zm/aids/unindex.htm> (accessed on
November 2008).
- Ministry of Finance and National Planning (FNNDP2006). *Fifth National Development Plan 2006-2010, Summary, Broad Based Wealth and Job Creation through Citizenry Participation and Technological Advancement*. MOFNP: Lusaka.
- MoE, (1996), *Educating Our Future*, National Policy on Education. Zambia Educational Publishing House: Zambia.
- MoE, (2001), *Teacher's Curriculum Manual*. CDC: Lusaka.
- MoE, (2003), *Interactive Methodologies Manual for HIV/AIDS Prevention in Zambian Schools*. GRZ, Lusaka.
- MoE, (2003), *Learning Achievement at the Basic School Level*. Zambia's national assessment Report -, by Examinations Council of Zambia on behalf of Ministry of Education.
- MoE, (2004), *Zambia Case Study*. Paper prepared for the Colloquium 'Teaching in a World with AIDS': Harare, November 2004.
- MoE, (2005), *Educational Statistical Bulletin*. Directorate of Planning and Information: Lusaka.
- MoE, (2005), *HIV/AIDS Policy Implementation Strategy for Colleges of Education in Zambia*. Directorate of Teacher Education and Specialized Services: Lusaka.

- MoE, (2006), *Zambia Teacher Education Syllabi (Revised Version)*. Curriculum Development Center, Lusaka.
- MoE, (2007), *Educational Statistical Bulletin*. Directorate of Planning and Information, Lusaka.
- MoE, (2008), *Teaching in the Window of Hope, HIV/AIDS Education for Zambian Teachers, Tutor's Guide*. Community Health and Nutrition, Gender and Education Support (CHANGES2) Program: Lusaka.
- MoH/NAC, (2010), *Zambia Country Report: Monitoring the declaration of Commitment on HIV and AIDS and the Universal Access, Biennial Report* submitted to the United Nations General Assembly special session on aids declaration of commitment, 31st March 2010.
- Mulimu Kufekisa Akapelwa, (2007), *An Easy Look at Zambia's Fifth National Development Plan 2006- 2010*, Civil Society for Poverty Reduction (CSPR) ;
[http://www.cspr.org.zm/reports\\$updates/SIMPLIFIEDVERSIONFNDP](http://www.cspr.org.zm/reports$updates/SIMPLIFIEDVERSIONFNDP)
 (Accessed on 2 February 2009).
- Musonda, L.W. (ed.), (2001), *Learning Achievement at the Middle Basic Level*. Report on Zambia National Assessment Project-2001, ECZ for BESSIP, Lusaka.
- Papert, S. (1991), Situating Constructionism, in Harel & Papert (eds.) *Constructionism*, Ablex Publishing: Norwood.
- Pollar, G. (1993), *Making Accessible to the Deaf CD-ROM reading software*. Austin, TX: Texas School for the Deaf at http://www2.wlv.ac.uk/teachingdeafstudents/science_engeering
- Riekehof, L.L.(n.d), *The Joy of Signing* 2nd ed.
- Shuttleworth,M.(2008) at http://www.experiment-resources.com/qualitative-research_design.html
 accessed on 17th October 2009.
- Siatontola, S. P. (2004), *The Role of Teachers in HIV/AIDS Education in Southern Zambia*. MA.ED Thesis, University of Dublin.

Sleek, S. (1998), *HIV/AIDS Education efforts have Missed Deaf Community*, Vol. 29 Number 10 Oct. 1998. <http://www.apa.org/monitor/oct98/hiv.html> (accessed on 29/01/2009).

The American Social Health Association, (2001), *The HIV/AIDS Program: Caring for the Underserved: The Deaf and Hard of Hearing and HIV/AIDS in the United States*. <http://www.hab.hrsa.gov/>.

Times of Zambia, (2005), *Ministry, Disabled's Association Sadden Chief*. <http://www.zambiatourism.com/visitzambia2005/>.

UNAIDS, (2009), *Uniting the world against AIDS, Aids Epidemic Update 2009* at http://data.unaids.org/pub/Report/2009/JC1700_Epi_Update_2009_en.pdf accessed on 8th April 2010.

U .S. Health Resources and Services Administration, (2001), *The Body. HIV/AIDS in the deaf and Hard of Hearing*. <http://www.thebody.com/content/whatis/art41116.html> (accessed on 29th 01/2009).

U.S. Agency for International Development Bureau for Africa, (2002), *Tips for Development Life for Developing Life Skills Curricula for HIV Prevention Among African Youth, A Thesis of Emerging Lessons, SD publication Series*. Washington D C. <http://www.ibe.unesco.org/uploads/media/Tool4Dec2006-FINAL> (accessed 29/01/2009).

Wilson, B.G. (1996,ed), *Constructivist Learning Environments: Case studies in instructional design*. Educational Technology Publication, Inc, Englewood Cliffs, New Jersey 07632, U.S.A

Zambia Central Statistical Office Preliminary Report, (2007). *Demographic and Health Survey 2007*. Central Statistical Office: Lusaka, Zambia.

ZNAD, (2001), *Sign Language Dictionary, A Basic Dictionary of Gestural/Visual Communication System of the Zambian Deaf Community*. Venus Stationary Limited, Lusaka, Zambia.

APPENDICES

APPENDICE 1

QUESTIONNAIRE FOR TEACHERS

Dear Colleague,

I am a Postgraduate student from the University of Zambia. I am trying to find out if interactive methodologies are used in teaching HIV and AIDS prevention to learners with hearing impairments. I am also interested to learn from you about the effectiveness of these methods and if there are challenges you face in implementing them. The information you will provide will be treated with the highest confidentiality and will not be used to injure you or your school in any way. I will therefore be very grateful if you gave me your honest answers to the following questions.

Age:.....**Sex:**..... **Highest Qualification:**.....
Teaching Experience:.....**Grade Being Taught:**.....

1. Do you teach HIV/AIDS prevention using interactive methodologies (role play, stories, games, discussions, debates, out-doors visits and video presentations) in your class?

Yes /No
2. If you teach HIV/AIDS prevention using the methods above, which ones do you find effective?

3. What challenges do you face when teaching HIV/AIDS to learners with hearing impairments using each of the methods you have mentioned in question (2)

4. What challenges make you not to use the methods you have not listed in question (2)?

5. Are you at ease to teach HIV and AIDS? **Yes/ No**

6. If you don't feel at ease, why?

7. What teaching strategies and techniques should be used to teach HIV/AIDS prevention effectively to learners with hearing impairments? (list them)

8. Does sign language restrict you in any way in teaching HIV and AIDS using interactive methodologies? **Yes/ No**

9. If yes to question (9), in which ways does sign language restrict the use of the methods? (list them)

Thank you very much for answering the questions

APPENDICE 2

QUESTIONNAIRE FOR LEARNERS

Dear learner,

I am a Postgraduate student from the University of Zambia. I am trying to find out if you learn about HIV and AIDS at this school. I am also finding out what methods are used to learn about HIV and AIDS. The information you will provide will be treated with the highest confidentiality and will not be used to injure you or your school in any way. I will be very grateful if you gave me your honest answers to the following questions.

Age: _____ **Grade:** _____ **School:** _____

Date: _____

- 1. Do you learn about HIV/AIDS in this school? **Yes /No**
- 2. Do you discuss HIV/AIDS in class? **Yes /No**
- 3. Do you feel shy to discuss HIV/AIDS issues in class? **Yes /No**
- 4. If you feel shy, why

- 5. Do your teachers teach HIV/AIDS in class? **Yes / No**

6. With our teacher, we learn HIV/AIDS through (**tick** the ways used only)

- (a) Videos
- (b) Drama
- (c) Debates
- (d) Discussion
- (e) Out-door visits
- (f) Stories
- (g) Games
- (h) Songs

Write any other ways _____

7. Which of the methods in (question 6) do you like using to learn about HIV/AIDS most?

(Write them) _____

8. Why do you like the method you have chosen in learning about HIV/AIDS in class?

9. What difficulties do you face when discussing matters to do with HIV/AIDS with your teachers and other learners in class?

Thanks very much for answering the questions.

APPENDICE 3

INTERVIEW GUIDE FOR TEACHERS

1. What barriers to communication are there amongst the hearing impaired learners when they are learning HIV and AIDS using the interactive methodologies?
2. What barriers if any do you the learners' experience?
3. Does sign language restrict you or your learners in any way when discussing HIV and AIDS?
If yes, how?
4. Are there some words for HIV and AIDS prevention that are difficult to sign? What words?
5. Are there some words that misinterpreted or give different meanings when signed? What words and what different meanings do they give?
6. Are you at ease teaching HIV and AIDS prevention to learners with hearing impairments?

APPENDICE 4

INTERVIEW GUIDE FOR HEAD TEACHERS

1. Does your school teach about HIV and AIDS prevention? If the school does, how is it done?
2. Does the school have the Interactive Methodologies Manual for teaching HIV/AIDS prevention in Zambian Schools? If yes, how has the manual helped your teachers to teach about HIV/ AIDS prevention? If not, what material are you using to teach HIV/AIDS to the learners?
3. Do your teachers teach HIV/AIDS prevention in class? If they do, what challenges have they reported about teaching HIV/AIDS prevention to learners with hearing impairments?
4. Are your teachers trained in HIV/AIDS methodologies or any other HIV/AIDS related programmes? What programmes and how have such programmes helped your teachers in teaching HIV/AIDS prevention?
5. How does the administration support HIV/AIDS teaching and programmes in the school?

APPENDICE 5: CHECKLISTS

HIV/AIDS FRIENDLY SCHOOL CHECKLIST

S/N	FEATURES ON HIV AND AIDS AVAILABLE	tick YES	tick NO	tick RARE
1	THE SCHOOL ENVIRONMENT			
	<ul style="list-style-type: none"> • Posters/bill board with HIV/AIDS • HIV/AIDS writings on walls 			
	<ul style="list-style-type: none"> • HIV/AIDS messages in staffrooms and offices 			
	<ul style="list-style-type: none"> • HIV/AIDS timetabled 			
	<ul style="list-style-type: none"> • HIV/AIDS clubs schedules 			
2	THE CLASSROOM ENVIRONMENT			
	<ul style="list-style-type: none"> • Posters on HIV/AIDS on walls • Pupils work HIV/AIDS hanged in classes 			
	<ul style="list-style-type: none"> • Teaching and learning aids on HIV/AIDS hanged in classes 			
	<ul style="list-style-type: none"> • HIV/AIDS resource corner 			
3	LEARNING RESOURCES			
	<ul style="list-style-type: none"> • Learners text books available for teaching HIV/AIDS 			
	<ul style="list-style-type: none"> • Teachers text books on HIV/AIDS 			
	<ul style="list-style-type: none"> • Videos for HIV/AIDS lessons 			
	<ul style="list-style-type: none"> • Video and audio tapes on HIV/AIDS 			
	<ul style="list-style-type: none"> • Ribbons 			
4	ANY OTHER (To be written down)			