ACCESS AND USE OF INFORMATION BY SCHOOL CHILDREN TO ALLEVIATE SOCIAL DEPRIVATIONS: A STUDY OF SELECTED SLUMS IN NAIROBI COUNTY, KENYA

BY

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DECLARATION

DECLARATION BY CANDIDATE

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DEDICATION

I dedicate this work to my husband, Dr. Cleophas Kyalo Ndiku, to daughters Esther Ndanu and Faith Mwende. I also sincerely dedicate this work also to my parents, brothers and sisters who urged me to go to school and finally to all school children who love reading.

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ABSTRACT

Although information is the key to knowledge, vulnerable communities have little or no access to vital information. Slum children are perhaps the most vulnerable section of the society who suffer human deprivations of all forms. Social and environmental deprivations of children have been shown to have a deleterious effect on their physical, intellectual and psychological development. Despite the United Nations Universal declaration on Human Rights (1948) which promotes access to information for all, there has been limited access to and use of information by children in Nairobi slum areas. The slum dwellers' access to and use of essential services is affected by poverty and infrastructure among others. The aim of this study is to investigate accessibility and use of information by school children in selected Nairobi slums and propose a model that will enhance accessibility and use of information to alleviate social deprivation. The specific objectives of the study are to: identify information needs of school children in the selected slums in Nairobi county; determine the types of library information services available and their accessibility to slum children; establish the role played by information service providers and other agencies in the provision of information to school children; examine the policy and legal frameworks in access and use of information by school children in slums; establish the role of Information Technology in promoting access and use of information by school children in slum areas and propose a model for enhancing accessibility and use of information by slum children in Nairobi county. This study utilized Project CATE (Children's Access to [and use of] Technology Evaluation) Model and Brenda Dervin's Sense Making Theory complemented by Piaget's Cognitive Development Theory. This study used a multi-case study research design and adopted Constructivist/Interpretative philosophical world view. A mixed paradigm methodology was adopted and the qualitative research was used as a dominant paradigm. The study employed purposive, stratified and simple random sampling strategies to determine the study population and the sample size, which was 586. The study employed various methods of data collection namely structured interviews, focus group discussions and questionnaires. The study findings revealed that pupils in upper classes in Nairobi slums did not seem to adequately access information services. In addition, most schools did not have school libraries. The study identified inadequacy of reading materials, computers, funding and space as the major challenges that were encountered in provision of library information services in the slums. The study further, established that there were no clear policies regarding provision of information to school children in slum areas. The study recommends: periodic conduct of user needs studies to determine information needs of school children in the slum areas; establishment of libraries and information services in slum; upgrading of existing libraries; staffing of school libraries with trained personnel and development of a policy to address information related issues for all schoolchildren. The study came up with a model that if adopted will go a long way in enhancing accessibility and use of library information services to school children and alleviate social deprivation among school children in the slums.

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ABBREVIATIONS AND ACRONYMS

AIDS   -   Acquired Immune Deficiency Syndrome

CATE MODEL-   Children's Access to and Use of Technology Evaluation

BOG   -   Board of Governors

CBO   -   Central business organizations

EFA   -Education for All

DC   -   District Commissioner

GOK   -   Government of Kenya

KESSP   - Kenya Education Sector Support Program

HIV-AIDS   -   Human Immunodeficiency Virus Infection /

IFLA   -   International Federation of Library Associations and Institutions

LIS   -   Library and Information Science

LISR   -   Library and Information Science Research

 MDG s   -   Millennium Development Goals

MYSA   -   Mathare Youths Sports Association

NIP   -   National Information Policy

OVC   -   Orphans and Vulnerable Children

PTA   -   Parents Teachers Association

SIDAREC   -   Slums Information Development & Resource

UNDP   -   United Nations Development Programme

UNESCO   –   United Nations Educational, Social and Cultural Organization

UNICEF   -   United Nations Children's Fund

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

This research investigates accessibility and use of information by school children in selected Nairobi slums in Kenya to alleviate social deprivations. All societies ancient, medieval or modern have functioned and prospered on the basis of information and knowledge in their various stages of development. Information is a key component in all spheres of human life. It facilitates the proper functioning of a democratic society and it is crucial in a productive, social, economic and effective government (UNDP, 2003 a).

Kyrke-Smith (2007) states that in a world of unprecedented global competition and power, access to information and effective communication are integral to the actions of governments, groups and individuals. The problem of developing countries of the world is therefore not merely economic poverty; it is also information poverty, which must be a great concern to human kind. Information is a basic need, and must be a priority (Islam & Islam, 2010).

The information revolution, the exponential growth and spread of knowledge have given birth to a new era of knowledge and information which has a direct effect on economic, social, cultural and political activities all over the world, including Africa (Ogunsola, 2005). In many cities, the urban poor have to deal with many forms of social exclusion

(Sinha, 1977). Language, education and infrastructure barriers continue to ensure that the poor in cities such as Nairobi remain untouched by the information revolution.

Since connectivity and informational capacity will determine wealth and power in our time, the urban poor risk being even more marginalized and impoverished. Their poverty index will not just be measured by their income or assets but also by their ability to generate process, receive and disseminate information, or their level of information poverty (Warah, 2004). If access to information and proper communication can promote development, then it is important to know how the poor obtain information and what channels of communication are available to them (UN-Habitat, 2003 a).

Information has been viewed as the currency of the world. This implies that information is a commodity that can be bought, sold or exchanged for other things. It also means that those who have access to information or possess it have an advantage over those who do not have it. The argument is that information is seen as an enabler which assists one to make informed choices (Carnaby & Rao, 2003). Libraries and information services are vibrant institutions that connect people with global information resources and the ideas and creative works they seek. Libraries and information services make available the richness of human expression and cultural diversity in all media (IFLA/FAIFE, 2002).

Issak (2000) asserts that today's society is marked by acceleration in the use of information technology and the proliferation of information, thus libraries and information service providers have to reassess their role and redefine tasks in order to ensure that all citizens have access to information. Information organization, its availability and, most importantly, its accessibility and use seem to be powerful concerns

that any library information service needs to take into consideration. In developed countries it is becoming clear that a considerable part of a Library's collection is becoming obsolete, owing to the developments that are occurring with networked information resources. In the less developed and developing countries, the same situation is evident, although for different reasons (Eyre, 2004).

Due to the existence of basic problems related to high levels of poverty, public libraries in Africa rank among the lowest priorities in those countries. However, the publishing industry in Africa is fast growing, after a profound stagnation, although it is not yet fulfilling information needs (Issak, 2000). Children are supposed to attain adequate and relevant information to enable them match up their interests and abilities with their aspirations (Kirui, 2005). Information is therefore, the key to success.

The primary purpose of education is the integral development of every being and besides its value, the achievement of this purpose is a decisive factor in the true economic and social development of people (UNESCO, 2004). Libraries and other information services are thought of as one of the means by which education goals can be reached (IFLA/UNESCO, 1994). The library information service proposition has discovered a new level of social consciousness and is widening the sphere of its services to special groups called the 'disadvantaged' groups which lack the basic resource or conditions such as standard housing, medical, educational facilities and civil rights believed to be necessary for an equal position in society (Kumar, 1996).

Education is provided for in the United Nations Declaration of Human Rights Article 26 as a basic human right (UNHCHR, 2003). A right to education implies a right to access

and use of information. Quality primary education provides a base for all other forms of advanced education and sustainable development. Libraries and other related information services are therefore crucial in educational development because the information they hold is an essential tool which fosters learning processes (Glendon, 2002).

The government of Kenya recognizes that education is the basic tool for human resource development, improves the quality of life and cultivates nationalistic values. Kenya is committed to the EFA (Education for All) goals of the provision of quality education for all school going age population by 2015 (Onsomu, 2004). EFA is a global commitment to provide quality basic education for all children, youth and adults. This commitment requires all participants to universalize primary education and massively reduce illiteracy by the year 2015 (UNESCO, 2011). The government, parents, communities, NGOs and private entrepreneurs provide, in partnership and through the cost sharing policy, primary and secondary education in Kenya (Government of Kenya, 2003).

The government of Kenya further recognizes the strategic importance of raising the overall education level of Kenya ns within the context of poverty reduction and economic growth. Education is not only a welfare indicator; it is also a key determinant of earnings and therefore, an important exit route from poverty. Education is identified as one of the four pillars of the government's overall economic recovery strategy (Government of Kenya, 2003). The Vision 2030 is the country's new development blue print covering the period 2008 to 2030. In this strategic plan, Kenya recognizes that the education and training of all Kenyans is fundamental for it equips citizens with understanding and knowledge that enables them to make informed choices about their lives and those of the

entire Kenyan society. The visions aim is to transform Kenya into an industrialized country and improve the quality of life for all Kenyans and it also recognizes that though the education sector has faced serious challenges over the years (particularly those relating to access, equity, quality and relevance), significant achievements have been made (Government of Kenya, 2007).

In recognition of the Millennium Development Goals, and to underscore the value of basic education, the Government of Kenya re-introduced free primary education in the year 2003 as a commitment to achieving Free and Universal Primary Education while at the same time aiming at promoting literacy in Kenya (Ministry of Education, 2012). The government has put in place a policy framework and appropriate legislation that ensures provision of education to all children regardless of their circumstances. Key among them is the children's Act of 2001 that provides for education as a right to all children (Ministry of Education, 2004).

According to Kenya government policy on education, there is no official fee charged in primary schools registered with the government and every child is entitled to receive free textbooks (Ministry of Education, 2004). However, it is difficult to obtain textbooks free of charge. The rights to universal, equitable, and free access to education and information, the right to admission to any educational institution regardless of religion, race, caste, sex, or place of birth are enshrined in Kenya's new constitution which was promulgated on 27th August 2010 (Government of Kenya, 2010a). Quality education ensures the sustainable acquisition of knowledge, be it intellectual or practical capable of developing the individual and contributes to national and global development. The

process of providing quality education begins with proper planning for financial, human and physical resources and curriculum (International Bureau of Education, 2004). The provision of an adequate school library program ought to be part of the resources necessary for provision of quality education, for there exists a positive correlation between the presence of adequate library media centers staffed with library media specialists and higher academic achievement (Lance, Rodney & Hamilton-Pennel, 2005).

A sound education is facilitated by a good library information services. Libraries have the power to produce material happiness, mental joy, and spiritual delight thus, school libraries ought to be integral to the education process if quality education is to be achieved (Lonsdale, 2003; Magara & Nyumba , 2004). Libraries should be seen as social institutions charged with the duty of providing the means for practical self-education for all (Dike, 1998).

The functions of a school library are to :- acquire and display books and non-book materials for reading; make the library an agency for curricular enrichment, pupil exploration, and dissemination of information; facilitate the instructional program for teachers; instill love for books and libraries in children as their companions in leisure; stimulate reading habit in pupils; teach the art of skillful use of books, non-book materials and sophisticated libraries; cooperate with other libraries, agencies and community leaders in planning, and developing an overall library program for every community or area; and where public libraries are not in existence, function as a distance learning/education study centre (IFLA/UNESCO, 2001 & Clyde, 1996).

School libraries are meant to serve and meet the needs of pupils, teachers and communities, provide library materials and services appropriate to users, stimulate and guide pupils in all aspects of reading; to help pupils develop helpful interests and acquire desirable social attitudes and help pupils become skillful users of libraries. The International Federation of Library Associations and Institutions (IFLA) endorses the importance of school libraries and has formulated a School Library Manifesto, ratified by UNESCO stating that, the school library provides information and ideas that are fundamental to functioning successfully in today's information and knowledge based society. The School library equips pupils with lifelong learning skills and develops their imagination, enabling them to live as responsible citizens (IFLA/UNESCO, 2000).

Education in this age of information, cannot be classroom-centred but has to be child - centred, which in turn requires a resource and library-centred approach in order to develop a culture of reading. Such an approach can only be achieved if libraries are suitably equipped, staffed, and monitored effectively. There is need for a purposeful library policy, which will be an investment in the country's future progress (Magara & Nyumba, 2004).

According to IFLA/UNESCO (2000 &2001) manifesto, library and information services are key actors in providing unhindered access to essential resources for economic and cultural advancement. In doing so, they contribute effectively to the development and maintenance of intellectual freedom, safeguarding democratic values and universal civil rights. They encourage social inclusion, by striving to serve all those in their user communities regardless of age, gender, economic or employment status, literacy or

technical skills, cultural or ethnic origin, religious or political beliefs, sexual orientation, and physical or mental ability. The library experience may be the key to understanding one's place in the world.

Library information services are needed today more than ever whereby people and communities desperately need to consider alternative points of view and information for decision making. People see libraries as places of wide-eyed discovery, a tool for life-long learning, support for political and social inquiry, bank of ideas and inspiration, source of answers to factual questions, place to acquire new skills, community centre, local studies resource and a place of sheer pleasure and enjoyment. The publicly-funded library is one of the most democratic institutions, serving the needs of the community it serves. As a public space, it helps define a sense of that community, providing a safe meeting point (IFLA/UNESCO, 1994).

Most countries have a large network of public libraries. In some countries, especially in Africa, the national library acts as the coordinator of the network of public libraries. Public libraries range in size from large central libraries to small village centre and mobile libraries. Educational institutions, such as universities, colleges and schools all have libraries, serving the educational objectives of their parent bodies. In some countries, it is common for them to be open to the general public (IFLA /UNESCO, 2001).

The slum dwellers' access to and use of essential services is affected by their low financial status and poor infrastructure among others. This seems to create different levels of access and puts them in situation in which they are disadvantaged from the

outset. The slum dwellers do have fewer materials and financial resources and children growing up in these environments tend to do less well in education and other aspects of life. Overcoming obstacles of lack of material is a challenge for families living in poverty (Swartz, De la Rey, & Duncan, 2004 & Sinha, 1977). Not only does reduced financial resources impact on children's home environment (lack of electricity and lack of other basic resources) it also impacts on a children's cognitive development as low income families tend to have access to fewer information materials/services and media resources (Guo & mullah, 2002).

The understanding of the psychological characteristics of the disadvantaged due to inequalities is as much of importance as analyzing and understanding the social system that brought in such conditions of inequalities. For the proper development of children, an organized and effective atmosphere in the family and social world are the pre-requisites, the absence of which leads to a deprived climate. Deprivation is the overall condition where there is insufficient satisfaction of basic psychological and social needs. It is a condition in which particular external and internal factors merge to narrow a person's behavioural alternatives for achieving self-fulfillment (Bassouk & Donelan, 2003).

Durrani (1998) states that Kenyan library information services are set up to fulfill the needs of the dominant class in society and that other groups of people, particularly the poor and disadvantaged are denied access to the information they need in their lives. Library information services could be re-oriented to be accessible to ordinary, poorer

people. Librarians and information workers should be proactive in trying to meet information needs of all.

Libraries and information professionals must find ways to reach out to the corners of the cities and to the centres of deprivation. The Librarian's role may be seen as that of helping to open the book of life to children and young people while recognizing their different cultural backgrounds. The single most significant factor in serving the disadvantaged person may be the respect and understanding between the library user or potential user, the individual or community and the library personnel. It is imperative to know and appreciate the lifestyles, cultural beliefs, values, motivations, desires, interests and aspirations of various groups (Kumar, 1996).

1.2 Development of Slums: Global Context

Slums are often associated with Victorian Britain, particularly in industrial, northern English towns, lowland Scottish towns and Dublin City in Ireland. According to UN-Habitat (2003 a), since it first appeared in 1820s, the term slum has been used to identify with the poorest quality housing, mostly unsanitary conditions, places of crime, drug abuse and all manner of human deprivations. Mathenge (2011) asserts that a slum is a difficulty area that lacks basic services and infrastructure.

Experts at a UN-Habitat meeting in Geneva (2002) agreed that a slum is a contiguous run-down settlement where the inhabitants are characterized as having inadequate housing, high rates of poverty, and unemployment. UN Habitat (2003 b) asserts that a slum is a collection of households living in close proximity to one another in a number

of buildings such that the households share one or more deprivations of: access to improved water, access to improved sanitation facilities, sufficient living area, structural quality and durability of dwellings and security of tenure.

A slum is often not recognized and addressed by the public authorities as an integral part of the city. That is one of the reasons why little data on slum dwellers can be found. Due to the rising world population, the number of slum dwellers is rising. Slums are usually characterized by urban decay. They are commonly seen as "breeding grounds" for social problems such as crime, drug addiction, alcoholism, high rates of mental illness, and suicide. In many poor countries they exhibit high rates of disease due to unsanitary conditions, malnutrition, and lack of basic health care. One billion people worldwide live in slums and the figure will likely grow to 2 billion by 2030 (UN- Habitat, 2003 c).

Tibaijuka (2006) UN-Habitat's former Executive Director in her report during a forum in Vancouver provides concrete evidence that there are two cities within one city in the urban world population. One part of the urban population that has all the benefits of urban living, and the other part, the slums and squatter settlements, where the poor often live under worse conditions than their rural relatives. The slum dwellers are faced with extreme poverty, illiteracy, hunger, diseases and all manner of squalor. Slum children are perhaps the most vulnerable section of the society that suffers from human deprivations of all forms. Many children are forced to live and earn on the street due to their vulnerable and distressed situation.

Tibaijuka (2006) further notes that while cities account for an average of 60 percent of gross domestic product, a large number of people, particularly in Africa, still live in

informal settlements and slums because municipal governments fail to provide adequate housing and basic services at their level of income or subsidy. Children in the sums are often unable to find work, drop out of school at an early age and often result to committing crimes, taking drugs and becoming street children (Swartz, DelaRey & Duncan, 2004). Among the expectations of the slum dwellers is the hope of improved education opportunities for their children (Gathigah, 2009).

Studies have showed that there is a direct link between cognitive development of a child and his/her environment (Guo & mullah, 2000). Through various mechanisms, children from environments of poverty and other social deprivation are affected in their intellectual development. These mechanisms include physical environment, early cognitive development stimulation and parenting style.

While literature supports the fact that a child's home and family environment have a large influence on his/her performance, it also suggests that school can make a difference if resources and methodologies are managed effectively (Van der berg & Louw, 2006; UNESCO, 2005 b & UNICEF, 2004). To this end, all efforts of improving access and use of information should be made to provide a supportive learning environment and enhance provision of information to slum children.

The United Nations eight Millennium Development Goals (MDGs), approved at a United Nations Summit of 189 world leaders in September 2000, are aimed primarily at fighting extreme poverty, hunger, illiteracy and disease (UNDP, 2003a). The spirit of MDGs will only be achieved if poverty reduction is addressed at the "country level and sub-national level". Such restructuring can determine whether policies have pro-poor or anti-poor

connotations, for which trade liberalization could be a test case in point. The bottom line is that we need to dwell more on inequality, and that it is good for sustainable economic growth. The seventh United Nations MDG vows to improve the lives of at least 100 million slum dwellers by the year 2020. With one billion people living in slums, and thousands joining them every day, the world is indeed sitting on a social, economical and political time bomb that is ticking away quietly in many slum areas of the world (UNDP, 2003b).

In April 2005, the former Director of United Nations-Habitat Tibajuka (2006) stated that the global community was falling short of the Millennium Development Goals which targeted significant improvements for slum dwellers and an additional 50 million people had been added to the slums of the world in a period of two years.

1.3 Development of Slums in Kenya

Most of Kenya's urban centres were established in the last hundred years. These centres were established as seats of the British colonial Government which governed Kenya from1900 to 1963. These centre's had segregated residential layouts. There were white residential areas, where natives required a pass to visit. There were areas for the Asian population and other areas for the natives (Government of Kenya, 2005).

According to Karanja and Makau (1998) there existed a big disparity in housing. Housing in the different sectors of Nairobi city varied to reflect the racially inspired political hierarchy. The white areas consisted of bungalows set in spacious gardens, the houses in the Asian quarters retained typically Indian architecture, while the houses for

natives were designed to specifically accommodate a migrant workforce and little else but residential sectors were well planned with sufficient services provided. There was harmony between the size of the population, and the number of schools, hospitals, roads and other public amenities provided. Due to restrictions on native travel to the city, population expansion was tightly controlled.

Karanja and Makau (1998) further state that the segregation of populations formed the basis upon which a skewed system of distribution of land and other resources in Nairobi city was established. The set of land laws and urban planning standards the colonial Government bequeathed to newly independent Kenya were unable to reverse the inequitable colonial land distribution. These laws, policies and planning standards were completely unsuitable in addressing the rapid urbanization that followed independence.

With the advent of independence in 1963, the management of urban centre's shifted from the colonial administration to a national Government. The segregation of residential areas was tacitly perpetuated by the new administration. However, this time round it was based on class rather than race. The biggest impact of independence was felt in what were previously the areas designated for natives. Independence led to the lifting of restrictions on entry and travel to any part of the country. The result was accelerated rural-to-urban migration. The city was perceived to have plenty of employment opportunities and many sought to make a new life there. The rural urban migration has led to an increased demand for resources required to meet the consequent demand for infrastructure services (Olima, 2001).

Throughout the seventies populations in urban centre's in Kenya continued to grow rapidly, straining the ability of municipalities to provide sufficient housing and services. Insufficient planning further compounded the situation and as a result the already existing slums expanded and many new ones emerged (Karanja & Makau, 1998). The slums mostly occupied the poorest quality lands as no formal systems were put in place to provide affordable serviced land for the new entrants into cities. In many cases, the only recourse the poor had were reserves, swamps, steep slopes, refilled quarries and garbage dumps (UN Habitat, 2006).

Officially the Kenya Government never recognized slums. This is depicted by maps of urban centre's in Kenya which almost universally show slums as unoccupied land. By the turn of the century the Government of Kenya had adopted a more accommodative view of informal settlements (Karanja & Makau, 1998). There are several factors to which this change is attributed: the country's political environment and temperature demanded more accountability from Government in a general way, the campaigns of civil society and communities made it increasingly difficult to continue to ignore the slum issue as a major national challenge, international pressure that pushed Government to adopt pro-poor policies and the existence of a cadre of progressive professionals in Government, particularly within Nairobi City Council, who began to explore possibilities of addressing the growing slum challenge (Obudho & Aduwo, 1989 ; Kedogo, Sandholz & Hamhaber, 2010).

A more accommodative environment provided opportunities for communities to engage with the Government for change. However, the threat to these settlements has not

dissipated. As Government seeks to expand or improve infrastructure it is forced to look to the areas traditionally occupied by informal settlements: road, railway and other utility reserves that lay vacant and were occupied are now required for development (World Bank, 1998 & UN-Habitat, 2010).

Slums are characterized by inadequate land and substandard housing (illegal and inadequate structures), and also by serious lack of basic services, overcrowding, unhealthy living conditions and hazardous locations, and insecurity of tenure leading to irregular or informal settlements, poverty and social exclusion (UN-Habitat, 2004 ; Kedogo, Sandholz & Hamhaber, 2010).

1.3.1 Development of Slums in Nairobi

Kenya's capital city, Nairobi, is an international, regional, national and local hub for commerce, transport, regional cooperation and economic development. It connects together eastern, central and southern African countries (UN-Habitat, 2004).

Nairobi is the most populous city in East Africa, with an estimated urban population of 3,138,369 (Government of Kenya, 2010b). Slums in Nairobi are generally of two types, namely squatter settlements and those that arise out of illegal sub-divisions of either government or private land. A number of slums are located on land unsuitable for construction, especially of residential housing.

Informal settlements are widely located across the city. However, their location has largely been defined by their proximity to areas where their residents are able to get employment. For example, Kibera and Mukuru which are some of the largest slums have

access to the Industrial Area. Most slum dwellers walk to work in the morning to the Industrial Area and nearby sources of employment (Mitullah, 2003).

Slums accommodate the majority of the city population. They occupy one-eighth of the land space in Nairobi but host three-quarters of the city's population of four million people. Many factors combine to make the Nairobi slums the most violent and vulnerable neighborhoods in Nairobi. And as media reports indicate, post-election violence started in the Nairobi slums (Kibera) before it spread to other parts of the country (Sana & Okombo, 2012). They have high densities compared to both middle and high class residential areas. The growth of slums in Nairobi has resulted from a variety of factors, historical and contemporary in nature. The forces that have contributed to urban spatial segregation in Nairobi are many and varied. Some   are legal and economic whereas others are cultural (Olima, 2001).

During the colonial period, the people of Kenya witnessed a large-scale government sanctioned spatial segregation based on race and reinforced by planning laws as well as exclusionary zoning regulations. The segregation/division along racial lines divided the city into four distinct sectors; North and East defined as the Asian Sector (Parklands, Pangani and Eastleigh); East and South East defined the African Sector (Pumwani, Kariokor, Donholm); South East to South marked another small Asian enclave before it was bounded by the Game Park (Nairobi South, Nairobi West). Finally, the line North and West marked the European area (Togom, 2009).

Syagga, Mitullah and Gitau (2001) point out that the forces of rural-urban migration and income differentials between the rural and urban areas, as well as within urban areas have

contributed to the growth of slums in Nairobi. Other factors include unemployment and underemployment, and increased population densities in the rural areas that have forced especially the young to move to urban areas.

According to the United Nations Centre for Human Settlement (UN-Habitat, 2010), Nairobi's slums are overcrowded, with four to six people living in one room. The dwellings are very close to each other, services are basic, while morbidity and mortality rates are high. City authorities say more than 1.6 million live in the slums or informal settlements. Most slum dwellers live below the poverty line. The physical layout is relatively haphazard making it difficult to provide infrastructure. The majority of the inhabitants have low or very low incomes.

According to Mulama (2006) there are approximately 199 slums in Nairobi. They are densely populated and severely lacking in basic services. The data on slums is limited, with the exception of a few slum areas, which have been heavily researched, for example Kibera. The increased number of slum dwellers poses a threat to the environment (UN-Habitat, 2010).

Within the Nairobi slums, the lack of a functioning sanitation and drainage system is perhaps the greatest daily nightmare slum dwellers must cope with. It is from these kinds of slums that the euphemism of the "flying toilets" came into being. Slum dwellers have a habit of defecating into polythene bags and then throwing them into a nearby footpath, or stream. All of this and much more are as a result of the lack of the most basic services – services that most people take for granted. The residents of the Nairobi slums, each day, must endure the sight of filthy narrow alleys, and sludge and human waste from shallow

latrines flowing into nearby streams, a situation, as one can imagine, gets much worse during the rainy season. The lack of latrines and poor drainage leads to the swamping of entire neighbourhouds with dirty water during these rainy seasons. As a result, there are high incidences of diseases like typhoid, malaria and diarrhea (UN- Habitat, 2010). Key socio-economic challenges in the Nairobi Slums include land-based conflicts, pressure on housing, landlord-tenant conflicts, insecurity, low levels of civic awareness and poor state of service delivery (Sana & Okombo, 2012).

Out of the various Nairobi slums, this study targets the following slums:-Kibera, Mathare and Mukuru slums in Nairobi County.

1.3.1.1 Kibera slum

As an informal settlement, Kibera dates back to the 1920s' when the British colonial government decided to let a group of Nubian soldiers from Sudan settle on a wooded hillside outside Nairobi. The British colonialists then failed to repatriate the Nubians to their country or to compensate them with land title deeds to these acquired lands from the Kenyan people. Nubians built homes, and set up businesses while they were still squatters with no legal rights and called the place Kibera. The word Kibera is derived from Nubian word (Kibra) meaning Forest or Jungle. The settlement is divided into 9 villages, Lindi, Soweto (East and West), Makina, Kianda, Mashimoni, Gatuikira, Kisumu Ndogo, Laini Saba and Siranga (Togom, 2009).

Kibera is located 5 kilometers South East of Nairobi City Centre and it lies at an altitude of 1,670m above sea level, latitude 36 degrees, 50° east and longitude 1 degree, 17° south

about 140 km south of the equator (Karanja, et al, 2002). The growth of Kibera as an informal settlement is closely connected with Nairobi City's phenomenal growth. Life in the slum is a daily struggle with poverty, crime, and diseases. There are conflicting reports regarding the actual population in Kibera slum. For example, according to the Kenya Population and Housing Census reports (2009) Kibera's population was 170,070, contrary to previous estimates of one or two million people (Government of Kenya, 2010b). However no one disputes the fact that it is the largest slum in Kenya. The distortion of facts has been attributed to exaggeration by Western Non-Governmental Organizations (NGOs) in order to obtain funding from governments and charity organizations (Warah, 2010).

The living conditions in Kibera are representative of the state of urban poverty world-wide. High population densities, poor sanitation and water quality, low access to basic services like health care and education, and incomes often well below the poverty line characterize Kibera. Further, residents lack legal rights like security of tenure, leaving them without power to leverage structure owners to provide structure maintenance or basic services. The children in this slum have to grapple with a lot of challenges in the environment (Warah, 2010).

The living conditions within Kibera are different depending on the area. There are very poor areas and there are estate areas with up to four storey houses, but the majority are simple mud houses with a tin roof. Except for the few roads around the estate areas all the tracks between the houses are mud. Improvements are made by people's or Non-Governmental Organizations efforts (Government of Kenya, 2005).

Kibera is the only informal settlement in the country where there are more than 100 Non-Governmental Organizations operating in this small area but this has done very little to improve the lives of residents. Although there has been housing upgrading, majority of people still live in mud-corrugated structures with lack of basic facilities and medical care is a luxury. Governmental Organizations are active at the community level but they operate on an ad hoc basis, with little coordination among them, and with limited support from the government. Institutional planning and financial frameworks must be restructured at national and local levels if the council is to be empowered to respond to the challenge of slum upgrading in a holistic way (Anyangu-Amu, 2010).

Education is just a dream and the introduction of free primary education in 2003 has had little beneficial impact to the slum dwellers. In fact there are more informal schools (approximately 80 schools) than public schools. Kibera is served by just 4 vastly over crowded primary schools on its outskirts. This leaves the burden of education to private initiatives, which get no funding. Reports that the Government has run out of cash for free primary education is not news in Kibera. Since the launch of the initiative, only a small number of children go to school due to limited admissions. In reality even government schooling is not completely free. Parents may have to provide a uniform, text books, a desk and basic supplies. Finally many children are needed to work to help support the family, or simply to fetch water and care for younger siblings (Okoth, 2009).

The precarious physical, social and legal conditions of these settlements heavily affect residents' health, education and environment, in addition to severely constraining local economic development (UNCHS, 1999).

1.3.1.2 Mukuru slum

Mukuru slum is situated 10km outside Nairobi Central Business District, Kenya, and the conditions there are inhuman. The slum was settled in 1958 when farm labourers working on colonial sisal farms settled there. This slum was founded by Njenga Kariuki who came to Nairobi from Nakuru in search of a job but since he had no skill, Njenga landed at a quarry situated about 20 kilometers East of Nairobi. He built a temporary structure adjacent to the quarry which served as a home and a store from where workers would buy consumer goods. Unknown to him Njenga had founded what would become one of the largest slums in Nairobi and immortalize his name for generations to come (Ithula, 2010).

Mukuru comprises 20 villages with a population of over 600,000 as previously reported. However the 2009 population census results states that the population is 130,402 people hence it is slowly edging towards the largest slum in Kenya status (Government of Kenya, 2010b).

Families live in corrugated iron shacks measuring 10' X 10'. Large families are crammed into this tiny space to survive. The people are landless. Some were pushed from their rural homes by tribal and land clashes. Others are refugees from neighbouring countries such as Sudan, Somalia etc and many know no other life. Life for slum children remains nasty, brutish and short. Children look to other means of survival such as prostitution, drug peddling, begging and criminal activities (Ithula, 2010).

The high level of poverty puts basic education beyond the reach of many families. This has impacted negatively on education. It has contributed to high levels of illiteracy and

drop out levels. Health is also a big problem. Most common diseases include malaria, typhoid, dysentery and tuberculosis. This is related to the high cost of food in relation to low family income. Medical facilities are beyond the reach of most residents, the scourge AIDS is the biggest killer (UNICEF, 2012). The lack of teaching materials, desks, adequate sanitation facilities and playing areas fatally undermines the children's psychological, emotional and physical growth.

Dropouts amount to 44% of the school-going children in the slums. Though there is provision of free primary education in Kenya, many parents are unable to pay the few hundred shillings (€4 approx) per term towards management (UNESCO, 2005 a). This makes it particularly difficult for school management to run the schools because they have little or no financial resources. Children learn in battered makeshift structures made of rough wooden pieces of whatever is available. Often children suffer from health problems that are attributed to the condition of the classrooms. The makeshift structures are congested with some classrooms holding over 50 children. Whenever it rains, learning materials get wet and are blown away by the wind (Ithula, 2010).

Children are engaged in petty productive work to supplement basic family needs. Child labour in Mukuru includes hawking, petty trade, transportation using carts and household work. They also carry items for traders and other commuters. Dropping out of school is perhaps the major consequence of child labour. The children are so fatigued that they do not go to school. Those who go are unlikely to learn (UNICEF, 2012).

1.3.1.3 Mathare Slum

Mathare is in this big slum league, with previous reports giving different exaggerated figures that range from 300,000 to 900,000 people but the 2009 population census results shows the population as 87,097 (Government of Kenya, 2010b).

Mathare Valley is situated five kilometers northeast of Nairobi's city centre. It is one of the largest slums in East Africa and one of the oldest in Nairobi. Before Kenya's independence, Asians owned the area now known as Mathare, a village dating back to the year 1921. When the Emergency was declared in 1952, Mathare Valley was believed to harbour a Mau Mau core, and the settlement's 150 huts were bulldozed two years later. Most occupants were taken to detention camps, and the Government felt its suspicions were confirmed when numerous bodies were unearthed at the bulldozing, purportedly victims of political murders. However, Mau Mau succeeded in returning to Mathare to hold night-time meetings. Mathare Valley is enclosed by Pangani on the West. On the north, it is enclosed by the police depot, Mathare primary school, and Mathare Mental Hospital. Juja Road borders Mathare on the South, separating it from Eastleigh, an estate dominated by Somali immigrants and entrepreneurs. To the east, it borders Huruma estate. Mathare has several villages and wards (Ithula, 2010 & Unhabitat, 2003a).

The slum is only a few kilometers northwest of the fancy hotels and shops in the centre of Kenya's capital, Nairobi. The Mathare River runs through Nairobi and passes through the richest residential area, Muthaiga, where many diplomats and wealthy businessmen live. The Mathare slums start a few hundred meters downstream from them. This creates an image of two opposite and separate worlds. The Mathare area is one of the largest and

poorest slums in Africa. But one problem about Mathare and other slums is there are so few studies and facts available. When the United Nations collects statistics they use only two categories, urban and rural. The slums with their urban poor are hidden inside the urban statistics; just as the slums are hidden in the city too so few visitors ever see them (Ithula, 2010).

Health is a major economic issue for slum residents. The unhealthy physical environment leads to sickness, which leads to increased medical costs, which leads to reduction of workdays and economic loss. Economic loss leads to inability to invest in clean environment. The vicious cycle continues. Low education and ignorance leads to continuation of wrong beliefs and unscientific attitude towards health. Women and girls in slums have a poor quality of life. They spend a lot of time doing household chores. As a result they are anxiety prone and stressed. Combined with a traditional bias against educating girls they are often not sent to school or drop out at an early stage (UN-Habitat, 2003 b).

Educational Programs should be set up to increase the education status by making critical innovative interventions such as: - increasing enrolment and decreasing dropout rate, enable children cope with school curriculum, use of innovative teaching methods, involve parents and community in children's education, increase education levels amongst dropout and non-school going children especially girls and increase literacy levels amongst adult residents (UN- Habitat, 2003 a).

1.4 Access to information

Freedom of access to information is a simple concept that presents enormous complications in practice. The world is full of hindrances to freedom of access, some of them small and merely annoying and others massive and seemingly insurmountable. There are also facilitators of access: social, psychological, political, legal and technical information. Access on the other hand concerns ensuring free access to information. Information access covers many issues such as copyright, open source, privacy, and security. Librarians have always advocated for free and open access to information (Sturges, 2010).

Access to information is a right for all, including disadvantaged people. In the information age access to information is a human right that must be enjoyed by all as a precondition for equal participation in society. This means that socially and economically disadvantaged people in general should be included. The right to access information is explicitly recognized by the international community. The objectives of the various research efforts in information access are to simplify and effectualize for users to access and further process large and unwieldy amounts of data and information. A user might not always receive the information he/she requests as there are sometimes valid reasons why some kinds of information will be withheld, such as if its release would prejudice national security or damage commercial interests (Oltmann, 2009).

Citizens throughout the world have a right to physically access information products and services. Governments should strive to: secure an understanding of and implementation

of the concept of universal design (or design for all) whereby the needs of information users of all kinds are taken into account during initial content creation (Jagwanth, 2002).

On December 10, 1948 the General Assembly of the United Nations adopted and proclaimed the Universal Declaration of Human Rights. Among the rights were:-Article 19 states that everyone has the right to freedom of opinion and expression. This right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers. Librarians must address intellectual freedom from a strong ethical base and an abiding commitment to the preservation of the individual's rights. Library users seek information and ideas; librarians seek information and ideas on the users' behalf. Unrestricted receipt of information and ideas are a necessary consequence of that seeking if it is to have any point at all. What Article 19 does not tell librarians is precisely how they should achieve all this seeking, receiving and imparting of information. IFLA, through its Freedom of Access to Information and Freedom of Expression (FAIFE) core activity, has sought since 1997 to promote and protect the principle of accessibility, so that librarians can work out the necessary ideas and policies that will make up an access-based librarianship (Sturges, 2009).

Article 26 of the UN Human Rights charter asserts that everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit. Education shall be directed to the full development of the human

personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace. Parents have a prior right to choose the kind of education that shall be given to their children (Beiter, 2006).

Access to information is a pivotal empowerment tool and underpins effective interventions in the area of democratic governance which is central to sustainable development, poverty reduction and the achievement of the MDGs (World Bank, 2002). It is vital for strengthening accountability, transparency, participation and rule of law.

Accessible and understandable information and the means and ability to communicate are important for enabling people to participate in policy making processes and the decisions that affect their lives. UNDP believes that the implementation of the right to freedom of expression and the right to information are prerequisites for ensuring the voice and participation necessary for an open democratic society. This means that the promotion and protection of both access to information itself and flows of information that exist between constituents – both men and women, government, parliament, community groups, civil society organizations and the private sector are of equal importance (UNDP, 2006).

Ugah (2007) identified various obstacles to information access and use faced by developing countries. These include, lack of awareness; inaccessibility; information explosion; bibliographic obstacles: environment; poor infrastructure; declining budgets and rising costs; costs for users; staff attitude toward users; and crime. Further, he

observed that there are no ready-made solutions for every library that can be applied to the obstacles.

UNDP's activities in relation to access to information focus on: - improving the enabling legal and regulatory environment for freedom and pluralism in information; strengthening the capacity of independent and pluralist media; strengthening the capacity of civil society to raise awareness on rights to information and promoting communication mechanisms that enable marginalized groups to participate effectively in governance processes. Use and deployment of the new information and communication technologies (ICTs) has been rapidly growing since the early 1990s (UNDP, 2006). While most developing countries still face, to various degrees, serious access challenges, the focus is now on the development and use of specific new information and communication technology (ICT) applications and, in general, on the use of the new technologies to address traditional development problems and challenges. A surge in the use of information and communication technologies (ICTs) by government, civil society and the private sector started in the late 1990s with the aim not only of improving government efficiency and service delivery but also to promote participation of citizens in the various governance and democratic processes (Okemwa, 2004).

According to Nyokabi(2007a & 2007b), Kenya's efforts to enact freedom of information law (FOI) dates back several years but in recent times has been most apparent through the publishing of an FOI bill in 2005 and a subsequent and much improved white paper in April 2007. Freedom of information (FOI) Bill 2007 when enacted into law was meant to advocate openness, transparency and accountability and make the government more

sensitive to the needs and demands of the ordinary people. Access to information is integral to democracy and facilitates public participation in public affairs. An informed society is able to participate in the design and execution of public policies and is more resourceful and creative in addressing social and economical challenges thus enabling a society to increase its productivity and prosperity. The draft Kenya Freedom of Information (FOI) Bill is an assurance that Kenya is committed to freedom of information cause. However (Nyokabi, 2007a) asserts that access to information was one of the fundamental rights that Kenyan Members of Parliament knocked out of the draft constitution in Naivasha, Kenya on 18-28 January 2010. Instead of having this right enshrined in the constitution, the Parliamentary Select Committee resolved that MPs should legislate a law on access to information. The move rescinded a clause that would have brought to an end a culture of withholding information especially by the government on matters of national importance. According to (Nyokabi, 2007a & 2007 b), a Freedom of Information Bill seeking to grant the public access to official information has never come up for debate since it was drafted.

Nyokabi (2007b) further agrees that systems that enable people to be part of, and personally scrutinize, decision-making processes reduce citizens' feelings of powerlessness and weaken perceptions of exclusion or unfair advantage of one group over another should be established. Stakeholders (including officials and public representatives) should consider and provide recommendations on the development of legislation; and inviting submissions from the public at all stages of legislative drafting.

The Kenyan Constitution (2010) is a critical milestone towards creating reforms and quantifiable equality. The right to information is a much-needed tool for causing and affecting progressive change. It cannot be left to bureaucrats to negotiate agreements they are unequipped to deal with. Article 35 in the Bill of Rights says every citizen has the right of access to information held by the state or any information that is held by another person and that is required for the exercise or protection of any right or fundamental freedom (Government of Kenya, 2010a).

There are many reasons for having freedom of information legislation: to make government more accountable, increase public participation, promote the involvement of all in public life, including those currently marginalized, like women; to make private companies more accountable, monitor and expose corruption, lead to better decision making, protect privacy, expose human rights violations, and promote workers' rights; and to make the country more secure. Access to information makes the government more sensitive and responsive to the needs and demands of the ordinary people. A freedom of information law increases public participation, because the public can regularly engage with government officials and parliamentary representatives (UNDP, 2003a).

1.5 Statement of the Problem

Information services have never been as important for children and their families in Kenyan society as they are today (IFLA/UNESCO 2001). This is because in the present information age, information is a resource, a product, and thereby a basic need.

Although information is the key to knowledge and wisdom; vulnerable communities have little or no access to vital information (Durrani, 1998). Slum children are perhaps the most vulnerable section of the society who suffers human deprivations of all forms. The children in slums have to grapple with a lot of challenges in the environment. Social and environmental deprivation of children has been shown to have a deleterious effect on their physical, intellectual and psychological development.

Lack of access to information can be harmful to disadvantaged communities and especially children. Librarians and library governing bodies have a public and professional obligation to ensure that all members of the community they serve have free, equal, and equitable access to the entire range of information resources and services regardless of content, approach, format, or amount of detail. This principle of library information service applies equally to all users, minors as well as adults. Librarians and library governing bodies must uphold this principle in order to provide adequate and effective information services to children.

Despite the UN's Universal declaration of Human Rights (1948) advocating for access to information for all, there has been limited access to and use of information by children in Nairobi slum areas. The slum dwellers' access to and use of information and other essential services is affected by poverty and poor infrastructure, among others.

Information services rely on good infrastructure to flourish, which is not available in slum areas. These circumstances seem to create different levels of access and situations in which slum children are disadvantaged from the outset (Durrani, 1998). The precarious

physical, social and legal conditions in slums heavily affect access and use of information.

The background to the study shows that children in the slums like any other children require information in order to compete effectively in the dynamic world. Relevant, timely, complete and accurate information is vital for the development of a child. Information can be used to alleviate social-economic deprivations. It is unfortunate that children in the slum areas lack adequate and relevant information. This is because there are no known libraries or other information services within the proximity of most of the slum areas. Besides the lack of information services, children in the slums are also unhealthy, live in a polluted environment, lack immunization, physical exercises, suffer malnutrition and educational exposure. Sadly, their physical, emotional and intellectual growth is stunted from a very early age.

While Kenya has formally committed, through international human rights instruments, the children's act (2001) and the new constitution (2010) to ensure realization of the right to children's education and information, the legislative and policy frameworks are still weak and are yet to be enforced, hence they offer inadequate guarantees for the right to education and information. This means that accessibility of information by children in slum areas is greatly hampered.

Previous researches in the subject of information services to children in slum areas have highlighted many problems faced by children in these slum areas. These cut across social, economic and political issues but most of these researches are based on research done in

developed countries hence no research could be traced on library information services for children in the in slum areas of Kenya (Worden, 1996 & Palaniandy, 1998)).

The information needs and information seeking behaviour from another culture could be different from the Kenyan context due to the different cultural experiences, language, and level of literacy, socio-economic status and value system (Liu, 1995).

There is a need to avail information to children in the slums in Kenya to help them develop intellectual ability which would enable them to relate what they read with what is in their environment. One of the strategic efforts in line with human resource development, especially for children, is enhancing children's knowledge and perspective in earlier ages through providing information services. Easy access to and use of information boosts learning and enables children to match up their interests and abilities with their aspirations (Kirui, 2005).

Taking into account the research gaps on access to and use of information services by children in slum areas in Nairobi, the present study concentrated on the investigating to accessibility and use of information services as well as investigating the barriers that restrict accessibility and use of information services. The library information services must not only be accessible but should also satisfy user's information needs. A thorough study of the status of availability, accessibility and use of information services to children in Nairobi slum areas is therefore an absolute necessity

Librarians and other information professionals must find ways to reach out to the core of the inner cities and to the centre of deprivation. The librarian's role may be seen as that

helping in achievement of the Millennium Development goal that aims at ensuring that by 2015 children everywhere, boys and girls alike would be able to complete a full course of primary schooling. It is in view of the foregoing reasons that the study to investigate access and use of information services by children became imperative.

The focus of this study was to determine levels of accessibility and use of information services by children in selected Nairobi slum areas and investigate barriers that hindered access to information with a view to proposing a model that could be customized in order to enhance accessibility and use of information to alleviate social deprivations.

1. 6 Aim of the study

The study aimed to investigate accessibility and use of Information by children in Nairobi slums with a view to proposing a model that could be customized as a way of enhancing accessibility and use of information to alleviate social deprivations.

1.7 Specific Objectives

In order to achieve the above aim, the study is guided by the following objectives:-

1.7.1   Identify information needs of children in Kibera, Mathare and Mukuru slums to alleviate social deprivations.

1.7.2   Determine the types of information services available and their accessibility to children in Kibera, Mathare and Mukuru slums.

1.7.3 Establish the role played by information services providers and other agencies in provision of information services to children in Kibera, Mathare and Mukuru slums to alleviate social deprivations.

1.7.4 To assess the role of Information Technology in promoting access and use of information children in slums.

1.7.5 Examine the challenges faced by children in Kibera, Mathare and Mukuru slum areas regarding accessibility and use of information.

1.7.6 To review the policy and legal frameworks for access and use of information by children in slums.

1.7.7 Propose a model that can be customized to enhance access and use of information services by children in slums as a way of alleviating social deprivations.

1.8 Research Questions

The research was guided by the following research questions:-

1.8.1 What are the information needs of children in Kibera, Mathare and Mukuru slums?

1.8.2 What are the types of information services available for children in Kibera, Mathare and Mukuru slums?

1.8.3 What is the role of Information service providers and other related agencies in provision of information services to children in Kibera, Mathare and Mukuru slums?

1.8.4 What challenges are faced by children in Kibera, Mathare and Mukuru slums regarding access and use of information services to alleviate social deprivations?

1.8.5   What is the role of Information Technology in accessibility and use of information by children in Kibera, Mathare and Mukuru slums?

1.8.6   What government policies exist on access and use of information services by children in Kenya?

1.8.7   In what ways can accessibility and use of Information services be enhanced for children in Kibera, Mathare and Mukuru slums to alleviate social deprivations?

1.9 Assumptions of the study

The study was based on the following assumptions:-

- Children in the Nairobi slum area s have a broad range of information needs which are currently not adequately met since no research has been conducted to estimate the type and range of services required.

- Children from slum areas lack access to library and information services to enable them develop a reading culture and to alleviate social deprivations.

- That if factors that contribute to lack of access and use of information were identified, possible solutions could be recommended and models proposed for customization to enhance provision of library and information services to children in Nairobi slums as a way of addressing social deprivations.

1.10 Significance of the Study

The study is significant in that:-

- The recommendations made will be applied to help improve access and use of information in the slum areas for children and to alleviate social deprivations.

- The study would also make useful contributions towards the teaching staff, administrators, educational institutions, publishers, parents and guardians towards effective provision of information services to children in slum areas.

- The study would culminate into major research findings that would revolutionize the thinking of educational planners, policy makers and scholars towards effective provision of information to children in the slum areas.

- The findings of this study are expected to help guide policy-thinking and practice as far as access to and use of information by slum children and other disadvantaged groups is concerned.

- The model adopted could become a benchmark for future studies in slum areas.

1.11 Scope and Limitations of the study

The limitations of a study are the methodological characteristics that set parameters on its application and interpretation. In other words, limitations are the constraints on generalizability, transferability, and utility of findings, which are the results of the devices of methodology that establish the study's validity (Thomas, Nelson, & Silverman, 2005).

As already seen from the background study, Nairobi has many slums which this study could not cover. This is in view of complexities of issues pertaining to information services. The slum areas in Nairobi have a wide coverage and some are more advantaged than others in relation to their proximity to information centres.

This study opted to focus on three major slums in Nairobi County: - Kibera, Mukuru and Mathare Slums. This way, the study will bring up the depth of issues relating to information services. The Study covers only children in upper primary public schools, the class teachers, persons in charge of school libraries, and librarians in community libraries, Directors from the Ministry of Education, Ministry of Sports, Culture and Arts.

It is acknowledged that the scope of the study did not include all the slums within Nairobi County. In this regard, there are chances that the study left out some information that could have been gathered had all the slums in Nairobi County been included in the study. Furthermore the population sample of the study included only children in upper primary public schools thus leaving lower primary and also children in upper primary but in informal schools.

The study did not cover children in lower primary because the researcher considered them too young to be subjected to any form of interview. Piaget (1932), talks about the role of maturation (simply growing up) in children's increasing capacity to understand their world. He notes that children cannot undertake certain tasks until they are psychologically mature enough to do so. Further pupils in upper primary are more likely to know for certain the services that were being provided by information service providers and would be better positioned to say whether they were useful or not. This is because most pupils in upper primary are at the formal Operation Stage (Age 11 and beyond). The child in this stage can think logically about abstract propositions and test hypotheses systematically. The child becomes concerned with the hypothetical, the future, and ideological problems (Melgosa, 2002). This stage gives each individual the

mental skills necessary to understand the complexities of knowledge. The child is advanced enough cognitively to engage in complex computer uses. Age and the cognitive development of the respondents are hence factors that may influence use or non- use of information services. In addition, children in upper primary, but in informal schools were excluded from the study because of time limitations and also due to the fact that it would not have been possible to get teachers and the children to be interviewed.

1.12 Definition of Terms

1.12.1 Children: - The universal understanding of the term child is defined in both Encyclopedia America (vol. 6) and Encyclopedia International (vol. 4) as a person from age zero to seventeen. Mahwasane (2008) says that the term children usually refer to individuals between 2 and 12 years of age whereas an adolescent refers to young people between 13 and 18 years of age. However in this study the term is linked to the idea of a primary school population in upper primary stages which basically includes children from class four to eight**.** The terms children and learners are used interchangeably in this research.

1.12.2 Information: - In this study information are ideas, facts, imaginative works of the mind and data of value, potentially useful for decision making, question answering, and so on (Kaniki, 2001).

1.12.3 Information Services:- The term information services in this study implies any service based on information such as lending of information materials, providing reference facilities, processing and maintaining information supplying programmes,

research assistance services etc., which are provided on demand or anticipated demand (Shenton & Dixon, 2004).

*1.12.4 Access to information***: -**This is an individual's rights to obtain and use information collected or generated by others. In this study information access is defined as a combination of intellectual, physical, and social elements that affect the availability of information to individuals (Oltmann, 2009).

1.*12.5 Information need:-* A state that arises whenever individuals find themselves in a situation requiring knowledge to deal with the situation as they deem fit, (Irvall and Nielsen, 2005) or whenever the person has a knowledge gap that needs to be filled. It evolves from an awareness of something missing, which necessitates the seeking of information that might contribute to understanding and meaning (Kuhlthau, 1993).

1.12.6 Information seeking: - Information seeking is the purposive search for information in order to satisfy certain goals. It is a conscious effort to acquire information in response to a need or gap in one's knowledge (Case, 2002). Information seeking is a complex communication process that involves the interaction among the information seeker, the information, and the information provider.

*1.12.7 Information seeking behaviour***: -** This is an activity of an individual that is undertaken to identify a message that satisfies a perceived need. In this context, information is viewed as any stimulus that reduces uncertainty. Information seeking behaviour arises as a consequence of a need perceived by the information user, who in order to satisfy it, makes demands upon formal or informal information sources or services, resulting in either success or failure to satisfy that need (Wilson, 1999).

1.12.8 Information literacy: - To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the information needed. Ultimately information literate people are those who have learned how to learn. They know how to learn because they know how information is organized, how to find information and how to use information in such a way that others can learn from them (Breivik & Senn, 1998).

1.12.9 Disadvantaged children: - This term is used to refer to children who are economically disadvantaged, children who lack material things or do not have access to resources. The parents of these children do not have resources required to enable their children to develop to their potential educationally, socially, affectively and physically (Mahwasane, 2008).

1.12.10 Information Policy: - The set of rules, formal and informal, that directly restrict, encourage, or otherwise shape flows of information. Information policy includes; literacy, privatization and distribution of government information, freedom of information access, protection of personal privacy, intellectual property rights and information and communication technologies (ICTs) etc. (Jaeger, 2007).

*1.12.11 Reading habits:-*Reading habits refers to the extent to which users are motivated to read on their own. In other words, it pertains to voluntary reading at home, at school or class periods per week set aside for silent reading, the number of library lessons per week, the number of hours of voluntary reading at home, and the number of books read at the library (Ngugi, 2009).

1.12.12 Social deprivation: - The term 'social deprivation' is slightly ambiguous and lacks a concrete definition. However in this study the term refers to the reduction or prevention of normal interaction between an individual and the rest of society. With social deprivation one may have limited access to the social world due to factors such as low socioeconomic status or poor education (Bassouk & Donelan, 2003). The socially deprived may experience a deprivation of basic capabilities due to a lack of freedom which may result in reduced opportunities, political voice, or dignity.

This study has opted to use Macky's (2008) definition of deprivation, being an enforced lack of socially perceived necessities (or essentials). It involves going without because of a lack of resources, and this explains the close link between deprivation and poverty as conventionally defined in terms of low income. The first step in measuring deprivation involves identifying what constitutes essential items – things that no-one should have to go without. Social deprivation may be correlated with or contribute to social exclusion (when a member in a particular society is ostracized by other members of the society).

1.12.13 Childs social need: - This is the need to learn to cooperate with others in work and in play in a manner that is best befitted for his/her associates highest development. The social needs should be recognized in school, home and in a religious setting but for the purposes of this study the school and home will be considered.

1.13 Chapter Summary

This chapter has provided the background to the study and describes the enquiry as an attempt to fill some of the gaps left by the previous studies in investigating access and use

of information by slum children to alleviate social deprivations. Several issues were discussed in this chapter. These included background to the research problem, statement of the problem, and the objectives of the study. Other issues include the study rationale, assumptions of the study, methodology, definition of key concepts, study scope and limitations. One of the key issues that emerged from Chapter One is that information is a vital tool for socio-economic development. Availability of adequate, current information and effective information systems are key factors in socio-economic development and poverty alleviation. Children's services should be taken as important and treated equally with those for adults. Library information services could be re-oriented to be accessible to ordinary and financially challenged people. Librarians and other information specialists should be proactive in trying to meet information needs for all.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter discusses the literature related to access and use of information by slum children to alleviate social deprivations. Building upon previous studies this chapter begins by addressing the purposes for which the literature was used in the current study and shows how the literature review for this study is organized. The chapter provides the theoretical foundation of the study through the discussion of various models and a review of literature relating to access and use of information by children in selected Nairobi slums.

The chapter shows the debates, skepticisms and controversies currently found in the literature on access and use of information by slum children to alleviate social deprivations. The reasons for conducting the literature review for this study was to position it within other similar studies and explore to the available knowledge in the study area, so as to understand the relationship between the problem and the body of knowledge in the area. Other reasons were to establish the need for this kind of research and acquaint the researcher with the methodologies that have been used by others to find answers to research questions similar to the ones investigated in this study.

2.2 Theoretical Framework

Wilson (1981) says that apart from information retrieval there is no other area of information science that has attracted as much research effort and writing as user studies. Within user studies the investigation of information needs has been the subject of much debate and no little confusion. Information science is basically concerned with the use of information by humans and it is concerned specifically with the way in which humans search for information, systematically as well as unsystematically. The basis for information science is therefore found in people's experience of using and searching for information.

Library and Information Science (LIS) is a relatively new field that has often been criticized for a lack of real theory (Case, 2006). Nevertheless, theoretical foundations are being laid by researchers developing their ideas within LIS and borrowing from other fields. The result is that we now have many approaches that compete for attention (Bates, 2004).

Case (2007) defines the concept model in regard to perspectives, paradigms, theories and models. Models are viewed as a stage en route to the development of theory. Both models and theory are simplified versions of reality but models are tied more closely to the real world and typically make their content more concrete through the use of diagrammatic representation and simulations. Järvelin and Wilson (2003) suggest that conceptual models should map reality, guide research and systematize knowledge. Some of these models are briefly highlighted in this study.

Every research must have an underlying model of the phenomenon it investigates, whether tacitly assumed or explicit. Such models are called conceptual frameworks or conceptual models and they become topics of discussion and debate when a research is being undertaken. A model provides a working strategy, a scheme containing general, major concepts and their interrelations. It orients research towards specific sets of research questions. A conceptual model cannot be accessed directly empirically, because it forms the basis of formulating empirically testable research questions and hypotheses. It can only be assessed in terms of its instrumental and heuristic value. Typically, this happens by assessing the research strategies and programs and results it creates (Wagner & Berger, 1985).

 While a comparative analysis of existing information behaviour theories, or even a thorough review of the scholarly production on information behaviour, are beyond the scope of this thesis, an understanding of some of the main conceptual developments produced in this area over the past few decades is essential to frame this study theoretically. Such high-level review will also provide an introduction to the model around which the theoretical infrastructure of this research project is organized.

Researchers have used a number of models in information seeking and retrieval studies. These include:-information behaviour, information seeking behaviour (Wilson, 1981; 1996; Dervin, 1986; Ellis, 1993 & Kuhlthau, 1991) among others. Some of these models are of a summation type while others are more analytical. These models serve different research purposes. The strength of Ellis's model is that it is based on empirical research and has been tested in subsequent studies, most recently in the context of an engineering company. Ellis (1989) notes that the detailed interrelation or interaction of the features in

any individual information seeking pattern will depend on the unique circumstances of the information seeking activities of the person concerned at that particular point in time. Wilson (1999) proposes how these features may relate to each other temporally, providing a partial order.

Ellis's (1993) features are said to be general enough to fit a large number of empirical situations. However, if one is to explain information seeking behaviour, for example, in terms of the work tasks the subjects are engaged in, or their knowledge of the task, the features are criticized for falling short because they are not explicitly related to such external possible causative factors. Ellis's model may still be of indirect help in finding explanations for information seeking behaviour. It is possible to discern differences in any of the 'features' in different situations, involving different kinds of persons through successive research projects. For example, some persons in some roles may be shown to engage more or less in monitoring than other persons. This may then lead to an examination of the factors that 'cause' these differences.

Krikelas's (1983) model on information-seeking behaviour is said to be easy to understand but it has also been viewed as over-simplistic. It has been criticized for omitting any reference to characteristics of the information seeker and for a direct refusal to consider unconscious information needs (Case, 2007). However, despite the model's deficiencies Krikelas's model is acknowledged for his desire to unify the field of user studies, his introduction of a holistic approach allowing for the use of a range of information sources, his belief that the individual user defines 'information', and his role in 'signaling a turning point in the field of user studies, establishing new criteria to guide our research into information seeking, as well as laying the groundwork for the

development of models and theories of information behaviour in the years to come (Henefer & Fulton, 2005).

Wilson (1999) attempted to look back to his earlier models (1981; 1996). In the first model he attempted to outline what he, at the time, called 'information seeking behaviour' suggesting that an information user perceives a need and consequently makes demands on formal or informal information sources or services resulting in success or failure to find relevant information. Wilson reflects that this model acknowledges that other people may be involved in the information-seeking process through exchange or by passing on useful information and also that 'information use' was an area requiring further study. The author himself concedes that such a model does little more than provide a map of the area and draw attention to gaps in research with no suggestion of causative factors and consequently provides no hypotheses to be tested. In the second model Wilson proposes that information need is a secondary need that arises out of needs of a more basic kind and that someone looking for information is likely to encounter barriers. These potential barriers are categorized as: personal, impersonal and environmental, and include factors such as the importance of satisfying the need, lack of full information, availability and cost of sources (Wilson, 1981).

In 1996 Wilson revised his original model and, whilst following the basic framework of the original, he extended it to include theoretical evidence from other fields (stress /coping theory, risk/reward theory) (Case, 2007& Wilson, 1999). His readiness to test and rework his models and include elements of other author's works provides an example of the organic nature of research.

This study utilized Brenda Dervin's Sense Making Theory (2003), Project CATE (Children's Access to [and Use of] Technology Evaluation) model by Dresang et al (2003) complemented by Piaget's (1932) cognitive development theory to develop a theoretical framework for the study.

2.2.1 Brenda Dervin's Sense Making Theory (2003)

The sense making theory emphasizes the shift from an early focus on information sources and systems to users. Dervin does not consider information an objective and external entity, but something that involves internal cognitive process. Therefore, in Dervin's theoretical framework, the user becomes the focus in this sense-making model. Dervin's approach also includes a "situation-gap-use" metaphor for studying information needs. The gap in people's knowledge that develops out of a specific situation prompts them to seek information, and this gap is bridged by getting "uses" or "helps" (Morris, 1994).

Dervin (2003) asserts that people live in a world of gaps, a reality that change across time and space. Further she defines sense-making as behaviour, both internal (i.e. cognitive) and external (i.e. procedural) which allows the individual to construct and design his/her movement through time-space. Sense-making behavior, thus, is communicating behaviour which elicits responses from participants' interacting in a social or virtual space. Social and cultural reasons may be tied to the decision to use or reject a system; sense-making can elicit information from participants to discover what they are doing with information and what suggestions it gives to designers when constructing their information systems (Dervin, 1983).

Sense-making theoretical model has three elements that this study employs. To illustrate, this is how Dervin conceptualized her sense-making model:-

SITUATIONS-----------------GAPS---------------------USES/HELP

SITUATIONS

HELP/ USE   GAP
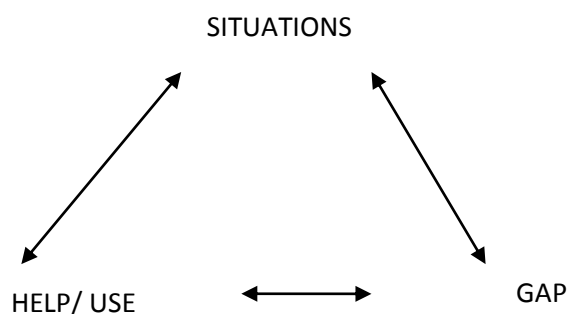
Figure 1: The sense-making triangle (Dervin, 1992).

Dervin defines a 'situation 'as a point in time and space at which the individual constructs meanings (Dervin, 1992). The situation is that thing that the participant defines as something of meaning to them taking place in a particular space at a particular time. It is specific because it puts a coherent label onto what they experienced; that is, it allows description of the actual space they negotiated and how they felt about where they were. To say they were in a situation of finding information because it was important for them to complete a task is one such an example (Dervin, 2003).

The concept of 'gap' means an unclear aspect of a situation that a person feels the need to clarify in order to continue movement in a direction that the individual considers to be constructive or desirable. Gaps are explored to find what constrains the participant from reaching an information seeking goal. Dervin (1983) defines the gap as something that needs bridging, information need or question the user has as they construct sense and move through space. The gaps are filled by an active process of sense-making (or sometimes sense-unmaking).

'Help/ uses', on the other hand, stand for the outcome or outcomes of sense-making that are aimed at addressing gaps (Halpern & Nila, 1988). Help therefore is anything that facilitates successful information finding, that is, something that allows people to bridge a gap to get the information they need. Dervin (2003) describes them as the help or hurt (for this study the term hurt is termed as hindrance) the person obtained to move past a gap. The help could be a person, part of a system, one's own problem solving strategy or possessed characteristics (determination to reach goal for example).

The basic dynamics of the sense-making triangle are as follows: the situation provides the context in which the individual needs to make sense of something (gap), which, in its turn, drives him to seek help. Having received this help, the individual is in a new or changed situation (Dervin, 1992).

The sense-making model allows the participant to choose a moment in time and space (a situation), define it by explaining how they felt at that point, asking what gaps they encountered (usually the participant will explain them without prompting them) and finding how they bridged that gap by the uses they utilized. Often it is required to go over this process to find out how they made sense of the information. Such a technique is called circling the experience which allows issues to be explored until the participant is ready to move on (Dervin, 2005).

Sense making (and unmaking) is therefore the process of gap bridging, a term that is rarely used, here, in its purposive, problem solving sense but instead identified as an essential mandate of the human condition (Dervin, 2005). People seek, process, create, and use information to make sense of their situation and information is meaningful only

in the context of such process. Information, therefore, is rarely an end in itself but a means to an end. Users are those who decide, in their own terms, what is informing and what is not. Sense-making becomes therefore integral to understanding how human beings derive meaning from information and is associated with the shift in research emphasis from information sources and systems to information users. The theory provides guidance for thinking about people, talking to them, asking questions of them, and designing systems to serve them as individuals seeking information in the context of a specific situation (Dervin, 2003).

2.2.2 Project CATE Model (2003)

The Project CATE outcome-based model incorporates inputs, activities, and outputs, but all are used as part of defining and supporting appropriate outcomes for persons involved. Expanding to a logic model, the Project CATE researchers also describe change for the institution and its programs (intermediate range outcomes) and, in relation to application of the model, for the profession (long-range outcomes). It identifies and focuses on outcomes that occur because of planned activities or processes for users or clients in terms of knowledge, skills, behaviour, or attitudes. This model concentrates on developing and testing appropriate outcome-based assessment criteria for evaluation of children's use of resources and services in a networked environment (Dresang& Gross, 2001).

Dresang& Gross (2001) further observes that the somewhat radical approach that an outcome-based model brings to the evaluation of children's services can only be understood if one understands the historical context and philosophical non-interventionist approach that public children's librarians, teachers, the government and other

stakeholders have taken in the past. Evaluation of children's services in public and school libraries has historically lagged somewhat behind overall evaluative efforts.

Prior to the 1980s, informal evaluation based on casual observation and best professional judgment was the predominant means of evaluating children's services in a public library setting. If children and their adult caretakers attended programs and no one complained about services, many librarians considered themselves and their libraries to be doing a good job. Moreover, any sense of intrusion on the privacy of a child's use of information was considered inappropriate. Formal evaluations consisted largely of input measures (e.g. how many books or other items were in the collection or how many story hours were held) (Dresang, Gross & Holt, 2003).

Schalock (2001) states that outcome-based evaluation encompasses the central question of what education, health care, and social service programs set out to achieve for persons receiving them: valued, person- referenced outcomes. It also encompasses what outcome-based evaluation players are requesting of education, healthcare, and social service programs: organization-reference outcomes that reflect the organization's effectiveness and efficiency. The outcome-based evaluation encompasses program, effectiveness, impact, and policy evaluation. He included both organizations and individuals as the focus of such evaluation; performance and value as standards; and outcome measures of organization performance, organization value, individual performance, and individual value.

Performance incorporates the idea of skills and the Project CATE model incorporates some aspects of the existing outcome-based models (Gross, 1999; Mohr, 1995; Schalock,

2001; Rossi, Freeman & Lipsey, 1999 & Babbie, 2001) etc. The Project CATE model is unique, however, and differs from the other models described in the following ways:-

- It is an interactive and iterative rather than a linear model. There is ongoing and constant modification and feedback as the model is developed and applied;

- It includes the collection of baseline data and a market research component (as some but not all other models do);

- The Pupils involved (the objects of the social intervention) are considered principal stakeholders, and their opinions are influential in the development of the outcomes assessment measures and the intervention (Dresang, Gross & Holt, 2003).

All research and evaluation are based on assumptions, and Project CATE is no exception. As Schalock (2001) points out, alternative research methodologies call for more assumptions than those of traditional scientific research. Those applying the Project CATE model in the environment of public library technology services for children must make the following assumptions:-

- Evaluation is continuous, interactive, and iterative;
- Children are or can become competent with digital technology;
- Desired outcomes for children's technology use can be identified using a market research approach;
- Strategic planning, market research, and outcome-based evaluation are useful tools for assessing children's use of technology in libraries;

- The library can perform adequate data collection and synthesize findings into statements of desired outcomes;

- Interventions can produce desired outcomes (Tapscott, 1998).
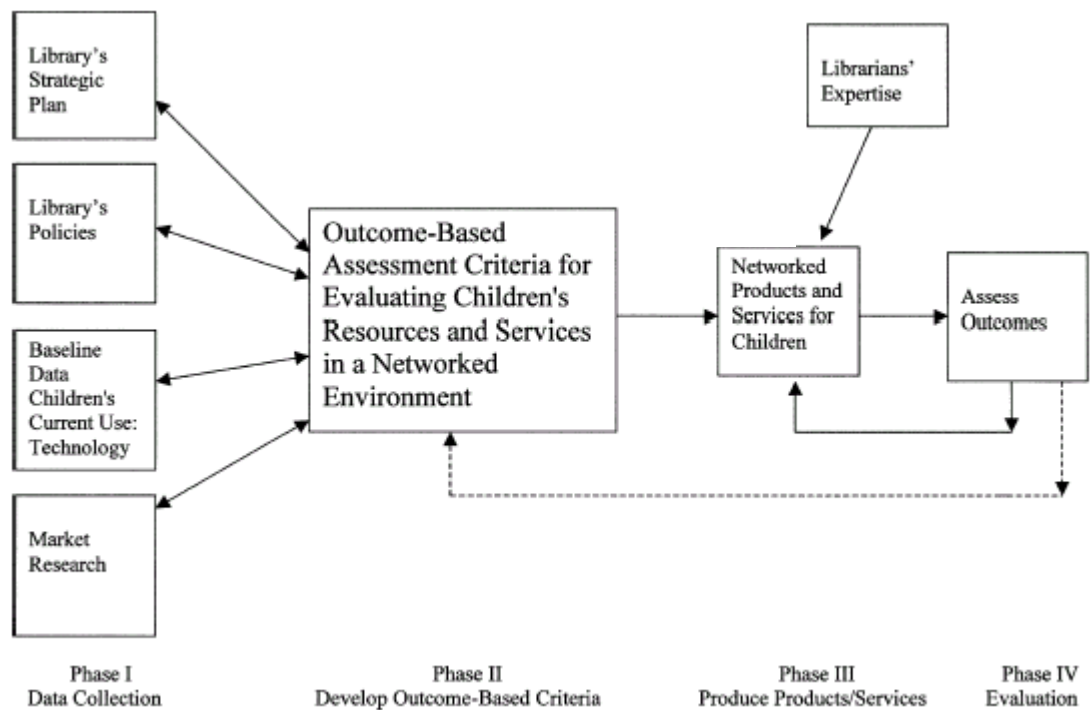
Figure 2: Project CATE Model (Dresang, Gross & Holt, 2003)

2.2.3 Piaget's Cognitive Development Theory (1932)

Cognitive theories are about the ways in which children come to think about, know and understand the world around them (Greig & Taylor, 1999). Cognitive development theory was developed by Jean Piaget (1932) who was part philosopher and part biologist and Lev Vygotsy (1896-1934). The two theorists regard the child as an active participant

in constructing knowledge. Although they agree that both biology and environment are important, they vary on the emphasis they place on each one.

Piaget being a philosopher was interested in questions on the acquisition of knowledge, such as what is learning? Are things the way they appear? (Huitte & Hummel, 2003). He believed that what distinguishes human beings from other animals is the ability of the human being to do abstract reasoning. As part biologist, Piaget was interested in describing and recording, in a systematic fashion, the various types and stages of thought which children go through as they develop (Greig & Taylor, 1999).

Piaget revolutionized people's thinking about child development. Besides his considerable output there is a massive literature on the subject of Piaget's theories by critics, supporters and those who have experimented with, expanded or attempted modification of Piaget's concepts (Marshall, 1984).

The study of child development is a vast one, and therefore this study has selected those aspects which are important in aiding the researcher to understand children and how they develop. Piaget gives detailed accounts of children's intellectual development and although his conclusions have not been fully accepted (Davis, 1988; Huitte & Hummel, 2003). His theory remains useful to this study. Piaget proposes that intelligence develops as a result of the interaction of the environment and the maturation of the child (Huck, 1979). Piaget's cognitive theory asserts that there are regular patterns in cognitive development which are experienced by everyone. Children pass through stages in mental development which although varying considerably between children, provide a general trend of development. Each stage has its sets of achievements in spatial, number, quality,

time, moral, chance and probability concepts, which according to Piaget demonstrated the growth of logical thought. The close of a stage is marked by a partial equilibrium, in which the developing thought processes become consolidated into a structure. This cognitive structure is both the final achievement of one stage and the entry point of the next (Davis, 1988). Piaget believed that infants are born with mental blueprints called schemas which are the primary mental organization and structure through which the child adapts to the environment (Greig & Taylor, 1999). Some of the earliest schema include the sucking and grasping reflexes which through adaptation, gradually become more complex schemas. This is achieved through two adaptive processes of assimilation and accommodation.

Assimilation is the encoding of incoming information to fit what the child already knows about the world. For example, this is observed when a child spontaneously sucks anything that might be a nipple (Greig & Taylor, 1999). Assimilation occurs when new experience is treated as though it was identical with the old and is incorporated into the unchanged scheme or schema (Melgosa, 2002). It is the process of using or transforming the environment so that it can be placed in pre-existing cognitive structures (Huitte & Hummel, 2003). This schema of action is an act of intelligence, the coordination of goals and the means by which goals can be attained (Marshall, 1984).

In accommodation, the infant has to gradually reorganize the existing schema to meet the challenges of the environment. Accommodation is thought to take place when the child perceives a discrepancy between new and old experience and the schema enlarges as a result (Davis, 1988 & Melgosa, 2002). Accommodation therefore is the process of changing cognitive structures in order to accept something from the environment (Huitte

& Hummel, 2003). It involves the modification of existing schemes to fit new information or ways of understanding of the world. When this happens, adaptation is then said to occur. This means that when a child is confronted with a new problem or activity, he makes use of previous patterns of behaviour in order to resolve the issue at hand.

Both of these processes are used simultaneously and alternately throughout life as the child increasingly adapts to the environment in a more complex way (Huitte & Hummel, 2003). Piaget refers to the early stages of development as the operation and this is fully realized in adolescence as equilibrium. Full equilibrium is achieved when the child becomes able to reason with hypothetical and deductive logic which mostly begins at around 12 years. However, some younger children may show evidence of some specific capacities of logical thought. Before this, the child's thought process will have undergone many changes (Melgosa, 2002).

Piaget (1932) identifies four major stages in cognitive development: the sensory-motor stage (from birth to year 2), the pre - operational stage (age 2-7), the concrete operational stage (age 7-11) and the formal operation stage (age 11 and beyond). These stages form what Piaget calls an invariant development sequence. That is, all children progress through the stages in exactly the same order in which he lists them. There can be no skipping of a stage because each successive period necessarily builds on the preceding period and typifies a more complex way of thinking.

Sensory-motor stage (Birth-2 years) is so called because the infant learns through his or her senses: eyes, ears, nose and skin (Marshall, 1984). It is the earliest stage of cognitive development. The senses become the child's primary means of intellectual development

(Melgosa, 2002). The child differentiates self from objects, recognizes self as agent of action and begins to act intentionally: e.g. pulls a string to set motion or shakes a rattle to make a noise. The child achieves object permanence: and realizes that things continue to exist even when no longer present to the sense (Atherton, 2005).

Pre-operational stage (2-7 years) is the stage where some children start to attend pre-school from 4 to 5 years. Piaget characterized this stage by animism, realism which means that children think inanimate objects are alive, that dreams are real physical events and that everyone sees things the same way they do (Greig & Taylor, 1999). The child learns to use language and to represent objects by images and words. Thinking is still egocentric: hence the child has difficulty taking the viewpoint of others. He/she classifies objects by a single feature: e.g. groups together all the red blocks regardless of shape or all the square blocks regardless of color.

Concrete operational stage (7-11 years) coincides with the period of compulsory education for most pupils. However, some children will still show thinking more typical of the preceding stage, while other brighter children will be well advanced (Davis, 1988). At this stage, the child can think logically about objects and events. Objects can now be classified according to their similarities and differences and they can be serialized according to their progressive size and weight (Marshall, 1984). The concept of number, which is another form of seriating, is learned (Atherton, 2005).

Although the child can now reason about a transformation and conserve quantity, the operation is still concrete. The child still lacks logical inference. Objects have to be present to be reasoned about. However, the ability to represent experience, and what is

known in language terms, is developing rapidly. The language acquired helps in the formation of concepts. Flashbacks and shifts in time periods can be understood as children begin to project themselves into the future or past. Shifting from an egocentric pattern of thought, children in the concrete-operational period can more easily identify with different point of views. Most of them can readily put themselves into a position of another person (Huck, 1979).

Formal Operation Stage (Age 11 and beyond) occurs at about 11 years or early adolescence. The child can think logically about abstract propositions and test hypotheses systematically. The child becomes concerned with the hypothetical, the future, and ideological problems. Piaget emphasizes the intellectual aspect of adolescence as a growing phase of intellectual development (Melgosa, 2002). This stage gives each individual the mental skills necessary to understand the complexities of knowledge. It is characterized by the ability to reason about objects that cannot be seen, to predict future events, to plan for tomorrow or next year. This stage of mental development brings the child into the mental world of adulthood just as the completion of pubertal changes heralds the arrival of physical adulthood (Marshall, 1988). It must be noted that physical and mental changes continue throughout life, but this completion of pre-adult developmental processes bring the child to the threshold of the adult world where adult physical and mental activity is possible.

Piaget(1932) also found out in his research that children not only reasoned differently from adults but also that they also had quite different world views, literally different philosophies. He argues that young children think in ways not quantitatively but

qualitatively different from adults (Huitte & Hummel, 2003). This means that we must acknowledge the uniqueness of children in their psychological and conceptual make-up. Piaget's (1932) detailed account of intellectual development is intrusive and reliable in aiding this study fathom a child's province of discernment. The last two phases of Piaget's theory are important in that these stages shape children's cognitive, affective and emotional development. An understanding of a child's development is indeed a prerequisite to understanding how they react to information sources and services. The researcher is able to tell if the children were faithful to themselves in the choice of information services and sources that they made and again if the teachers were faithful in the choices they made for children with regard to the child's intellectual capabilities (Piaget, 1932).

Fostering enjoyment and appreciation for information services and sources comes from knowing the age and psychological disposition of children, those dispositions that cause a child to like a particular information source/service. Without knowledge of children, how they learn to think, feel and behave, providing information for them and creating habitual readers from them could proof to be a futile job.

2.2.4 The Complementary Nature of the Three Models

Brenda Dervin's (2003) Sense Making Theory, Project CATE Model (2003) and Piaget's Cognitive Development Theory (1932) can be considered as complementing one another in illustrating access and use of information as a way of addressing social deprivations by school children in Nairobi slums. The sense making theory by Brenda Dervin's theoretically explains how people, seek process, create, and use information to make

sense of their situation. Apart from basic information needs, there are personal or individual needs that arise as a result of the situation in which the child finds himself/herself.

The child is motivated to seek information related to his/her situation, which is goal directed, since he/she is aware of a gap in trying to solve the problems encountered in everyday life within the family environment. Information is meaningful only in the context of such process. Information, therefore, is rarely an end in itself but a means to an end. Users are the ones who decide, in their own terms, what is informing and what not (Dervin, 2003) is. Piaget's cognitive development theory (1932) on the other hand is very helpful in helping us to understand the process of growth and changes that take place in the child. Access, use of information and the literary competence of any child depends on his or her cognitive development and other factors in life. His view of how children's minds work and develop has been enormously influential, particularly in educational theory. His particular insight was the role of maturation (simply growing up) in children's increasing capacity to understand their world: they cannot undertake certain tasks until they are psychologically mature enough to do so.

Project CATE on the other hand purports to be a futuristic model that incorporates emerging research methodologies. It takes this postmodern methodological approach grounded in qualitative field research. It constructs a design that gives a holistic view of the process rather than relying on a series of data collection instances. It is an interactive, nonlinear, dynamic model, the content of which may change at any moment as new data

and insights become available, suitable for use in the rapidly changing digital world (Dresang, Gross & Holt, 2003).

The model incorporates all of the research suggestions made at the 1989 Leadership Institute on the Evaluation of Public Library Children's Services into a model consistent with the best contemporary evaluation practices (Dresang & Gross, 2001).

Project CATE research issue orientation fits several of the projected needs of the LISR Board of Editors. For example, mission-oriented research, relevant to stated needs with an impact on everyday information services, and an assessment of the impact of the Internet on information-poor and culturally diverse communities. Ultimately, with its outcome-based focus, the Project CATE model will fulfill the call for research on the social effects of information structure and availability. Another contribution of the Project CATE research comes from its collaborative structure. Its structure adds complexity to the evaluation process in the planning and the implementation phases and also adds to the richness of insights and depth of analysis of the data collected (Hernon & Dugan, 2002).

The complementary nature of the three models is of particular relevance for this study because their integration shows that human lives in a world of information gaps and other social deprivations and that certain factors might represent barriers limiting access, and use of information services. On the other hand maturation helps a child to understand their world and hence make sense of it. There is need to look at factors that can bridge the information gaps thus enhancing accessibility and use of information services by school children in slums as a way of alleviating social deprivations. Information communication

Technology (ICT) could be applied to improve access to and use of information especially among the marginalized groups. Oltmann (2007) states that access can be mediated by technology, but it is not determined solely by technology. The main purpose of information accessibility and use is to strengthen children's knowledge, skills, attitudes and ability to adapt to ever changing world, while providing a mechanism to alleviate social deprivations. Age and the cognitive development of the respondents is one of the factors that may influence use or non- use of information services.

2. 3 Conceptual Framework

As shown in Figure 1, the independent variables of the study are information needs, type of information services, role of information technology and role of service providers. These are the variables expected to influence access and use of information services by children in selected slum areas in Nairobi County, which is the dependent variable of the study. Policy and legal frameworks are the moderating variables together with challenges faced in accessing and using of information by school children in slums.

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┌─────────────────────┐
│  Information needs   │
└─────────────────────┘
                              ┌──────────────┐
                              │  Challenges  │
┌─────────────────────┐       └──────────────┘
│ Type of Information  │
│ services             │                          ┌──────────────────────┐
└─────────────────────┘                          │ Access to and use of │
                                                  │ information by       │
┌─────────────────────┐                          │ children in slums    │
│ Role of IT          │                          └──────────────────────┘
└─────────────────────┘

┌─────────────────────┐       ┌──────────────────┐
│ Role of Service     │       │ Policy and legal │
│ providers           │       │ frameworks       │
└─────────────────────┘       └──────────────────┘
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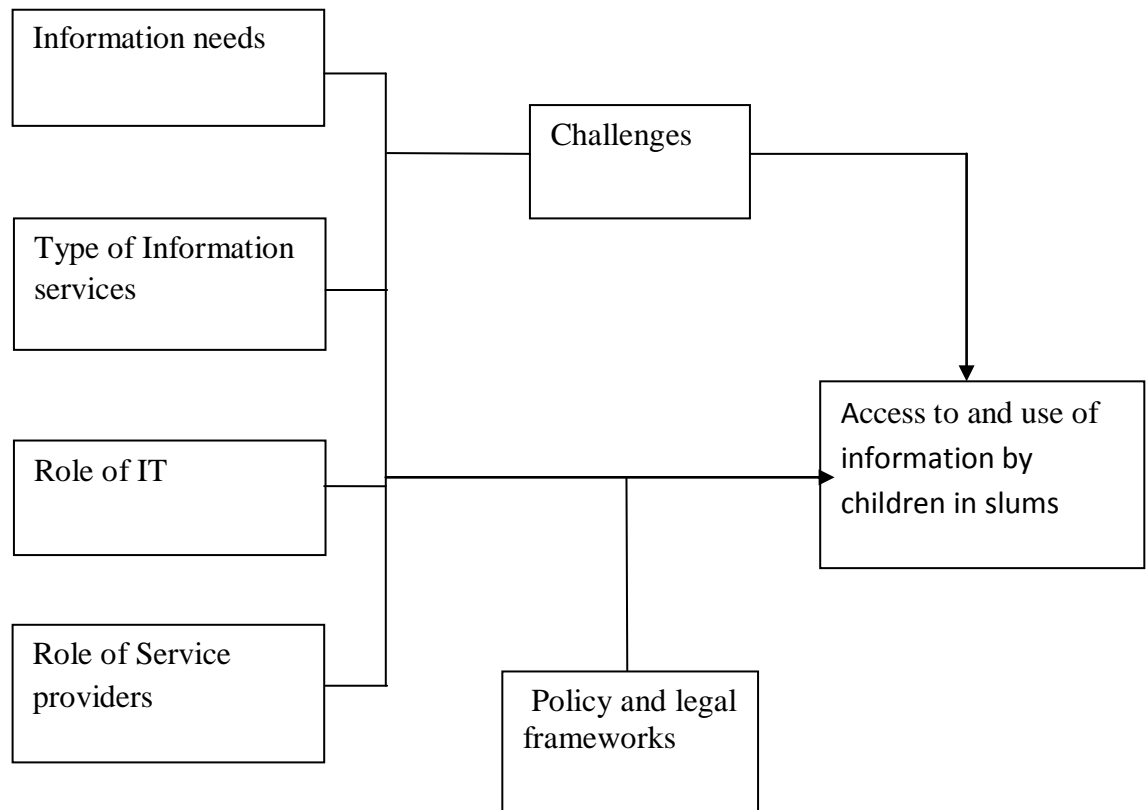
Independent Variables   **Moderating Variable**   **Dependent Variable**

Figure 3: Conceptual Framework. Source: Author (2014)

2.4 Children's Information Needs and Services

The concept information need has been seen by numerous scholars as abstract and intangible (Case, 2002; Maepa, 2000 & Kaniki, 2001). The abstract and intangible nature of information need is attributed by these authors to the difficulty defining the concept clearly. Case (2002) defines information need as a recognition that one's knowledge is inadequate to satisfy a goal that one has. On the other hand, Kaniki (2001) says information need is a lack of desired commodity (that is, information) necessary to deal

with a situation as the individual sees fit. An information need arises when a person recognizes something is wrong in his or her state of knowledge and wishes to resolve it, for example, the pupils constantly find themselves in need of information to write assignments, essays, tests and any other academic related information. A need therefore, implies that something is inherently indispensable and cannot be done without and that an information need is situation specific (Maepa, 2000). User's information needs are ultimately a need to resolve known gaps in their knowledge. Resolving user's information needs involves identification of relevant information for the task at hand. If use of identified information is hampered, resolving known gaps in knowledge also fails. In this way use of information is directly related to understanding and meeting the information needs of users (Dervin, 1976; 2003; Dervin, & Nilan, 1986).

Odini (1993b) identifies some general factors of informational needs. They include:

- What source is required and what format does the user want?

- Any background information on the user (e.g. motivation, occupation, location)?

- The social, political, economic factors which could affect a search.

- What will this informational need be a consequence of?

When a child gets the right information, she or he will be able to utilize those services to assist with her or his academic career and combat all forms of social deprivations. Thus, in order to meet the individual and specific needs of children in slums there must be available a full array of program options and services.

Information use is a behaviour that involves individual use of information in order to meet his or her information needs. Individuals do not use all the information they need

partly because they are not always able to obtain what they need, partly because the materials may not be relevant when they obtain them or partly because individuals sometimes do not know what they need. For the information seeking behaviour process to be complete, the information found must satisfy the user's needs, failure to which the search process must start all over again (Seyama, 2009). A challenge facing libraries is to develop and update collections and services to meet the needs of the multiple generations of users with differing approaches to information seeking. To remain relevant in this environment, libraries must provide services that match the information-seeking habits of a new generation (Connaway, 2008).

Palaniandy (1998) says that children have numerous information needs but information sources do not meet most of these children's information needs. Sex education, safety related information, emergency procedures, living skills, social awareness, and information on computers are the common unmet information needs of children. Children are found to be information poor in general. Lack of communication and ineffectiveness of the information providers are perceived to be the main reasons for these children not getting the information they need. Parents need to be well informed and trained first on the aspects of child caring and information environment of children. Other parties concerned with children are also urged to play an effective role to improve the present situation. Reading and literacy are necessary skills in order to communicate and their value must be constantly reinforced.

William I. Fletcher, a library administrator from Hartford, Connecticut and one of the founders of the American Library Association (ALA), in 1876 viewed a first concern over the needs of younger readers. He urges librarians to reach the young as early as possible (Anderson, 1987). The question is whether the needs of children in Nairobi slums are being met and at what level?

Libraries have always advocated that the child patron of today is the adult patron of tomorrow. The need to foster the 'future client' is an important one and it can be argued that the library has some social responsibility towards ensuring that the children of today are equipped to lead the world of tomorrow.   The young are an important client group whose needs must continue to be met and not overshadowed by the demands placed for services tailored to an ageing population. Now is the time for libraries to be concentrating on developing services for children, as it is the children who will be responsible for delivering the support services, the social-economic wellbeing and the political structure that will make it possible for the elderly to live well.

The scale and nature of a library's information services are determined by the allocation of resources to and within the library service. Children's services should be taken as important and treated equally with those for adults. In the slums areas the allocation of such funds is wanting.

Libraries must take the initiative for improving children's reading by working in conjunction with other agencies. Perkinson (1993) states that public libraries have many services and programs that can help School-Aged Children, parents and the people who care for them. These include:-Information for schoolwork; Recreation; Read-aloud

programs and books and other materials. Informative nonfiction books should be available as well and that sense of wonder and curiosity behind children's endless questions should continue to be encouraged as the kids grow older.

The school library on the other hand is a vital tool for a child for it provides support for the educational process as well as self-education and leisure reading. Apart from basic information needs, there are personal or individual needs that arise as a result of the situation in which the child finds himself/herself. The child is motivated to seek information related to his/her situation, which is goal directed, since he/she is aware of a gap in trying to solve the problems encountered in everyday life within the family environment (Mahwasane, 2008).

 Learners' information needs arise from tasks set by the teacher as well as the requirement for additional reading materials in schools. The critical perspective of the world among older children awakens the child's ability to think in a realistic way. Aspects raised in the classroom environment and the urge to expand knowledge concerning a topic could motivate the child to seek additional information on his/her own and this can arouse the inherent curiosity of the child (Mahwasane, 2008).

 The information needs of children change as they develop. At ten years of age children are especially receptive to information that will give them mastery over an uncertain world. They are also able to learn critical thinking skills that will enable them to evaluate information. Children and adolescents' information books should include the presentation of simplified principles and theories which lead to interpretation and evaluation (Fourie, 1991).

Walter (1994), states that children as part of the society need socialization and education. They have their own self-determined information needs and also they have a self-generated questions imposed on them by other children and adults. They have a very limited world experience and they are not fully developed physically, cognitively or socially.

A large number of the people in developing countries cannot read and write because of low education levels. They depend on their memories as their storehouse of knowledge as they cannot use written text. Because of their inability to read and write, they depend mostly on the human mind instead of recorded knowledge. In addition, a contributing factor to their ignorance is that most of them do not know they have information needs. (Mahwasane, 2008). Most children in Nairobi slums fall in this category.

Odini (1998), laments that there exists little documentation in Kenya on the use of information by the school population. He complains that there is too much dependence on 'chalk and talk' with little library usage, since students/pupils do not need to obtain ideas from various sources to pass examinations. This he says is unfortunate since it is in early life that a taste for books and the habit of using libraries and their resources or educational materials are most easily acquired.

Kenya has a fairly good information infrastructure which forms a solid base on which information services can develop and flourish. Information services are viewed as vital resources for national development. However there is need for improved access to information by the various user groups and for the availability of information at the right time and in an appropriate form. It is lamentable that information systems in the country

are so much under-utilized owing to various factors such as the prevalence of information services which have been designed without a proper analysis of the needs of users, high levels of illiteracy and language barriers. There arises a need for information experts in Kenya to stimulate the use of information if serious attention is to be paid to the information needs of the various groups and the communication process among each group of the user community. Kenya's national information systems comprise the nation's libraries, documentation centre's, archives, records centre's and learning resource centres. These systems are supported by other agencies dealing with the generation, enumeration, and transfer of information such as the publishing industry, statistical bureau, telecommunications, informatics and the mass media (Odini, 1993a & 1998).

2.5 Information Seeking Behaviour

Information seeking is a conscious effort to acquire information in response to a need or gap in one's knowledge. During the information seeking process, several factors are at play such as identifying, choosing and locating a likely information provider that will satisfy the information needs of that particular person (Case, 2002).

Maepa (2000) clarifies the concept as one which is concerned with who needs information, what kind of information is needed, the reasons for its need as well as how that information, once found, is evaluated and eventually used. Everyone has a different set of strategies for finding the information they need for their daily living. Information seeking behaviour is viewed by Wilson (1999) as a broad term encompassing the ways individuals articulate their information needs, seek, evaluate and select. Wilson (1999) further elaborates that information seeking is purposive in nature and is a consequence of a need to satisfy some goal.

Lu (2010) in her study explores students' use of "information seeking" to cope with their day-to-day personal stressors and problems. Five major different information seeking behaviours related to coping emerged from her findings: information seeking for problem solving, information seeking to escape; information seeking for a transition; information seeking to change mood and information avoidance.

The initiation of the search process can be clouded by children's uncertainty about defining or articulating an information need. They can also experience particular difficulties in as far as formulating their information needs is concerned. They are also likely to experience needs which are not met. They also experience difficulties in as far as finding and interpreting information about books in the catalogue as well as locating specific books on the shelves. Recognition memory develops before recall memory and as a result children are more likely to recognize such a term independently (Kuhlthau, 1993). This means that children particularly in slums can have difficulties in articulating their information need, whereas they can recognize one if it is suggested to them.

2.6 Reading Habits

According to Sangkaeo (1999) the term reading habit refers to the behaviour which expresses the likeness of reading of individual types of reading, and tastes of reading. It is a pattern with which an individual organizes his or her reading. Reading is important for everybody in order to cope with new knowledge in the ever changing world (the technological age). The ability to read is at the heart of self-education and lifelong learning.

Children use different sources to obtain information as they have self-identified information needs and wants. Most of the information which is provided to them is that type of information which they have not asked for (Walter, 1994). In developed countries children receive information from well-meaning adults as well as from other sources such as television and their peers. These are their two main sources. Some children regard other children as their most important source of information. On the other hand, adults are also regarded as information providers in children's lives. For example, the teacher will provide the child with information concerning world geography; the police officer will concentrate on information about the dangers of drug abuse; the nurse provides them with information concerning AIDS; the church minister will provide them with information concerning ethics or morals (Mahwasane, 2008).

The young people tend to get their books from whatever source they can easily obtain at that moment. In advantaged schools, where both class libraries and school libraries exist, pupils have the opportunity to borrow from the class library as well from the school library. Children in developed countries have many appropriate sources of information such as parents, extended family members, teachers, and helping professionals of all kinds. However, in most developing countries most of information providers do not have accurate information or the ability to provide information effectively to children. Even information-literate parents do not have time to communicate all the information needed by children. Some of these information needs are sensitive and difficult for many parents to talk about their children, with sex being the most sensitive (Walter, 1994).

Sangkaeo (1999) laments that reading culture in sub-Saharan. Africa is not encouraging. Based on this, he clearly states that Africa is not a reading society but a chatting society

and that Africans prefer listening and chatting more than reading. The reading habit of children in Africa is hence slowly and surely waning. This is due to the fact that there have been poor reading cultures of Africans generally and other glaring factors like non-availability of reading materials (Telly & Akande, 2007). According to Choudhung (1990) reading habits are best formed at a young age in school, and once formed, it can last one's life. The importance of reading cannot be overemphasized. This is because reading habit plays a very crucial role in enabling a person to achieve practical efficiency (Telly & Akande, 2007).

Most people in Sub-Saharan Africa have less access to information materials and without proper access, it is hard to establish a reading culture, Children and adults need access to a wide range of reading materials to help them acquire and maintain fluent reading skills, broaden horizons, and think independently and critically. Improving access to relevant information and promoting a reading culture are a prerequisite for strengthening literacy skills, widening education and learning opportunities, and helping people to address the causes of poverty (Makotsi, 2005).

The non-progressive nature of literacy in almost all African countries is an issue that goes beyond schooling. This is because parents who cannot read themselves are unable to help their children to read and the vicious cycle continues. There exists various factors that hinder the development of reading habits by the pupils and these are considered as stumbling blocks to the achievement of quality basic education (Tella & Akande, 2007).

In Kenya, the discussion on reading habits mainly focuses on adults reading habits. Many people do not read beyond the newspaper (Chakava, 1998). Majority of the people live

below the poverty line and cannot afford to buy books (Pawlitzky, 2005). Most people struggle with the bare essentials of life such as food, shelter and clothing. From the background of this study it has been noted that people in the slums fall in this category. Information plays a vital role in the process through which the child becomes assimilated into society. There is need to examine what information materials slum children read and their attitudes towards reading. These studies shed some light on the reading habits of children which is the theme of this study.

2.7 The Role of Information Providers and other Agencies in Provision of Information to Children

Children need information to give them trampolines for their minds. Reading is power. Reading makes the mind strong and able to decide the direction of life. It makes you informed, and it gives the ability to understand other people and their culture. Reading opens the mind. Understanding of information makes one a better decision maker. This means power for poor people, and in the long run development for poor countries (Nilsson, 2002).

Mahwasane (2008) states that lack of education is a huge problem for the developing world, and information literacy have to be promoted. Therefore public and school libraries should be the main targets for aid from the developed countries in order to create a situation where the developing countries could reach the ability to help themselves. The Power of Libraries can make the difference between poverty and true development.

Public libraries play a crucial role in supporting literacy for much of their history. Libraries have often been seen as a place that people, particularly those who need special

assistance in developing literacy skills can go to for access to a wide array of print and media resources, as well as professionals who are there to help them navigate those resources (Celano & Neuman, 2002). Public libraries are strategically positioned to expose children to both print and electronic resources as well as meaningful language opportunities that are critical for reading achievement (American Library Association, 2000).

In addition, equality of access to information, services and materials has been a vital part of libraries' mission and ethics, as stated by the American Library Association's Policy 61:1:1 Library Services for the Poor. The policy supports promoting the removal of all barriers to library and information services, particularly fees and overdue charges. Policy 61.1.3 supports promoting full, stable, and ongoing funding for existing legislative programs in support of low-income services and for pro-active library programs that reach beyond traditional service-sites to poor children, adults, and families. Public libraries are particularly well-suited to provide slum children with the language-rich opportunities that help ready them for reading simply by offering the wide variety of materials and programs they do (American Library Association, 1990).

The Role of the School Library in raising the pupil's achievement should be emphasized by all information stakeholders. During the past twenty five years research have been conducted internationally endeavouring to identify and measure the impact that school libraries have on the development of children's' and adolescents' literacy skills. The IFLA/UNESCO School Library Manifesto (IFLA, 2000) sets forth that there is a meaningful relationship between the school library and learning and at its core establishes

that the provision of information and access to reading materials is fundamental to functioning successfully in today's society which is becoming increasingly information and knowledge based and that there is an established body of evidence that demonstrates that students achieve higher levels of literacy, reading, learning, problem-solving and information and communication technology skills when teachers and school librarians work as a team.

There is clear evidence that active reading programs initiated and encouraged by the school library can foster higher levels of reading, comprehension, vocabulary development, and language skills. Indeed, research spanning many decades highlight that when there is access to diverse reading materials, more reading is done, and literacy development is fostered (Todd, 2002; Moore & Poulopoulos, 1999; Kuhlthau, 1993). Libraries play a very special role in providing enrichment to students from disadvantaged backgrounds by providing additional help to develop skills to succeed (Williams, Wavell & Coles, 2001).

Both school and public libraries have a role to provide resources to complement students' curriculum and literary needs. There is a growing need for partnerships between school and public libraries which will shift the long-established emphasis that this responsibility is for the school libraries alone. In addition the impact that computer and information literacy has had in the community is driving the need for better partnerships between the school and public library. Similarly, the growing need for co-operation arises from the simple fact that no single library can provide every item needed in the information age (Brown, 2004). Public libraries are strategically positioned to expose children to both

print and electronic resources as well as meaningful language opportunities that are critical for reading achievement.

Recently, considerable researches have been undertaken in the United States to examine the growing importance of the roles and relationships of school and public library services. One of the major works is that of Fitzgibbons (2000) who explores the range of successful, co-operative relationships between such libraries in the context of United States government education reform policy and the goal of improving student learning. A co-operative relationship, it is assumed, will improve library services and provide children with better access to resources in their search for 'information, knowledge and learning. Fitzgibbons also assumes that it is the co-operative relationships between two separate institutional settings, and not joint-use facilities, which are the essential ingredients in achieving the educational reform and increased student learning that the United States government is seeking. Joint-use libraries also require purpose-built facilities and can only be established after extensive consultation with all stakeholders. For many libraries it is the general efforts at co-operation and collaboration which will enhance service delivery for children, particularly in relation to reference and information services.

General efforts at co-operation can include a shared vision, common goals and joint policies and procedures. With respect to school and public library partnerships in relation to reference and information services, Fitzgibbons (2000) identifies the following opportunities:-the sharing of information about respective resources; development of open communication channels; facilitating assignment alerts; joint collection development; the teaching of information skills and instituting homework help centres.

Research has also been undertaken into the linkages between school libraries and academic achievement. The idea that the public library has a social responsibility to provide equity of access to reference and information services to children was discussed earlier. It can also be argued that it should contribute to the learning process of the child by investigating and pursuing options which facilitate the best delivery of reference and information services to facilitate the child's learning. The public library can make an important contribution to children's learning (Jantti & Cox, 2011; Emmons & Wilkinson, 2011).

Odini (1998), states that various psychologists have emphasized the significance of childhood experiences in molding the adult. It is regrettable that there is no sufficient locally-published reading material for children in Kenya and also that in the country there is no official policy requiring schools to have libraries. School libraries are not given any official support from the government. Mutungi (2012) similarly laments that the status of school libraries in Kenya is not clear. Further he asserts that the Kenya's "Vision 2030", one of the strategies of ensuring quality education promised to improve the textbook to pupil ratio, by increasing textbook grant to schools. It is however not explicit as to whether the textbook grant will be to help to set up school libraries.

2.9 Legal and Policy Frameworks Relating to Information

Information has been viewed as one of the valuable resources for socio-economic, political, and technological development and is believed to be of serious concern to the nation. Nwalo (2000) views information to be a fifth factor of production which is by no means inferior to land, labour, capital, and the entrepreneur. This view strengthens the

need and urge for countries to have National Information Policy formulated for sustained developmental programmes, projects and progress.

McClure and Jaeger (2008) assert that Policy at any level is the set of government directives intended to shape decisions and actions of individuals, organizations, and government agencies. As such, policy can be established by legislation, executive orders, judicial rulings, guidelines and regulations, rulemaking, agency memos, signing statements, agency circulars, and other types of official statements. Uhegbu (2008) on the other hand says that policy is a plan of action, a statement of aims and objectives, especially when made by government.

A National Information Policy (NIP) lays down guidelines to regulate information through management, access, storage, retrieval and timely dissemination to target users. Information policy includes a range of issues related to freedom of information, privacy, secrecy, security, intellectual property, and information and communication technologies (ICTs) while in the same vein Oladele (2001) puts it that National Information Policy is a framework for developing the information holdings of a country. It is a statement of mission or intention on how the information resources are to be harnessed, processed, and geared towards development processes of a country with the main aim of putting order into the chaotic webs of information. Information policy can be formal as well as informal. Formal information policy is articulated into a document that is made available to individuals to lay their hand on, while informal information policy is not codified but implied (Jaeger, 2007).

Arnold (2004) proposes six considerations for the development of national information policy. These are:-

- Socio-economic development;

- Public policy on the application of information;

- Access to and the availability of information;

- Social factors; and

- Economic factors.

Further, he insists that governments need to consider all of these factors when they develop national information policy that will benefit socio-economic development. The increasing awareness of information as a valuable national resource since the period after the Second World War has influenced many countries to develop national information policies. The national information policies that have been developed tend to have a particular focus and aim according to the circumstances of each country and in accordance with the approach of each country's government. Such a policy is also a reflection of how information is valued by the particular government as a commodity or resource.

Governments encounter inherent problems in the field of national information policy. These problems interact with political, economic, social and cultural factors, which influence how governments respond to them and the response changes over time (Orna, 2008). The major issues relate to:-

- The nature of information itself. Oppenheim (1996) suggests that governments find it difficult to get to grips with information policy because they have a problem with defining information, which arises from the fact that it is dynamic

and innovative, and has social and economic implications – all of which make it hard to handle. That difficulty is not limited to governments.

- Power relations. Information policies, on both the national and organizational scale, entail relations between groups of people who are parties to them in some way. There are differences in the relative power enjoyed by the various groups, as between, for example: individuals/organizations subject to legislation which is part of the policy, and the government which determines the policy; vendors information communication technology (ICT) solutions, and those who have to use them in the organizations that purchase them; industries with commercial interest in exploiting scientific research, and supporters of free access to it (Muir & Oppenheim, 2002).

- Economic issue of market orientation vs. public good. There is what Koenig (1995) describes as an 'under-recognized' tension between those two views of information. On one hand, information 'doesn't exist in any meaningful sense in a wild state' so ownership should be vested in the creators, distributors, etc. who added the value by putting it into products/services. But on the public-good side, its unique characteristic is that it can be replicated or disseminated at costs that are marginal compared with those of creating it; and that leads to the argument that 'society would be daft' not to encourage the widest/cheapest distribution possible. He observes that changes in IT, from the early 1990s on, both strengthen the argument for the public-good view, and drive forward competition in using IT to create and manipulate information, with tension among stakeholders fiercer than ever before. An accurate prediction; and the tension is still with us.

- From formulating the policy to managing action. The transition from formulating policy to implementing it is another big challenge. Those who issue policies or directives to establish policies may have little conception of the work of the people who have to wrestle with putting into practice the stream of policies and initiatives (Orna, 2008). A National Information Policy needs provision of necessary means or instruments such as financial, personnel and institutions for concrete implementation.

In most developing countries there are no organized national information policies as such. Primary information is provided directly by organized information agencies in developing countries, such as libraries, documentation centre's and archives, broadcasting corporations, departments of information and telecommunication, culture, education, external affairs trade and commerce, industries, finance planning, tourism and government printers. These results in unnecessary duplication of effort since these organized information agencies are not coordinated. The main challenge is the tremendous cost of running such organized information agencies effectively and efficiently. There are costs involved in installing and using communication facilities, television sets, video cameras and tape recorders, developing a computerized database and running the production of posters, leaflets and booklets. The other challenge in developing is the difficulty experienced in fostering inter-agency cooperation as well as liaison (Adimorah & Ugoji, 1997).

Odini (1998) asserts that Kenya has no comprehensive information policy but it has several sectoral policies in the form of legislation, regulations and guidelines, covering,

public libraries (Kenya National Library Service (KNLS) Board Act); archives (Public Archives Act); deposit material (Books and Newspapers Act); Sessional Paper No. 5 of 1982 dealing with science and technology information; and District Focus Circular No. 1/86 on the establishment of District Information and Documentation Centre's. Other relevant laws include the Copyright Act, Universities Act, Education Act and Sessional Paper No.6 of 1988.

Ayoo & Otike (2002) observes that several factors hampered the formulation of a national information policy in Kenya. These factors relate to poor recognition of the importance of information, funding shortages, weak infrastructure, lack of qualified manpower, information illiteracy and lack of commitment within the information profession.

The development of a national policy on the acquisition, management, and use of information can only be driven by recognition of the value of information as an important national resource. For a long time, both the government and the public have not recognized information as an important component in the development process of a developing country. For this reason, most of these countries have not paid much attention to the development of any information infrastructures alongside the other sectors of the national economy such as agriculture, industry, education, health, etc. A change of attitude has to take place amongst the policy makers in Kenya if information matters are to be treated with any seriousness. The recognition of the importance of information will go a long way in ensuring that matters pertaining to its development are given maximum attention (Nyokabi, 2007).

Orna (2008) states that over the years the discipline of information science, and its practitioners, has contributed a body of information policy research both theoretical and practical, much of it based on study of how organizations think and behave. Their research has built up a strong case for information policies, and has provided evidence of how to achieve and use them, on both a national and organizational scale. They have recognized, from the earliest days, the potential and risks of what is now called the digital revolution; and the thinking of those whom the brief for this issue calls 'founding players' and their successors has played a leading part in efforts to narrow the gap between information communication technology (ICT) and information content, between socio- and technical approaches.

2.9 Role of Information and Communication Technology in Access to Information

Information and communication technologies (ICTs) comprise innovations in microelectronics, computing (hardware and software), telecommunications and opto-electronics (study and application of electronic devices that source, detect and control light). These innovations allow the processing and storage of large amounts of information, along with rapid distribution of information through communication networks. Information communication and technologies (ICTs) include computers, the internet, telephones, radio and television. These technologies help in the timely delivery of information, shorten distances and eliminate hierarchy and geographical boundaries. This leads to reduced costs of operations (Adeya & Cogburn, 2001 & UNDP, 2001).

Information communication and technologies (ICTs) empower people with the ability to communicate instantaneously, which is known to facilitate the development process by increasing efficiency, effectiveness and equity and are now regarded as an important tool

in development, which is increasingly becoming technology-oriented, and success in the global economy depends on access to information and communication technologies (Adeya & Cogburn, 2001 & Yonah, 2002). Information communication and technologies (ICTs) have been the driving force behind the global information society, in which information work predominates and information is regarded as a valuable resource. An information society is a society in which the creation, distribution and manipulation of information is a significant economic and cultural activity and where the production, distribution and consumption of knowledge and information are the driving forces for change (Dordick & Wang, 1993). The information society is made possible by ICTs and is characterized by networking forms of activities in economy, society, politics and culture, which Castells (1996) referred to as the networked society.

Information communication and technologies (ICTs) are viewed as powerful tools for socio-economic development (UNDP, 2001; Gills & Mitchel, 2002). The World Bank (1998) and UNDP (1999) agree that information communication and technologies (ICTs) have the potential to improve the welfare of the poor by providing opportunities to increase social capital; improved availability of market information; creation of new economic opportunities; improved economic efficiency and competitiveness; better access to health and education facilities and more efficient and effective governance. Information communication and technologies (ICTs) have in fact made a new development paradigm possible (Hilbert, 2001). The role of information communication and technology (ICT) in fostering development and addressing the needs of the poor has been the subject of heated debate in recent years. This debate has been attributed partly to

a high failure rate of the ICTs for development projects, especially in developing countries (Heeks, 1999; Maepa & Mphahlele, 2004).

Various challenges involved in leveraging information communication and technologies (ICTs) in poor countries which, in most case are overlooked or not taken seriously by the proponents of information communication and technologies (ICTs) for development projects, is another source of controversy. The extent to which information communication and technologies (ICTs) can be used to reduce poverty in poor countries is strongly contested (Heeks, 2005a & Wilson, 2000). Critics of "ICTs for development" say that information communication and technologies (ICTs) are a waste of money, given the many other pressing development issues; that it would be best to divert resources from information communication and technology (ICT) development towards areas of greater impact and real need; that human beings face the risk of disillusionment with information communication and technologies (ICT), as information communication and technology (ICT) projects do not bring the benefits claimed; they also say that information communication and technologies (ICTs) will not benefit but instead will harm people, by opening up new avenues for exploitation (Moodley & Cloete, 2004).

Those who Support the information communication and technologies (ICTs) for development view are generally saying that the divide between those who have access to ICTs and those who do not will become even greater if information communication and technologies (ICTs) are not promoted; that information communication and technologies (ICTs) will support other sectors in the economy and people's lives will improve through investment in information communication and technologies (ICTs) ; that information

communication and technologies (ICTs) are precisely the tool to bring everyone into the "information age" and so ensure that the benefits of this form of social organization are shared (InfoDev, 2006 & Heeks, 2005b). On the other side of the debate there are those who feel that, if used wisely, information communication and technology(ICT) can be effective in addressing development objectives, including the economic and social empowerment goals of the poor (Moodley & Cloete, 2004). Despite these developments the fact is that the gap between those who have access to ICTs and those who do not and between people living in urban areas and those living in rural areas of developing countries is still large (Bridges, 2003).

Within the context of development, information communication and technologies (ICTs) are regarded as tools for socio-economic development and sustainable livelihoods (Lewis, 2004). The ability to use and adapt information communication and technologies (ICTs) is regarded as a critical factor for generating and accessing wealth, power and knowledge, which can be used to achieve socio-economic development. Information communication and technologies (ICTs) may also cause inequality, fragmentation of the society and social exclusion for those who are not able to use information communication and technologies (ICTs) and participate in the network society. Disparities in the use of information communication and technologies (ICTs) generally known as the digital divide, exist throughout the world between rich and poor countries and between specific groups of people (Castells, 1998).

With rapid changes in technology, there is need to transform the school libraries from being print rich to embracing new technologies. The role of the 21st century school library has evolved as a result of the exponential growth of information, rapid

technological advancements and the challenge to contribute to student achievement (Koechlin, Zwaan & Loertscher, 2008). ICT provision in the school library widens the range of material or information available for the users and makes access to it quite easier

Information communication and technology (ICT) is an enabler in facilitating learning and accessing information. Its potential for increasing the range, relevance and accessibility of information and communication used in schools is significant. Equally important is its potential for supporting teacher librarians in their everyday roles and in their continuing training and professional development. A wide range of information communication and technology (ICT)   tools are now available, e.g. computers, the Internet, and other software, television and radio, video, cameras and other equipment, to aid the teacher librarians. Through the advances made through technology, the walls of the classroom and the library have expanded to include the entire world. One could say that we have a global internet library (Breivik & Senn, 1998).

The teacher librarians are supposed to act as users, deployers, and advocates of information communication and technologies (ICTs)   for effective information delivery in 21st century school communities. In addition they need to acquire the relevant technological expertise and be prepared for the challenging and dynamic nature of information communication and technologies (ICTs) in the realm of teaching and learning. A key focus of school libraries is to ensure equitable access for all school community members to engage in the world of technology-enhanced information environments. School libraries embrace the continual development of new technologies and the opportunities they afford to improve efficiency and increase access to information

and recognize the potential to foster lifelong learning, personal learning goals, inform decision-making, build knowledge capacity, innovation, creativity, inquiry and cultural continuity. School library programs are constructed with the knowledge that rapidly changing structures and the complexities of ICTs require learners to acquire and apply a range of multimedia literacies (ASLA & ALIA, 2001).

Quek Sai Gearn (2009) asserts that the cornerstones of a good library facility design reflect a vision of how the school library and school library media specialists contribute to the complex process of learning and teaching in physical and virtual school library facilities. The new library spaces exist virtually and physically where pupils may explore, wander and seek new information and acquire information literacy, critical thinking and practical life-long skills.

The application of information communication and technologies (ICTs) in Africa continues to produce, a new class of well-informed and knowledgeable citizens who are empowered to actively participate in decision making at all levels. For example, information communication and technology (ICT) has exposed African people to new experiences and practices, which continue to influence their socio-political and economic organizations. It is appreciated that the application of Information communication and technologies (ICTs) has improved productivity in various sectors of African economies (ASLA&ALIA, 2001).

Various challenges have been faced by developing countries regarding use of information communication and technologies (ICTs) in libraries. Chisenga & Abebe (2001) surveyed the use of information communication and technologies (ICTs) in public libraries in ten

(10) Anglophone African countries. The study revealed that all libraries studied pointed out lack/inadequate information communication and technology (ICT) personnel and lack of funds. Okiy (2005) points out poor and inadequate telecommunication facilities; poor level of computer literacy, poor level of computer facilities; poor level of awareness of Internet facilities among policy makers, government officials and the ruling class in general; and minimum involvement in network building in Africa as challenges militating against the use of Information communication and technologies (ICTs).

 In Kenya libraries face many challenges, ranging from funding to staffing. The progress towards information communication and technology (ICT) based services in libraries and distance education has therefore been rather slow for various reasons: -the high cost of information and communication infrastructure facilities; lack of technical expertise; poor computer literacy; poverty. Even though national absolute poverty declined, Kenyans especially in slum areas still have consumption levels that are inadequate to meet basic food needs. Kenyans falling within the poverty bracket will hardly visit or seek information communication and technology (ICT)   enabled library services if their basic needs are unfulfilled (Amollo, 2007 & UN- Habitat, 2010).

School libraries should grasp the opportunities presented by the application of new technologies to revolutionize. The most dramatic impacts have been in the expansion of the range of materials collected and made available, together with the ability to reach users regardless of geography. The hallmark of a school library in the 21st century is its actions and evidences that show that it makes a real difference to pupils learning, that it contributes in tangible and significant ways to the development of human understanding,

meaning making and constructing knowledge. The school library is about empowerment, connectivity, engagement, interactivity, and its outcome is knowledge construction (Todd, 1999).

2.10 Challenges to Access and the Use of Information

Numerous challenges have been faced in regard to access and use of information. These include:-

- Provision of children information services. Provision of reference and information services for children has received very little attention yet they require specific reference services and techniques to assist them access this information. Children compete with adults for the librarian's attention, an adult request may often be perceived as more important. Children lack experience, have limited vocal skills, have different information requests to adults and may even be too short to see over the reference desk. This does not mean that their request is not important to them (Brown, 2004).

- Lack of universal form of services. Titumir & Hossain (2004) says that universal form of services made available to all citizens on a uniform basis regardless of income, status or power are affected by financial circumstances, creating different levels of access and situations in which the urban poor are disadvantageous from the outset.

- Services not based on users' needs. Odini (1995) states that the prevailing information systems in the country have been designed without a proper analysis of the needs of users. The approach in user studies has been piecemeal.

- The language barrier. While linguistic and cultural diversity is part of the world's cultural wealth, it is also an important barrier in communication. An information service must be based on a language which is known to the majority of the potential readers. In Kenya, the multiplicity of tribes, large and small, each speaking its own vernacular, is a problem. It is clearly impossible to base a large information service on the small number of books in their own vernacular (Ngugi, 2009).

- Information infrastructure. A strong information infrastructure, which may enable people of any region or country to access global information, is lacking in most developing countries there is a lack of postal and telecommunication systems. Those that are available do not function properly. There is little funding, particularly foreign exchange, for the maintenance of channels of communication distribution. There is inadequate trained manpower and an absence of properly stocked libraries (Adimorah & Ugoji, 1997). This call for skill, knowledge up gradation and technological appropriation.

- Lack of sufficient locally published reading materials. As far as schoolchildren are concerned, it is important to catch them young. It is in early life that a taste for books and the habit of using libraries and their resources are most easily acquired. Psychologists emphasize repeatedly the significance of childhood experiences in molding the adult. It is to be regretted that there is not sufficient locally-published reading material for children in Kenya. There is an urgent need for librarians and other information professionals to discuss the library needs of children with teacher's parents and other stake holders and to encourage children to explore

library collections widely for books for pleasure as well as for assignments (Ngugi, 2009).

- The levels of literacy in sub-Saharan Africa are low. Some regions of a country in the African continent may have literacy rates as low as 20 percent or even lower. Slum areas tend to have even lower literacy rates in sub-Saharan Africa. This is due to poverty status in informal settlements (Ondari-Okemwa, 2004).

- Underdeveloped information communication and technology (ICT) infrastructure. Ondari-Okemwa (2004) further states that any knowledge-based economy would normally boast of well-developed information communication and technologies (ICTs). In sub-Saharan Africa, information communication and technologies (ICTs) are still quite underdeveloped.

Library information services could be re-oriented to be accessible to ordinary, poorer people. Librarians and information workers should be proactive in trying to meet information needs of all (Seetharama, 1990).

2.11 Empirical Studies

All People have a right to access to and use of information products and services. The current information environment is rich, characterized by a tremendous growth of information sources and providers, multiple methods for accessing information, and a redundancy of content from multiple sources but many information users tend to experience a sense of information inadequacy and anxiety (Prabha et al, 2007).

Most of the studies dealing with the problems of slums have highlighted that the slums have become an integral part of the city. They cannot be uprooted and removed (Davis, 2006; UN Habitat, 2003a & 2003b). Priority should therefore be given to the slum development programmes in improving the existing facilities of which education and information access and use is an important component.

Corradini (2006) asserts that at an international level, there is a significant body of research publications on specific themes related to some characteristics of children and young adult population. It has been envisaged that topics on which most of the researchers have mostly investigated are related to young people's reading interests, library services development, information literacy, and staff development. Some of them are reviewed to give a general view of accessibility and use of information by urban slum children and to see as to how different cities are dealing with the problem of information access and use in the slum areas.

Oltmann (2009) in his research paper entitled information access analyzes the research area of information access within Library and Information Science (LIS). He observes that information access is an important research concern of information ethics, within library and information science but it is underdeveloped conceptually, methodologically, and theoretically. The study asserts that information access is frequently linked to jurisprudential theories of freedom of speech. Further he observes this linkage and also explains how the three predominant jurisprudential theories of free speech: the marketplace of ideas/ search for truth, democracy, and individual empowerment relate to information access. The study defines access as the presence of a robust system through

which information is made available to all people. Such a system has physical, intellectual, and social components. Thus, information access is seen as a combination of intellectual, physical, and social elements that affect the availability of information to people.

The denial of access to information is not merely a denial of access to the ideas held by others or suppression of freedom of expression but it also marginalizes people's participation in the various economic political and socio-cultural activities. Poor and vulnerable groups often lack information that is vital to their lives; information on basic rights and entitlements, public services, health, education, work opportunities, public expenditure budgets, among others. They also lack visibility and voice to enable them to define and influence policy priorities and access resources (UNDP, 2003a).

McCreadie and Rice (1999a & 1999b) in their two articles generated a broader understanding of access by reviewing literature across six different disciplines. Their review, covered library studies, information science, information society, mass media, organizational communication, and economics of information. They discussed six different conceptualizations of access. These are summarized as:-

- Access to knowledge and its representations (this includes messages sent and received, printed and audiovisual materials, digital data, analysis and advice, and education). In LIS, this conception of access typically includes books, documents, periodicals, citations, and databases. The underlying assumption is that if people have access to an artifact, then they have access to the knowledge contained

therein. In individuals personal and work lives, "access to knowledge" can affect their quality of life and decision-making abilities.

- Access to technology, which primarily focuses on connections or interactions with particular technological systems or types of media. This argument parallels recent digital divide literature; distributing (more) technology to diverse areas does not necessarily improve the lives and opportunities of people.

- Access as communication is found in information science. According to this perspective, access involves making sense of and using information. This includes comprehension, retention, and decision making. Again, a compounding effect is evident: "communication competence is gained through access to and participation in communication practices," so those who gain access to information are likely to benefit more and gain further.

- The remaining three conceptions of information are found less frequently in the LIS- First, access can be understood as control, meaning "control of participation and of content and/ [or] control over who gains access to what information to whose advantage". Second, information access can also be conceptualized as "access to economic commodities or goods," implying that there are costs and benefits of access. Lastly, McCreadie and Rice (1999a & 1999 b) found that several disciplines consider access as a means to participation, particularly in the political process; here, information access includes rights, social power, and even the ability to benefit from accessing information. According to them, four of the six conceptualizations are present in LIS disciplines: access as knowledge,

technology, communication, and participation, though participation is rarely discussed.

They concluded with a challenging, though mostly unheeded, call for further research: with access underlying many different areas of everyday life and implicit in much research, we need to understand its dimensions in order to consider seriously its implications and to guide us in designing policies and systems.

Burden (2000) notes that there exists a connection between "access as knowledge" and "access as communication". He asserts that information has value only if it is accessible, if it can be read and understood, or if the user can gain new knowledge from it. "Access as knowledge" focuses on extracting knowledge from artifacts such as books or documents, and "access as communication" include making sense of and using information. Burdens argument combines these two into a single understanding of access.

International Reading Association (IRA) (2000) in its statement on providing books and other print materials for classroom libraries reported that access to books refers to the availability of quality literature in classroom, school community, or home libraries. Children with adequate access to books have many books to select from on a daily basis, both in and out of school.

In a similar study Elley (1996) provides evidence of the link between books and educational attainment. The study states that there are many potential benefits in a good book, provided it grasps and holds student's interest. Not only do students expand their language by reading widely, they also learn much about other times and places, stimulate

their imagination, gain insights into human nature, are able to follow their specific interests and hobbies and enjoy an escape from unpleasant realities.

Ramos and Krashen (1998) conducted a study on the value of using the public library to provide children more access to books. In this study 104 children from homes that had few or no books visited their local libraries monthly. The children had limited access to print outside of the 30 minutes each week during library visits. When visiting the public library, children were allowed to check out 10 books each. Some of these books were to increase the supply of literature in their classroom library, and some books were for taking to their homes.

Shenton & Dixon (2005) in their research explore the information needed by young children and teenagers in their everyday lives. Their major concern was the situational factors that must be appreciated if an adequate understanding of youngsters needs is to be gained. The situational factors identified may be grouped into five categories: those pertaining to the stimulus that has given rise to the need, those relating either to the manner in which the need develops or to its time-scale, those concerning the nature of the information itself desired by the individual, those associated with the users situation, and, finally, those involving the end product for which the information is required. This research Provides deeper insight into the nature of kids' information needs hence it is relevant for this study.

Yilmaz (2000) carried out a research on reading and library usage of the students whose mother tongue is Turkish in Vienna-Austria. Her aim was to identify in detail, the

problem of reading and library use. Secondly, she wanted to find out the effects of these habits on the students language development, educational achievements and consequently cultural adaptations. Her findings reveal that a majority of students do not have reading habits. Finally her study observes that there is no direct impact on cultural adaptation of the children.

On the other hand, Weinreich and Torbien (1993) carried out a research on children's reading habits and their use of the media in Denmark. Their interest was to find out how much children read during their free time, what they prefer to read and how they read. Their findings show that Danish children in the nine to twelve age ranges read quite a lot of books in their free time. Girls in this study were found to read more than boys. In addition, the results show that children whose parents read to them when they were small seem to read more books when they are older. Finally, regarding use of other media, the study showed that Danish children make considerable use of a wide range of other media such as radio and computers available to them.

Corradini (2006) conducted a study in Italy investigating the experiences, expectations and perspectives on library use. The study promoted greater understanding of the factors affecting library use by young adults. The key findings of the study were that young adults believe libraries are important institutions which they fancy as places where communication and dialogue is fostered. The study reports that in Italy there had been a limited acknowledgement of the importance of reserving special attention to adolescents.

According to Makotsi (2005) most people in Sub-Saharan Africa have less access to books or other learning and information resources, and without proper access, it is hard to establish reading culture. Children and adults need access to a wide range of reading materials to help them acquire and maintain fluent reading skills, broaden horizons, and think independently and critically. Improving access to relevant information and promoting a reading culture are a prerequisite for strengthening literacy skills, widening education and learning opportunities, and helping people to address the causes of poverty.

In Sub-Saharan Africa particularly, the problems of illiteracy, poor infrastructure and the scarcity of learning resources gravely limit the opportunities people have to learn. Information, services, and products should be equally, readily and equitably accessible to all library users. Those responsible for delivering library information services must consider issues of accessibility, information services, programming and use made of available information services. A library should provide services and materials that respond to the informational, educational, personal and cultural needs of the community it serves (Telly & Akande, 2007).

Darko-Ampem (2004) in a pilot survey in Botswana asserts that books impart knowledge to the reader, draw out and foster qualities such as imagination and self-understanding, and contribute to the child's mental growth by stimulating the senses of touch, sight and hearing---the three main channels by which people learn. The author discusses the issue of child development, children's rights, socialization, gender and race stereotyping. He emphasizes the potential of literature for children, not only for making them aware of the pluralistic society around them but to help them understand the people of the universe.

Access to books refers to the availability of quality literature in classroom, school community, or home libraries.

Mabuza (2005) using reader-response theory carried out a study on the reading responses of six enthusiastic teenage readers in South Africa. Her aim was to explore whether the Siyagruva series of books published by New Africa Books from 2002 onwards, fill a gap. The gap here refers to the gap in the teenage book market in South Africa that the New Africa Book Siyagruva series of books set out to fill when its first books were published in 2002. The gap also refers to the needs of South Africa teenage readers for books that reflect issues that interest them at this stage of their lives. In addition she set out to investigate reading preferences and choices among the teenagers. Her study reveals that the books do fulfill a need in the readers and that the readers read about real issues and situations that reflect their own lives. She notes that the participants in her study liked the idea of a series of books with the same characters that they like and identify with. In addition, the children found the appearance and style of the books appealing. This makes them want to read all the books in the series. This study gives insights into how and why children choose specific books.

In a research conducted in Uganda by Magara and Nyumba (2004), it is reported that a right to education implies a right to access information. The research further elaborates that libraries and other related information services were crucial in educational development because the information they hold is an essential tool with which to foster the learning process. More broadly, one of the national objectives of the Government of Uganda is to afford every citizen equal opportunity to attain the highest standard of life

possible, as stated in the Constitution of the Republic of Uganda. The study reveals that the White Paper on the Education Policy Review Commission report of the Government of Uganda, provides for the: promotion of scientific, technical and cultural knowledge, the skills and attitudes needed to promote development; and eradication of illiteracy and the equipping of the individual with basic skills and knowledge to exploit their environment for self-development as well as national development.

A study carried out in Botswana by Telly & Akande (2007) examined children's reading habits and the availability of books in Botswana primary schools. Inadequate book availability, lack of interesting children's literature and watching television were identified as factors hindering pupils from developing reading habits. The study asserts that a child can know much about his own environment only if exposing him or herself to reading books, newspapers, and magazines. As the child is exposed to reading and develops the love for books, he finds it easier to explore the wealth of human experience and knowledge. During childhood, it is possible that children miss the opportunity of getting in touch with books and find it difficult to form reading habit at the later years. This is based on the belief that reading children become reading adults. The study adopted both quantitative and qualitative methods which gave insights to the present study.

Ngugi (2009) observes that in Kenya, user studies on children in slums and in general are scanty. Most empirical studies have dealt with adults reading habits, children's literature in specific languages and education, (Chakava, 1998 & Mbae, 2004). These discussions reveal a reading deficiency abounding in Kenya (Pawlitzky, 2005). These researches

argue that many people do not read beyond the newspaper and that Africans do not read beyond completion of their formal education unless it is for professional achievement (Chakava, 1998). It has been observed that majority of the people live below the poverty line and cannot afford to buy books (Pawlitzky, 2005). Most people struggle with the bare essentials of life such as food, shelter and clothing. Literature plays a crucial role in the process through which the child becomes assimilated into society. Kenyan children are exposed to various books, hence the need to examine what they read and their attitudes towards reading. These studies shed some light on the reading habits of children which is a major theme in the present study.

Mbae (2004) in his study observes that most schools in Kenya exist for one reason only; to teach pupils and students how to pass examinations. He says that schools do not teach pupils how to read beyond examinations. He points out that, schools with their textbook oriented teaching method have contributed to the pupils and students hating reading instead of teaching them the art and value of reading.

Ngugi (2009) in her study investigated the state of children's literature in Kiswahili in primary schools in Kenya by examining the reading habits of pupils both in school and at home. The study highlights the following aspects: attitudes towards reading, the amount of reading materials available to pupils both at school and at home, the accessibility of the reading materials, the frequency of reading for pleasure, the reading environment that pupils are exposed to and any other activities that pupils engage in that contribute to enhancing and maintaining of reading habits. In addition, the study also investigated the role played by other stakeholders in developing and enhancing reading habits in pupils.

These included: head teachers, Kiswahili teachers and parents. In her study she applied Cognitive Development Theory in order to understand the cognitive development of children in relation to the literary competence of the child. The Social Learning theory was also applied in relation to the learning environment of the pupils and finally Reader Response theory was used in order to describe the responses of the pupils to the literature they read. The study therefore has a reader-oriented perspective that informs the current study.

Odini (1995) in a research paper in a New Library World journal Identified some of the factors that hinder information use in Kenya as the prevalence of inappropriate information systems, an un-stimulating education system, high levels of illiteracy and the language barrier. The researcher makes various recommendations for the stimulation of information use in the country, including paying more attention to the information needs of the user community and the communication process among each group of the user community. He challenges information experts in country Kenya to conduct qualitative user studies research which would lead to the design of improved information systems.

This study has benefited from these studies in that their documentation of the kinds of questions they asked in their questionnaires provided an insight into thinking about the kind of information that was needed in this study and hence the questions to ask the respondents. In addition, the studies provided insights into the whole concept of accessibility of information services and information needs among children. The present study seeks to make a contribution by filling the gap that still exists in the Kenya.

2.12 Information Gap

From the literature survey conducted, it has been revealed that there exists a significant body of empirical studies on specific themes related to some characteristics of children and teens population. Unfortunately, most of these studies are concerned primarily with young people's reading interests, library services development, information literacy and staff development (Weinreich & Torbien, 1993; Ondari-Okemwa, 2004 & Perkinson, 1993). As far as the Kenyan situation is concerned, no research has been done on access to and use of information by children in slums in Nairobi County.

The present study broke new ground by specifically focusing on the contribution of information services on alleviating social deprivations of children in slum areas.

Moreover, Dresang & Gross (2001) asserted that children are a marginalized user group. Adults talk about them but rarely talk to them, either in the planning of resources and services or in their evaluation hence they are rarely acknowledged or regarded the child as an active participant in constructing knowledge. This study's key informants were school children. This study therefore, has attempted to fill the gap by illustrating the absence of adequate information services in the slums and providing propositions on ways of filling the information gap.

2.12 Chapter Summary

This chapter provided information on the purpose and the importance of the literature review. The chapter discussed different models in information seeking and retrieval studies. These include:-information behaviour, information seeking behaviour, accessibility and use.

The literature review covered the origin and the way in which knowledge has been built up in the field of accessibility and use of information to alleviate social deprivation and identified important trends and the debates and controversies in the field. The literature review was organized thematically, by using themes and sub- topics related to the study. Previous studies facilitated the identification of gaps in the literature.

Reviews of previous studies revealed that User's information needs are ultimately a need to resolve known gaps in their knowledge. As argued earlier in this chapter, resolving user's information needs involves identification of relevant information for the task at hand. If use of identified information is hampered, resolving known gaps in knowledge also fails. In this way use of information is directly related to understanding and meeting the information needs of user.

The chapter also showed that access to information means the removal of cultural, physical, social and other barriers that prevent disadvantaged children from entering, availing, using or benefiting from the various information systems and services that are available to other people. Consequently all efforts should be aimed at having universal access to information for children in slum areas.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter seeks to give an accurate description of the research design and the methodology used during the research. Case study approach, using both quantitative and qualitative data collection methods was employed. A description of the study population and the sampling procedures that were used are also discussed. The chapter covers the methods of data collection and the data collection instruments that were used in the study and discusses validity and reliability issues applied to the study, ethical considerations, and procedures for data presentation analysis and interpretation.

3.2 Research Design

Research design is a plan or a blueprint of how a researcher intends to conduct a study (Babbie & Mouton, 2001). It is a plan for the collection, measurement and analysis of data, with the central goal of solving the research problem. It includes the outline of what the researcher did, from writing the hypothesis and its operational implications, to the final analysis of data (Creswell, 2003).

3.3 Choice of Research Paradigm and Methods

Creswell (2003) recommends the selection of a theoretical paradigm as a starting point for social research. Research methodologies revolve around quantitative or qualitative approaches. Each approach has distinctive characteristics, advantages and disadvantages.

Tashakkori & Teddlie (1998) in their study show the conflicts between these paradigms which they say developed almost into heated discussions over the relative merits of the opposing worldviews or belief systems. In the social and behavioural sciences, these have typically been positivism and constructivism. The fundamental question for the researcher is one of quantitative or qualitative approaches. The quantitative approach involves collecting numerical data that can be counted while the qualitative approach involves methods that collect verbal or textual data. The qualitative methodology is thus, mainly concerned with how ordinary people observe and describe their lives.

Stake (1995) states that the distinction between the qualitative and quantitative methods is a matter of emphasis – for both are mixtures. Social Science researchers recognize the compatibility of qualitative and quantitative methods (Berkowitz, 1996). Combining methods can compensate for the possible limitations of a single approach. Crotty (1998) and Corradin (2004) state that the strong dualism in social research has been progressively softened in favour of mixed method approaches, which can generate the best balance among the various methods available to increase knowledge over a phenomenon.

Both approaches can be effectively combined in the same research project and this is in part due to the realization that the complexity of society cannot be understood from a single perspective and that is why multiple perspectives have become important elements in modern social science research. The necessity of overcoming the dualism was felt to grant a future to survey research that aimed to ensure the comparability of answers gathered from different respondents as reminded by Corradin (2004). Thus, it is now

widely accepted and even encouraged that the choice of the approach depends on the research questions, along with identified constraints. This means that also a pragmatist orientation can be recognized (Crotty, 1998).

As observed by Tashakkori and Teddlie (1998), mixed models can be used either in all phases of the research process (conceptualization, data collection, data analysis, inference), or in some of these. Creswell (2009) distinguished among three subtypes of mixed methods research—qualitative dominant, pure mixed, and quantitative dominant. Thus, the role of the qualitative in mixed methods research might be (1) equal or interlaced; (2) lead or dominator (3) uniquely separated and later combined.

After having analyzed the research questions as to the best methods to be used to fulfill aims and objectives of the study, the choice of a suitable paradigm will justify the theoretical perspective, and endorse the methodology and the methods used for the research (Corradin, 2004).

The study used a combination of quantitative and qualitative methods of inquiry. Qualitative-dominant mixed methods research, the type of mixed research in which one relies on a qualitative, constructivist-poststructuralist-critical view of the research process, while concurrently recognizing that the addition of quantitative data and approaches benefited this research.

For the present study, after having considered the various epistemological positions and theoretical perspectives from the works of Dervin (2003, 1992, 1983), Crotty (1998), Creswell, (2003 & 2009) & Patton (1990), the researcher adopted the constructivist

approach. This is because this study investigated how children construct and give meaning to their actions and reality, their reported perceptions, truths, explanations, beliefs, and worldview, their interactions with library staff and information services and the consequences of their constructions for their behaviours and for those with whom they interact. The prevalence to the qualitative aspects was given so as researcher could conduct an in-depth study on access and use of information by children in slums and generate practical, real-world solutions with my research as it was intended.

Interpretative research was used in an exploratory fashion to investigate the factors that affect access to and use of information by children in Nairobi slum areas. The lack of prior research and the desire and need to explore the opinions information professionals indicates that an interpretative study had to be done

3.3.1. The Constructivist Approach

Constructivism involves the ability of each person to give a unique meaning to a phenomenon. Thus, each interpretation is equally valid and appreciable, since the world is framed by our cultural and linguistic constructs. Evaluations will tend to make comparisons among different subjects or groups, as to interpret data gathered, without giving more significance to one set of data (e.g. teacher librarians vs. pupils) in particular (Patton, 1990).

Mackenzie & Knipe (2006), state that the interpretivist- constructivist paradigm grew out of the philosophy of Edmund Husserl's phenomenology, and Wilhelm Dilthey's and other German philosophers' study of interpretive understanding called hermeneutics.

Interpretivist/constructivist approaches to research have the intention of understanding the world of human experience (Cohen, Manion & Morrisson, 2000), suggesting that reality is socially constructed. Constructivism is a theory of knowledge (epistemology) that argues that humans generate knowledge and meaning from an interaction between their experiences and their ideas was inspired by Jean Piaget. During infancy, it was an interaction between human experiences and their reflexes or behaviour-patterns. Jean Piaget called these systems of knowledge schemata (Piaget, 1932).

The interpretivist/constructivist researcher tends to rely upon the participants views of the situation being studied (Creswell, 2003) and recognizes the impact on the research of their own background and experiences. Constructivists do not generally begin with a theory (as with post positivists) rather they "generate or inductively develop a theory or pattern of meanings" (Creswell, 2003) throughout the research process. The constructivist researcher is most likely to rely on qualitative data collection methods and analysis or a combination of both qualitative and quantitative methods (mixed methods). Quantitative data may be utilised in a way, which supports or expands upon qualitative data and effectively deepens the description.

3.4   Mixed Methods Approach

The study has been conducted with a mixed-method approach, so that the presence of bias throughout the research should be minimized. Since the major focus was in understanding the phenomena under investigation, there has been a prevalence of qualitative inquiry methods, which tend to understand the individuals perceptions of the world so to gain insight into the existence of social facts.

3.4.1 Justification for combined methods

Although the epistemological and ontological positions of qualitative research are generally different from those of quantitative research, Cohen, Manion and Morrison (2000) attest that the two paradigms are not fundamentally opposed to each other thus, they can be used in conjunction or triangulated to fit the question under study. Bryman (1988) points out that the differences between the two approaches are technical rather than epistemological, meaning that, in practice, researchers can "mix and match" methods, according to what best fit the questions under study.

The differences between the two paradigms in approach and purpose do not mean that qualitative research and quantitative research are mutually exclusive. To emphasize this point, Gorard and Taylor (2004) stated that the distinction between quantitative and qualitative work on which the notion of paradigms is based, is in any case, exaggerated. They say that it is somehow impractical to sustain an argument that all parts of all methods, including data collection, carry epistemological or ontological commitments. They argue that there are certain shared assumptions underlying all types of research, regardless of the methods used and that there are no pure ontological or epistemological divisions in practice.

The tendency to bind different epistemological positions with particular methodologies has been widely criticized in the methodological literature. Since the beginning of 1980's there have been several papers published, which argue that even if there are differences in the philosophical assumptions, quantitative and qualitative methodologies are not mutually exclusive.

Researchers argue that none of differences between quantitative and qualitative methodologies outlined earlier take the form of diametrically opposite practices, but rather make up a continuous scale on which qualitative and quantitative studies are not at all simply positioned. A second point they make to support their position is that there has been and still are a lot of qualitative researchers who hold quite clearly realist ontological position as well as quantitative researchers whose ontological position is nearer to idealism and relativism than to realism (Hammersley, 1992 & LeCompte, 1990).

As several authors have argued, it is the concrete research problem rather than philosophical position which determines the methodology (or overall strategy) of the study whereby, depending on the nature and complexity of the problem, the strategy can be either qualitative or quantitative or a combination of both (Hammersley 1992& Bryman, 1988). Dunne and Johnston (1992) argue that 'debates about quantitative and qualitative methods', which characterize the positivist/ technical and interpretivist/ practical dialectic are not an issue any more as the aim of the research in the new era ought not to be to represent the 'truth' no matter whether it is perceived as absolute or socially constructed but to serve emancipatory interests.

Developing an emancipatory interest enables individuals to free themselves from the inter -subjective or commonly held meanings that dominate their understanding of their current world, and subsequently change their practices. We argue that developing an emancipatory interest is critical in learning to create social change that, wants to create a better world and society for self and others.

Creswell and Clark (2007) explain that the use of quantitative and qualitative approaches in combination provides a better understanding of the research problem and also provides strength that offset the weaknesses of both quantitative and qualitative research.

Informed by the range of quantitative and qualitative international studies of library and information services to disadvantaged children and access and use of information, this study used a triangulated methodological approach, combining qualitative and quantitative research instruments in order to resolve the research questions. By employing methodological triangulation the research aims to address the limitations of single methods, extend the scope and depth of the findings, as well as to contribute to the scientific rigour of the study.

The qualitative framework intended to capture the living experiences of the participants in order to understand their meaning perspective, as it went beyond the statistical results of the study (Janesick, 1994). On the other hand, the quantitative method was utilized in order to capture the statistical aspect of the study. Qualitative research is inherently multi-method in form. However, the use of multiple methods, or triangulation, reflects an attempt to secure an in-depth understanding of the phenomenon in question (Denzin & Lincoln, 2005).

Mixed methods approach allows a researcher not only to test the validity of emerging themes, but also contributes to the construction of a multi-faceted, in-depth understanding of the case under study. Triangulation is not a tool or a strategy of validation, but an alternative to validation. The combination of multiple methods, empirical materials,

perspectives and observations in a single study is best understood, then, as a strategy that adds rigour, breadth, and depth to an investigation (Denzin & Lincoln, 2005).

The combined methods research was important for the current study as it helped to fit together the insights provided by qualitative and quantitative research in answering the research questions. Qualitative and quantitative approaches should not be taken as mutually exclusive and competing paradigms, but rather as approaches which are useful in different ways and therefore have the potential to complement each other.

3.5 Case Study Approach

This study employed a multi-case study research design, with both quantitative and qualitative data collection methods. Leedy and Ormrod (2001), Yin (1994) state that a case study research can include a single case or multiple cases also referred to as multi case, multi-site or collective case study. The Case study design was considered appropriate for this research because it gives the researcher an opportunity to gather in-depth data on access and use of information services by children in selected slum areas in Nairobi to alleviate social deprivations.

The research investigated information needs and information seeking behaviour of children in the selected slums, the types of library information services available and their accessibility. The study also investigated the role played by information service providers and other agencies in the provision of information service to children in the selected slums, the policy and legal frame works for access and use of information by children in slums and sought to find out the role of Information Technology in promoting access and use of information by children in slums.

A case study is suitable when the research being conducted is an in-depth study of less than fifty cases (Mouton, 2001). This is appropriate because this research consists of three cases only. In this research, cases were selected from three Nairobi slums i.e. Mathare, Mukuru and Kibera. Yin (1994) observes that evidence gathered from multiple case studies is being more in-depth than from a single case study and this provides a basis for generalization.

A case study allows one or multiple phenomenon to be studied in depth and detail in context and holistically and to be looked at as a whole. Case studies are detailed investigations of individuals, groups, institutions or other social units. It relies on multiple sources of evidence and benefits from the prior development of theoretical propositions. It is suitable for learning more about little or poorly known situation and it is a research strategy, an empirical inquiry that investigates a phenomenon within its real-life context (Leedy and Ormrod, 2001).

Conducted in the case's natural setting, this approach enables a researcher to analyze phenomena as they occur. The aim is to present a richly detailed report of the intricate web of factors, e.g., policies, relationships, personalities, facilities and events that contribute to the specific phenomenon under investigation.

The multiple-case studies design allows the researcher to explore the phenomena under study through the use of a replication strategy. Yin (1994) compares the use of the replication strategy to conducting a number of separate experiments on related topics. Replication is carried out in two stages:-a literal replication stage, in which cases are

selected (as far as possible) to obtain similar results, and a theoretical replication stage, in which cases are selected to explore and confirm or disprove the patterns identified in the initial cases.

The case study method, especially the multi-case studies design, provides library information service researchers with a proven tool for achieving a deep understanding of a specific phenomenon--for example, the information needs of a particular user group (in this case children in Nairobi slum areas). The strength of the multiple-case studies design lies not only in its ability to demonstrate consistent patterns of behaviour but also, and perhaps more importantly, in its ability to uncover new and/or divergent themes. These emerging themes can be explored through the replication process. This process allows the researcher to probe beneath the surface of the situation and to focus on the "why" of individual behaviours (Yin, 1994).

The case study method can be used not only for exploratory research but also for theory development or generation of a new theory Therefore case studies can facilitate theory building When used to generate a new theory, case studies can facilitate conceptual refinement of emerging theoretical formulations or they can lead to the discovery of new insight and interpretations. The detailed exploration of a particular case can generate insight into social processes which, in turn, give rise to theoretical formulation (Willig, 2001). In this study, theory was used as a theoretical pattern and a perspective to guide the study. This is the reason why the theoretical framework for this study was initially provided at the beginning of the study, to guide the researcher to what was to be examined.

The strengths of case studies are in terms of describing, understanding and explaining of concepts. This strength translates into interpretive, which is a paradigm of qualitative research. The major weaknesses of a case study are: when a single case is involved, the findings cannot be generalized to other similar situations; case studies are time consuming; can be expensive to conduct and it is a potential source of bias. These issues can all be addressed by the application of rigorous data collection and analysis techniques (Stake, 1995).

3.6 Study Population

The research population is considered a critical part of any survey. A population is a complete set of elements (persons or objects) that possess some common characteristic defined by the sampling criteria established by the researcher. A target population consists of all elements or units of analysis about whom survey information is collected (Creswell, 2003).

The population of the study comprises children of the school going age in upper primary in the 16 public schools in the selected Nairobi slum areas. The researcher purposively chose to select upper classes because of the relatively long period they had spent in learning. This category is likely to have more information needs than the lower classes due to various tasks that require a diversity of information sources and services. Age of the respondents is one of the factors that may influence use or non-use of information services. Children may not undertake certain tasks until they are psychologically mature enough to do so. This is in part due to their cognitive developmental stages. The class teachers, headmasters, persons in charge of the school libraries, policy makers and

information service providers such as Kenya National Library Services (KNLS) and other community libraries in the slums are the key informants.

3.7 Sampling Techniques

A sample is a model of the population or a subset of the population that is used to gain information about the entire population. Sampling on the other hand is the process of selecting a group of people, events, behaviours, or other elements with which to conduct a study (Newman, 2006).

In this study various sampling techniques were applied. These include both non-probability sampling and probability sampling.

3.7.1 Purposive Sampling Procedure

Purposive sampling procedure, a non-probability sampling method was utilized in selection of the slums to be included in the study. This research has noted a major limitation in using purposive sampling, that is; not every element of the population has the opportunity for selection in the sample but the researcher used personal judgment to select subjects that were considered to be representative of the population.

The three Nairobi slums involved in this study were selected based on the purposive criteria outlined below:-

- Location/accessibility

The three slums Kibera, Mukuru and Mathare are located in the outskirts of Nairobi just a few kilometers from the city centre. Hence the slums were chosen due to their close proximity to the city of Nairobi.

- The slums population and history

The three slums selected are among the oldest and largest slums in Kenya with a very high population. They have accumulated history to offer for studies based on documentary evidence. They are believed to be information rich cases.

- Level of development

Level of development was also considered. As observed by Pawlitzky (2005) reading does not take place in a social vacuum. Reading as a social activity is embedded in specific social settings, which have an impact on it.

The researcher visited the city education office at city hall in January 2010 and also did in depth research in previous studies, to get first-hand information on slums in Nairobi. All the information collected was carefully studied to establish which slums were to be included in the study. It was concluded that, out of an approximate one hundred and ninety nine slum villages in Nairobi, three met all the criteria and that they collectively would make a suitable sample for the study. The three slums are also located in close proximity to affluent estates such Muthaiga and Langata. This could have an influence on access and use library information services to children in the slums. The public schools were clustered by their geographical areas. This ensured that units are in the same area which marked it operationally convenient.

The key informants were also selected purposively. These are the teacher's in charge of libraries/librarians (all persons in charge of school libraries in the three slums were involved), the headmasters (All the 16 head teachers in the public primary schools) and the class teachers for the five categories from each school, policy makers and other

information service providers (Community libraries) (One person was chosen from each of these categories). The head teachers provide much of the administrative information needed in the study. Four information Centre's were chosen purposively. This is because they serve children and youth. These are SIDAREC, MYSA, Mukuru Dc's Library and Global Alliance of Africa Community Library. Overall distributions of participants in the study is clearly shown in table 3.1

3.7.2 Stratified Sampling Method

Stratified sampling method a probability type of sampling was used to ensure that different groups of target population are adequately represented in the sample so as to increase the level of accuracy in estimating parameters. It is a technique that can achieve a greater degree of representativeness and thus decreasing the probable sampling error.

Stratified sampling is used to gather information about subgroups in the sample frame and is used to improve the efficiency of the sample plan. There three major reasons for using Stratified sampling method:

- Some subgroups are more homogenous than others so fewer numbers are needed for those groups to obtain the same level of precision
- Group comparison is the purpose of the study (disproportionate stratified sampling)
- Some elements are more important in determining outcome of research interest than are others (Newman, 2006).

Within strata, selection of sample elements was done randomly, not first available. The pupils attending class 4,5,6,7 and 8 qualified for the study hence they were stratified

according to the 5 classes. Further stratification was used to ensure an equal representative sample (pupils) of males and females in each class. The overall male to female ratio in this study was 1:1.

3.7.3 Simple Random Sampling

Simple random sampling (probability sampling) was used to select a sample from each strata (class and gender). In this type of sampling the **e**lements of study are selected at random thus each individual in the population has an equal opportunity to be selected for the sample (Creswell, 2003). The word "yes" was written in three pieces of paper while on the others the word "No" written and all the pieces were put in a container. The pieces were then mixed and each boy was asked to pick one. The pupils who picked the papers marked "yes" were then selected to participate in the focus group discussions whereas those who picked the pieces with the word "No" were excluded from participation. The same procedure was repeated for the girls.

The total number of pupils in the upper primary in the schools in the three slums was 12,341 and a total of 480 pupils from all the16 public schools were interviewed, implying that 30 pupils from each school participated in the study drawn from class four to class eight. The number of participants (pupils) for the focused group discussions per each respective class was 6 that is 3 boys and 3 girls. According to Silverman & Zukergood (2000) the research on focus groups generally recommends six to twelve participants as optimum for impact. Within this range, the interactions are easy to manage. Sweet (2001), states that a group of between 6-10 participant is small enough to give everyone the opportunity to express an opinion and large enough to provide diversity of opinions. Diversity in opinions was also highly considered through selection of the participants

from a low class (4) to a higher class (8) with varying ages and gender. Burgess (1996), for instance, conducted thirteen focus groups with people of varying age, gender and ethnicity. The overall distribution of participants in the study is presented in table 3.1.

Table 3.1: Overall distributions of participants in the study

Head teachers	**16**
Class teachers	80
Persons in charge of library	16 approx.
Pupils	12341
Director Ministry of education	1
Director of KNLS	1
Director The Ministry of Sports Culture and Arts	1
Community Libraries	4

Table 3.1: Sample used in the study

Unit/ Category	Population	Sample
Head teachers	16	16
Class teachers	80	80
Persons in charge of library	16	3
Pupils	12341	480
Director Ministry of education	1	1
Director of KNLS	1	1
Director Ministry of Sports Culture and Arts	1	1
Community libraries	4	4
Total participants	**12460**	**586**

Table 3.2 Sampling Technique

	Sampling technique
Head teachers	Purposive
Class teachers	Purposive
Persons in charge of library	Purposive
Pupils	Stratifed & Simple random
Director Ministry of education	Purposive
Director of KNLS	Purposive
Director The Ministry of Ministry of Sports Culture and Arts	Purposive
Other information centre's/service providers	Purposive

3.8 Instruments of Data Collection

Data for this study was collected using semi-structured interviews, focus group discussions and questionnaires. The application of more than one instrument in data collection is vital for it provides checks and balances with regard to shortfalls characterized by each of the data-gathering instruments (Creswell, 2003). A focus group interview of 6 pupils was formed to represent each class. The class teachers, were required to complete the questionnaire while teachers in charge of libraries and/or librarian in all the selected schools, the policy makers the Headmaster and the other information service provides were required to participate in different semi structured interviews.

3.8.1 Interviews

Interviews are defined as face-to-face encounters between the researcher and the respondents, for the specific purpose of obtaining research-relevant information. The interview method is considered to be one of the most common and effective way of understanding our fellow human beings (Denzin & Lincoln, 2005). Interviews are normally flexible and they provide an interviewer with the opportunity to probe and ask follow-up questions. In so doing, more information and a greater depth can be obtained from an interview than from a questionnaire (Creswell, 2003). For these reasons interviews were used in this study. However, interviews tend to be more expensive than questionnaires in terms of time and money because, contrary to an interview, a questionnaire can be mailed. The interviews used for this research purposes can be divided into two different types:-

- **Semi-structured interviews**

In semi-structured interviews, a basic framework, a set of basic questions and a given procedure is provided, but greater latitude is granted to the interviewer on how different respondents are treated, probed and prompted. The interviewer is free to modify the format and the order of questions as appropriately as possible. Semi-structured interviews take a wider variety of forms and fulfill a diverse range of functions. For the purpose of this study, semi-structured interviews were conducted with the head teachers, policy makers and the information service providers. A different semi-structured interview schedule was developed for each of these categories of respondents.

- **Focus group discussions**

Focus group discussions are a means of obtaining information from people in a group. It is an interview with several people on a specific topic or issue (Bryman, 2004). Instead of asking questions of each person in turn, focus group researchers encourage participants to talk to one another, asking questions, exchanging anecdotes and commenting on each other's experiences and points of view. Focus groups are group discussions exploring a specific set of issues. The group is focused, in that it involves some kind of collective activity, such as debating a set of questions on a specific topic. The aim of focus group discussion is mainly to gain rich and often exploratory information. Focus group discussions are important because the group develops its own conversation, raising issues and ideas that might not emerge in a discussion with the interviewer alone (Morgan & Scannell, 1998).

In this study focus group discussions were held with the children to gain in depth understanding of actual practices of access and use of information services. The focus group discussions were chosen as the basis of this research for a number of reasons: - they allowed pupils verbalize their ideas and interact with one another in response to questions posed by the researcher; they yielded in-depth data and allowed a lot of data to be collected within a short time; the focus group discussions offered access to the children's thoughts, feelings, and expectations thus providing insight into the children's experiences from a holistic perspective.

Interaction between participants is a key feature of the focus group method and therefore careful consideration of group composition is vital (Morgan & Scannell, 1998). In determining the composition of the groups, the present study paid attention to the issues of compatibility of the participants. Cohen et al (2007) states that live discussion require good group dynamics and that depends on compatibility of the participants. To achieve compatibility the present study paid attention to the issue of education levels of the children. This was important, because different experiences and literacy levels produce different perspectives. Without education many people will not be able to use information services and sources, not because they do not have physical access to them but because they cannot read and understand the information available (Pillay, 2004). Because of the non-probability nature of this study, efforts were made to include both males and females in the study. The overall male to female ratio in this study was expected to be 1:1. Taking into consideration all the above factors, this study used group sizes of six respondents in order to capture the attention span of the pupils.

The major attraction of focus group discussions over other data collection techniques, as pointed out by Cohen, Manion and Morrison (2000), Cohen, Manion and Morrison (2007), Denzin and Lincoln (2005), Leedy and Ormrod (2005), were the following:-the potential for discussions to develop, thus yielding a wide range of responses; can generate a wider range of responses than individual interviews; might be useful for gaining insight into what might be pursued in subsequent individual interviews; they are often quicker than individual interviews and hence are time-saving and involve minimal disruption; they are inexpensive to conduct and often produce rich data that are cumulative and elaborative; can be stimulating for respondents and aid recall; and provide natural quality

control on data collection because participants tend to provide checks and balances on each other and extreme views tend to be weeded out.

Focus group discussion has a number of disadvantages:-results cannot easily be generalized; the emerging group culture may interfere with individual expression; the group may be influenced by one person and group-thinking is a possible outcome; the requirement for interviewer (moderator) skills are said to be greater than that for individual interviewing, because of the group dynamics that are present; it is difficult to research sensitive issues with focus group discussion; and confidentiality can be a problem between participants when interacting in a group situation,(Pillay, 2004). The researcher was aware of these disadvantages thus tried to reduce their negative effects in this study as much as possible.

The discussions with children lasted for one hour and they were conducted by the researcher with the help of a research assistant.

3.8.2 Questionnaires

The quantitative aspect of the study was facilitated by semi-structured questionnaires with only a few questions in the questionnaires being close-ended. The questionnaires were therefore designed to match requirements of validity and reliability by including close-ended and open-ended questions. The close-ended questions allowed the respondent to choose from a list of predetermined option. That is to say, the respondents were asked to make a selection from a list of options provided.

Semi-structured questionnaire asks more open-ended questions whereby the respondents were not given any categories to choose from, and they were answer, in their own words

(Cone & Foster, 1998). The semi structured questionnaires tend to be more objective and less leading than closed-ended questions. In fact, they are the opposite of a closed-ended question, which encourages a short or single-word answer. Questionnaires have advantages over some other formats of surveys in that they are cheap, do not require as much effort from the interviewer as do verbal or telephone surveys, and often have standardized answers that make it simple to compile data (Cohen et al, 2007).

Self-administered questionnaires are limited by a number of factors, such as the fact that respondents must be able to read the questions, understand and respond to them. The disadvantages pointed out by Kothari (2004) can be overcome by having questions worded so that they are easily comprehended by the respondent and do not need any further clarification by the researcher. The disadvantage of questionnaires is that they have a low response rate as people sometimes do not return them and, according to Lewis-Beck (1994) those who do return them may not be truly representative of the population. Another disadvantage that questionnaires have is that there is lack of control over how respondents interpret questions and a lack of opportunity to probe or correct misunderstanding.

The questionnaires in this study were personally delivered and collected. Delivering and collecting questionnaires is viewed by many scholars as contributing to a high completion rate. Questionnaires were delivered to the class teachers' and arrangements were made to collect these after five days. However not all the respondents filled and completed the questionnaires within the stated time frame. The use of the questionnaires was very effective and relevant to the study because the population under study is adequately literate.

3.8.3 Secondary Sources

The researcher also used existing records on user studies. The recorded information counterchecked the validity and reliability of the data gathered since recorded information has usually a high degree of accuracy and validity.

3.9 Problems Encountered During Data Collection

The researcher encountered several problems during data collection. These included accessibility, insecurity difficulties and problems associated with the definitions of various terms used in the research.

3.9.1 Problems of Accessibility

A slum is a difficult area that lacks basic services and infrastructure. It is a collection of households in close proximity to one another such that the households share one or more deprivations of: access to improved water, access to improved sanitation facilities, sufficient living area, structural quality and durability of dwellings. There is no free movement of people and goods in and out of slums. Hence access is a major problem.

3.9.2. Problems Encountered with Nairobi County Council

For one to conduct research within Nairobi city, one has to seek approval from Nairobi City Council. This proved difficult because after writing a letter to request an approval permit, the researcher waited for four (4) months for the approval to conduct the research.

3.9.3 Problems Encountered with the Head teachers, Directors and Librarians/teacher Librarians and Class teachers

- The researcher spent weeks trying to get hold of the head teachers, directors and librarians and class teachers. The researcher had to keep on trying in order to make appointments to visit the respondents.

- Some respondents had no interest in responding to the questions because of time limitations. The researcher had to appeal and encourage them to respond.

3.7.4 Problems Encountered During Focus Group Discussions by Pupils

Most pupils did not understand most of the terms used by the researcher in the focus group discussions such as "information need", "deprivation", "access", "information services", and "library resources". Most of these terms were new, difficult to understand and confusing to most of the respondents. The researcher had to explain everything, making use of relevant examples in order to make clarifications. This process was very slow, tedious and time consuming.

Pupils also lacked the proper vocabulary in English (the official language), because they do not read very often. At schools there is a lack of adequate information materials that would attract pupils to read and also be fluent in English language.

3.9.5 Problems of Insecurity

The three slums visited are located in very insecure and crime prone areas of Nairobi County. Slums are commonly seen as breeding grounds for social problems such as crime, drug addiction, and alcoholism. The researcher had to risk her life in order to conduct research in these crime prone slum areas.

3.10 Validity and Reliability of the Research Instruments

This research is a multi-case study and a mixed methods investigation, which utilized qualitative and quantitative methods. The most prevalent approach in this study was the qualitative design. The issue of the validity and reliability of the study was dealt with in cognizance of the variations in which these issues were considered in both qualitative and quantitative designs. Validity and reliability are the major technical considerations in quantitative and qualitative research (Babbie & Mouton, 2001). In the broadest sense, reliability and validity addresses issues concerning the quality of the data and appropriateness of the methods used in carrying out a research project.

The concepts of reliability and validity as overarching constructs can be appropriately used in all scientific paradigms, because to validate is to investigate, to check, to question and to theorize. While all research must have truth value, applicability, consistency and neutrality in order to be considered worthwhile, the nature of knowledge within the rationalistic (quantitative) paradigm is different from the knowledge in naturalistic (qualitative) paradigm. Each paradigm requires paradigm-specific criteria for addressing rigour (the term often used in the rationalistic paradigm) or trustworthiness, the parallel term for qualitative rigour (Pillay, 2004).

Whether quantitative or qualitative methods are used, rigour is a desired goal that is met through specific verification strategies. Without rigour, research is worthless, becomes fiction and loses its utility. A great deal of attention should therefore be applied to reliability and validity issues in all research methods.

3.10.1 Validity and Reliability in Quantitative and Qualitative Research

In quantitative research validity refers to the capacity of the research technique to encapsulate the characteristics of the concepts being studied and so properly to measure what the methods were intended to measure. Validity is mainly concerned with the extent to which the measuring devices would yield accurate results and capture the essence of what they are intended to represent (Babbie & Mouton, 2001). In quantitative research validity determines whether the research truly measures that which it was intended to measure or how truthful the research results are. In other words, does the research instrument allow the researcher to hit the bull's eye of the research object? Researchers generally determine validity by asking a series of questions, and will often look for the answers in the research of others.

Reliability is a measure of how consistent the results from a test are. It is a matter of whether a particular technique applied repeatedly to the same object would yield the same results each time, that is, provides consistent or precise data where they proved to be reliable.

In quantitative research, reliability is mainly concerned with the extent to which similar results will be obtained if the study were to be repeated. Research findings are considered to be reliable if they are repeatable, to the extent that repeated measures would yield

constant results (Babbie & Mouton, 2001; Cohen, Manion & Morrison, 2000). A high degree of stability indicates a high degree of reliability, which means the results are repeatable. The data collection methods that were used in this study (semi-structured interviews, group discussions and semi-structured questionnaires) have been applied in similar studies (see Chapter 2). In this study, care was taken to ensure reliability by means of pre-testing instruments and by using methodological triangulation.

Validity and reliability are two factors which any qualitative researcher should be concerned about while designing a study, analyzing results and judging the quality of the study. It is important for a researcher to be able to persuade his or her audiences that the research findings of an inquiry are worth paying attention to (Lincoln & Guba, 2005). Since validity and reliability are rooted in quantitative research, there is a need for validity and reliability to be re-defined for their use in qualitative research.

There is a need to find alternative ways of operationalising these terms that are appropriate to the conditions and circumstances of qualitative enquiry. Consequently, the quality of a study in each paradigm should be judged by its own paradigm's terms. In other words, these terms, as defined in quantitative terms, may not directly apply to the qualitative research paradigm. For instance, the question of replicability in the results does not directly apply in some form of qualitative research, as it does in quantitative research. While the credibility in quantitative research depends on instrument construction, in qualitative research the researcher is the instrument. Thus it seems when quantitative researchers speak of research validity and reliability, they are usually referring to research that is credible while the credibility of qualitative research depends on the ability and effort of the researcher (Pillay, 2004).

While the essential test of validity of findings in the natural sciences is that it has been directly replicated by an independent investigator, this approach is not feasible when a qualitative design is used and is highly questionable in real-world flexible (qualitative) designs involving people, as it can be complicated to created identical circumstances for the attempt to be replicated (Babbie & Mouton, 2001).

Another argument in the same vein is that the term reliability and validity are treated separately in quantitative studies, whereas these terms are not viewed separately in qualitative research. Instead, terminology that encompasses both, such as credibility, transferability and trustworthiness, is used. To widen the spectrum of conceptualization of reliability, and revealing the congruence of reliability and validity in qualitative research it has believed that there can be no validity without reliability (Cohen et al, 2000).

Reliability is a consequence of the validity of a study. Scholars have provided guidelines on how validity and reliability can be conceptualized in qualitative research. In qualitative research, validity and reliability are mainly conceptualized as trustworthiness, rigour and quality of the research. (Cohen et al, 2000) states that in qualitative research validity might be addressed through the honesty, depth, richness and scope of the data achieved, the participants approached and the extent of triangulation. In qualitative research validity and reliability relate to whether the findings of the study are true and certain, true in the sense of the findings accurately reflecting the real situation and "certain" in the sense of the findings being backed by evidence. There should be no good

grounds for doubting the results, meaning that the weight of evidence supports the conclusions.

The strategies for ensuring rigour in qualitative research are investigator responsiveness, methodological coherence, theoretical sampling and sampling adequacy, an active analytic stance, and saturation. These strategies, when used appropriately, force the researcher to correct both the direction of the analysis and the development of the study, as necessary, thus ensuring reliability and validity of the completed project (Babbie & Mouton, 2001).

Different strategies were used to ensure validity and reliability in the present study. These are triangulation, verification and instrument pre-testing, and approval.

3.10.2 Triangulation

Triangulation may be defined as the use of two or more methods of data collection in the study of some aspect of human behaviour (Cohen et al, 2000). It involves the use of multiple sources to enhance the rigour of the research combining research methods in collecting data offers the promise of getting a complete picture, in a way that a single method cannot achieve (Ngulube, 2005). This is important because each method has its shortfalls and the only way to offset these is to apply another method that will help to counteract the shortfalls.

Triangulation is a powerful way of demonstrating concurrent validity, particularly in qualitative research. Concurrent validity is achieved when data gathered from using one instrument correlate highly with data gathered using another instrument, that is when the

result obtained from different data collection instrument all agree or concur (Cohen et al, 2007).

A triangulation can help to counter all the threats to validity and hence help qualitative researchers establish validity in their studies. The idea behind triangulation is that the more agreement there is from different data sources on a particular issue, the more reliable the interpretation of the data is. Triangulation strengthens a study by combining methods. This can mean using several methods or data, including using both quantitative and qualitative approaches (Golafshani, 2003).

There are five types of triangulation which can be used by qualitative researchers to check for the validity of their studies: data triangulation, investigator triangulation, theory triangulation, methodological triangulation and environmental triangulation. However, triangulation can be time-consuming and a researcher using multiple methods may face difficulties when conflicting results are obtained from these multiple methods. For the purposes of the present study, triangulation was employed at two different levels, to ensure the validity and reliability of the study. These levels include data triangulation and methodological triangulation (Guion, 2002).

3.10.2.1 Data Triangulation

Data triangulation involves the use of different sources of data or information. Data from different sources can be used to corroborate, elaborate or illuminate the research in question (Golafshani, 2003).

Data triangulation in this study was achieved by the inclusion of various stakeholders in the study (children, teachers and persons in charge of libraries). This helps in

corroborating data sources, to enhance the validity and reliability of the findings. These sources of data are triangulated by looking for outcomes that are agreed upon by all stakeholder groups. This type of triangulation is important because, as pointed out by Guion (2002), if every stakeholder who is looking at the issue from different points of view sees an outcome in the same way then it is more than likely to be a true outcome.

3.10.2.2 Methodological Triangulation

Methodological triangulation involves the use of multiple qualitative and/or quantitative methods to study the programme. If the conclusions from each of the methods are the same, then validity is established. As stated earlier the present study utilized case study research design, with multiple data gathering methods for the purpose of collecting both qualitative and quantitative data. Data for this study were collected using semi-structured interviews, focus group discussions and documented sources. These methods were used in a complementary fashion and evidence was compared across all these methods, so as to ensure rigorousness of the collected data. One important benefit of multiple methods/methodological triangulation is the reduction of inappropriate certainty.

3.10.2.3 Verification

Verification is the process of checking, confirming, making sure and being certain. In qualitative research, verification refers to the mechanisms used during the process of research to incrementally contribute to ensuring reliability and validity and, thus, the rigour of a study (Meadows & Morse, 2001).

Verification mechanisms were woven into every step of the inquiry, so as to construct a solid product. The researcher was anxious to identify and correct errors.

3.10.3 Pre-Testing

Before data collection, the data collection tools were pre-tested to eliminate any ambiguities and mistakes. Babbie and Mouton (2001) assert that no matter how carefully one designed a data collection instrument there is always a possibility of error. The best and surest protection against such errors is to pre-test the instrument. Pre-testing the data collection instruments is considered as one of the ways that may be used for content validation (Ngulube, 2005).

The pretesting was done on 15- 19 February 2010. The researcher used this pre-testing to find out if there was any type of ambiguity and vague questions in the research instruments and also for the purpose of controlling the quality of the instruments.

All the research instruments used in this study were prepared in consultation with the researcher's supervisors. Some of the questions, and focus group discussions used in this study were gathered from other similar works and were adapted to the situation as well

The participants in the pre-testing consisted of a library and information science professional, a teacher librarian, a former director of KNLS, six pupils and a teacher. The participants were selected on the basis of their ability to provide a professional opinion concerning the instruments and their availability and convenience.

The participants provided useful comments for the improvement of the instruments. The researcher then incorporated the comments where necessary and compiled the final version. After incorporation of the comments from pre-testing, the instruments were sent to the two supervisors assigned to the researcher for verification.

The aspects that were included in the piloting phase, so as to increase internal validity and reliability of results were:-

- Verifying that the number and content of questions captured the essence of the research aims and objectives.

- Verifying the intelligibility of the questions, checking for response bias related to question words and ordering.

3.11 Data Presentation and Analysis

In terms of the data analysis, Creswell (2003) states that it is important to ensure that the format of data analysis which is employed matches the research paradigm and data, and can answer the research question. As mentioned earlier, data that was collected for this study was largely qualitative with few quantitative elements. Data analysis was carried out differently for both quantitative and qualitative data.

3.11.1 Analysis of Quantitative Data

The analysis of quantitative data involves cleaning, coding, entering and descriptive analysis as Durrheim (2002) observes. This was done through the aid of SPSS, software program.

3.11.2 Analysis for Qualitative Data

Babbie and Mouton (2001) point out that there is no one neat and tidy approach to qualitative data analysis, nor even one approach to each specific format of qualitative data analysis. Cohen at al (2007), state that analysis of qualitative data is almost inevitably interpretive.

Data from the interview schedules and the open-ended questions from the questionnaires were first analyzed by themes before they were coded. This analysis constitutes a form of content analysis, which according to Ngulube (2005) involves collecting and organizing information systematically in a standard format that allows analysts to draw conclusions about the characteristics and meaning of recorded material.

The first step in content analysis entails the construction of categories that are described as a set of criteria which are integrated around a theme. In that light, data was analyzed according to themes such as, but not limited to, situations of need, source, services and strategies employed to meet the information need. The categories were examined using one of content analysis basic methods, namely, conceptual analysis or thematic analyses. The analysis involves quantifying and tallying the presence of a concept. Categories were coded and dominant themes and trends were identified.

After data analysis the researcher used both descriptive and statistical techniques where necessary to interpret the data and the two forms of data were integrated to seek convergence or similarities among results.

3.12 Ethical Considerations

Ethical considerations represent a moral stance that involves conducting research to achieve not just high professional standards of technical procedures, but also respect and protection for the people actively consenting to be studied (Rubin, 1991). Professional ethical standards should be noted during all phases of the research process.

Throughout this study the researcher strived to adhere to ethical research considerations and professional guidelines. The researcher adhered to the regulations and guidelines prescribed by Moi University for the preparation of theses and dissertations. These regulations related to content, organization, overall requirements. The Moi University information policy concerns itself with the maintenance of ethical standards and protection of research subjects.

Relevant procedures were followed at the commencement to the end of the research process. This included-: permission to conduct the study to be obtained from relevant authorities, that is, school heads; research permit from respective government organs was sought. (The researcher sought consent to conduct research from the ministry of science and technology). The researcher weighed sensitivity of the topic in designing the data collection instruments and determine what is permissible. Hence the study is guided by the principle of informed consent. The respondents were free to decide whether to participate or not (voluntary participation).

During data collection the researcher explained the aim and significance of the study to respondents, in order to get their consent; anticipated result will be shared with relevant institutions such as policy makers, information centre's and participating institutions thus findings shall be made public. The researcher avoided acts of misconduct in research, such as data fabrication, falsification and plagiarism. The information collected was treated with confidentially and was used purely for research work. The informants' identification was protected by making them anonymous in the final report. The questions that respondents were asked were carefully structured, to avoid questions that might embarrass and/or annoy the respondents.

Since the subjects under investigation are minors, it was necessary for the researcher to reach them through their teachers, who were informed about the study aims and objectives, confidentiality of data gathered and dissemination of the findings. For this purpose, a presentation letter was addressed to the head teachers, and to the local authorities, along with a copy of the research tools to be handed out. The covering letters distributed were written specifically for each person addressed. Even if very similar in the whole they contained distinctive features, as to enhance the credibility of the study and assure confidentiality and anonymity, as well as informing on the treatment and dissemination of data.

3.13 Evaluation of the Research Methodology

As mentioned, the purpose of this study is to investigate the access to and use of information services by children in Nairobi slum areas. The investigation was conducted in order to ascertain whether the children access to and use information services, whether services that are provided by library information services meet the children's information needs or not, and to identify barriers that they come across as they seek information. It is anticipated that the recommendations of this study would contribute to the library information service providing more appropriately for the information needs of disadvantaged children. Leedy and Ormrod (2001) maintain that no matter what research methodology has been chosen for a study, the researcher needs to consider the validity and reliability of the approach used. The bias acknowledged by the researcher is that only children who met the criteria were interviewed.

3.14 Chapter Summary

This chapter presents the research design of this study. It describes the population and the sampling procedures that were used. Data collection instruments used in this study are discussed in detail and the reasons given as to why each instrument for data collection was selected. Validity and reliability issues and ethical standards, which informed the research process, have been presented.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This study was carried out in all the public primary schools, their libraries and community libraries in Mathare, Mukuru and Kibera slums. The total number of schools in the three slums is 16 (County Council of Nairobi Education Department, January, 2010), that is, 7 schools in Mathare, 5 in Mukuru and 4 in Kibera. The schools in Mathare slums are Salama, Ndururuno, Kiboro, Mathare 4A, Huruma, St. Benedict and Daima Primary schools. The schools in Mukuru are, Mukuru Kwa Njenga, St Elizabeth, Reuben, Mukuru- Kayaba and, Star of Hope Primary schools. The schools in Kibera are Kibera, Toi, Olympic and Ayany Primary schools.

Interviews were conducted in all the public primary school and community libraries; this targeted the head teachers, teacher librarian and community librarians. Also interviewed were the directors Kenya National Library Services, Ministry of Education, and Children Services (Ministry of Sports, Culture and Arts). Focused group discussions were conducted with upper primary pupils. In addition, the class teachers in upper primary were issued with questionnaires. The questionnaires were returned duly filled ready for analysis.

4.2 Quantitative Data Analysis

The results in this section were analyzed using descriptive statistics including percentages, and frequencies. These gave a 'picture' of the data collected and used in the research project. The findings were presented using tables and charts.

4.2.1 Biographical Data

The following subsections present the biographical data of the respondents who participated in the study.

4.2.1.1 Number of Pupils in Upper Primary Classes in the Public schools

Table 4.1 below illustrates the number of pupils present in upper primary classes during the study. The schools were drawn from three regions in Nairobi namely, Kibera, Mathare and Mukuru Slums.

Table 4.1: Total number of pupils

Slum	Primary School	Numbers of Pupils Present	Participants
Kibera	Olympic	832	30
	Toi	450	30
	Kibera	1116	30
	Ayany	930	30
Mathare Slums	Kiboro	1060	30
	Ndururuno	1157	30
	Salama	1150	30
	Mathare 4A	565	30
	St. Benedict	572	30
	Huruma	436	30
	Daima	658	30
Mukuru slums	Star of Hope	650	30
	St Elizabeth	618	30
	Mukuru kwa Njenga	860	30
	Reuben Primary	879	30
	Mukuru- Kayaba	408	30
Total		**12341**	**480**

Information/data obtained from head teachers showed that, the total numbers of pupils in upper primary classes in the public schools in Kibera, Mathare and Mukuru slums at the time of the study were as shown in table 4.4. The total number of the pupils in the upper primary in these schools was 12341; out of which 480 pupils participated in the study.

4.2.2.2 Duration of Service for the Teachers, Head teachers and Teacher librarians

The study established the duration of service for the teachers, head teachers and teacher librarians and the findings are presented in figure 4 below.
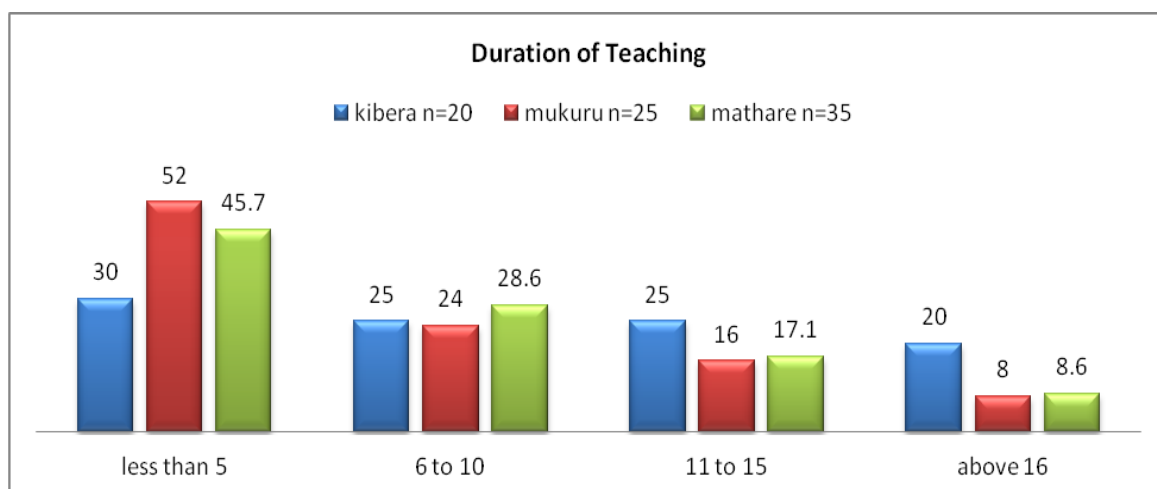
Figure 4: Teacher's Duration of Teaching

From the findings as show by the figure above, majority of the teachers in all the public schools in Mukuru, Mathare and Kibera slums have taught for a period of less than five years. This is indicated by 52%, 45.7% and 30% respectively. In addition, a large number of teachers in schools in Mathare slums had taught for a period of 6 to 10 years, while most of the teachers in Kibera had taught for duration of 11 to 15 years.

The head teachers in most of the public schools in Kibera, Mathare and Mukuru slums had served in their respective school for a period of more than fifteen years (e.g. Olympic, Toi, Kibera, Ndururuno, Salama, Kiboro, Reuben and Star of Hope). The head teachers, in Mukuru- Kayaba primary school, St. Benedict, St. Elizabeth, Huruma and Mathare 4A indicated that they had been head teacher for a period ranging between 10 and 15 years, while others had served as head teachers for a period of not less than five years. St. Elizabeth primary school teacher librarian had been teaching for 5 years while the teacher librarian in Reuben primary school had been teaching for the past two and a half (2½) years. The teacher librarian St. Elizabeth primary school indicated that he had received informal training on matters concerning the library. The teacher librarians in Reuben primary school and Ayany said that they had a diploma in library and information science.

4.2.3 Information Services

The study sought to establish the information services available in primary schools in Kibera, Mukuru and Mathare slums. The findings revealed as follows.

4.2.3.1 Nature of School Libraries Available in the Slums

Table 4.2 below illustrates the availability of libraries in the schools that participated in the study.

Table 4.2: Availability of libraries in primary schools

Slum	Number of schools with Classroom library	Number of schools with well-equipped library	Number of schools without a quipped library/class library
Kibera	3	1	0
Mukuru slums	3	2	0
Mathare slums	5	0	2
Total	**11**	**3**	**2**

Out of the 4 public schools in Kibera, 3 had classroom library, while 1 had well-equipped library. In addition out of the 5 public schools in Mukuru slums, 3 had Classroom library while only 2 had a well-equipped library. In Mathare slums 5 out of the 7 public schools had a classroom library while two had no library (St. Benedict and Huruma).

According to the pupils and the head teachers in Toi, Olympic and Kibera primary schools (Kibera), Ndururuno, Daima, Salama, Mathare 4A, Kiboro (Mathare) and Star of Hope, Mukuru Kwa Njenga, Mukuru-Kayaba (Mukuru) their school had class libraries. Ayany (Kibera), Reuben and St Elizabeth (Mukuru) had libraries, which the pupils accessed once a week.

All the head teachers stated that the establishment and management of these libraries were mainly as a result parents and well-wishers. In spite of the existence of libraries in some schools, the study noted there was dissatisfaction with the services due to shortage of books, space and time limitation for the pupils to use library services. Out of the public schools in the slums only Ayany primary school in Kibera, St Elizabeth primary school and Reuben primary school in Mukuru had a teacher librarian.

From these findings, it can be noted that the availability of the school libraries was in the slums was inadequate/unsatisfactory and consequently these constrained the pupil's access and use of information and thus social deprivation among the slum children. However children from Mathare slums compared with those from Mukuru and Mathare were far more informed because schools in the area had classroom libraries and well-equipped libraries.

4.2.4 Information Services

4.2.4.1 Frequency of Libraries Use

Teachers who participated in the study were requested to indicate whether they send learners to the available libraries. Figure 5 below illustrates the study findings.
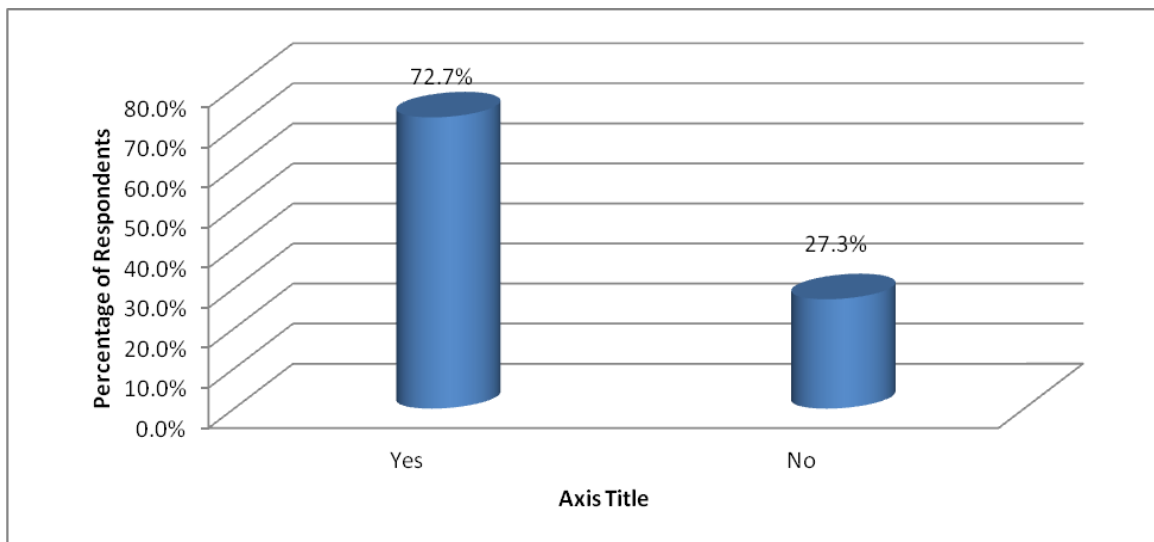
Figure 5: Frequency of use of Libraries

From the findings, most of the teachers 58(72.7%) from the schools which have class libraries in the three slums indicated that they send the learners to the library.

4.2.4.2 Purpose for Sending the Learners to the Library

The study made further enquiries on purpose for sending the learners to the library. The study findings are shown in table 4.3 below.

Table 4.3: Purpose for Sending the Learners to the Library

	Frequency n= 55	**Percentage%**
To collect information for school projects	4	8
To practice silent reading	18	36
To view a video	5	10
To listen to the radio	1	2
Note making	2	4
Using reference sources	6	12
Borrowing books	4	8
Using information sources	10	20

Teachers in the three slums indicated that the main purpose for sending the pupils to the library was to practice silent reading as indicated by 18 (36%). In addition, 10(20%) cited that they send learners to the library to use information sources. Viewing videos, borrowing books, collecting information for school projects, note making and listening to the radio respectively were cited as rare reasons for sending learners to the library.

4.2.4.3 Provision of Library Lesson in the Timetable

The respondents were requested to indicate whether there was provision of library lesson in the timetable to pupils in their schools. The study findings are illustrated in figure 6 below.
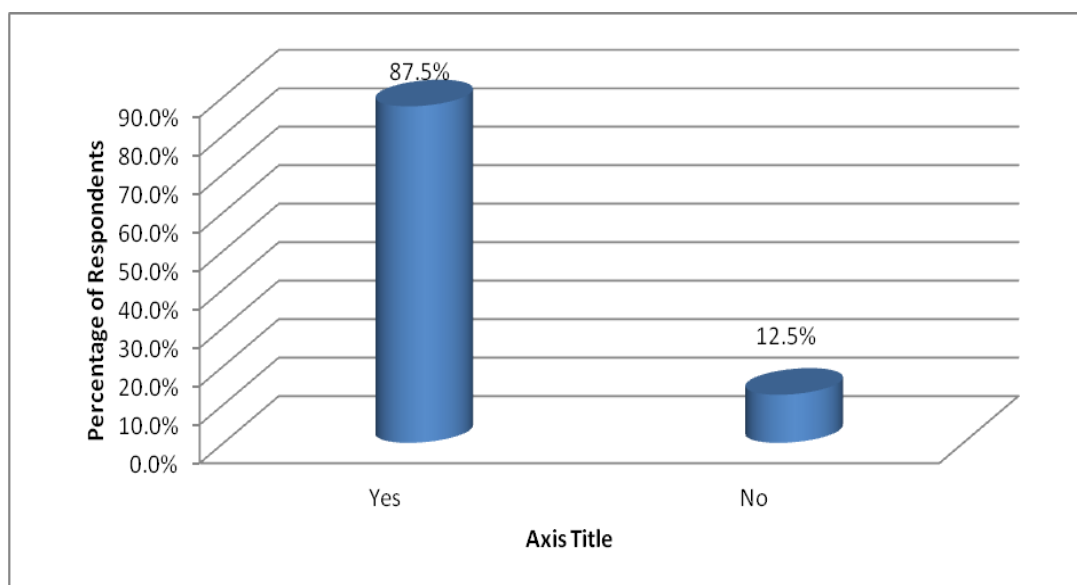
Figure 6: Provision of Library Lesson in the Timetable

Out of the sixteen public schools, 14 (87.5%) schools stated that there is provision of time for pupils to use the library, while in 2 schools (12.5%) in Mathare slums did not have such provision. This occurred once a week in all the schools that had such provisions.

The head teachers in the public schools in Kibera, Mathare and Mukuru primary school agreed that the timetable provided a lesson once a week for pupils to use the library. The teacher librarian in St. Elizabeth primary school said that the pupils visited the library for silent reading and to look for information. According to the teacher in charge of library at

Reuben primary school the children visited the library to borrow books, for revision and reading programs. The teacher librarian at St. Elizabeth primary school stated that the library issued story books and magazines while Reuben primary school offered services like reading in the library, provision of reference materials, reading programmes and typing/printing for teachers.

The head teachers in the schools with libraries indicated that the information sources kept by the libraries comprised books, magazines and newspapers. For instance the head teacher of Kibera Primary School indicated that the library services in the school provided information on the environment, academic and HIV/AIDS. The head teacher Kiboro Primary School also indicated that the library kept general information, HIV/AIDS and information on environment.

The pupils in the public schools in the slums; Kibera (Toi, Olympic, Ayany and Kibera), Mathare (Daima, Ndururuno and Salama) and Mukuru (Reuben, St Elizabeth, Star of Hope, Mukuru Kwa Njenga) accessed story books, textbooks and magazines during the library lessons. In addition those from Ayany conducted discussions during library lessons, while pupils in Reuben Primary School said that they obtain peer education from the school libraries.

The findings therefore showed that there is commitment from the schools in the three slums in enhancing information access in order to alleviate social deprivation through providing time for the learners to access the library to use various sources of information (books, magazines and newspapers). However there was need for improvement.

4.2.5 Accessibility and use of Information by School children in the Slums

The study further investigated whether teachers provided library resources based projects to learners. The study findings are illustrated in figure 7 below.
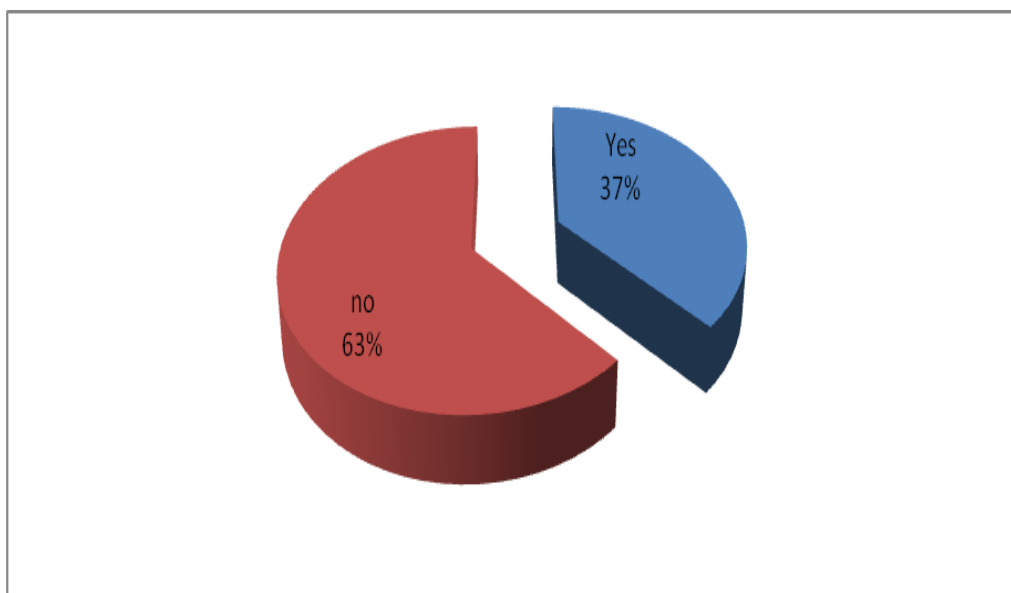
Figure 7: Provision of Library Resources Based Projects to Learners by Teachers

From the findings, 30 (37%) of teachers agreed that they provided pupils with projects based on library resources while 50 (63%) did not.

4.2.6 The role Played by Service Providers in the Provision of Information Services

4.2.6.1 Role Played by Teachers in the use of School Library Services

The study findings in table 4.7 show the role played by teachers in the use of school library services.

Table 4.3: Teachers' Role in the use of School Library Services

	Frequency n=55	Percentage %
Encourage the learners to visit the library	12	19.35
Assist in managing the school library	2	3.23
Assist in selecting library materials	5	8.06
Assist in recommending library resources	4	6.45
Help learners in choosing reading books	25	40.32
Help learners to search for information in books	10	16.13
Give the projects to do in the library	4	6.45

From the study findings in table 4.7, 25 (40.32%) teachers from Kibera, Mukuru and Mathare slum cited helping learners in choosing reading books as the major role they played. In assisting the pupils in the use of the school library services, 12 teachers (19.35%) indicated encouraging the learners to visit the library, while 10 (16.13%) cited, helping learners to search for information in books. Others including 5 (8.06%) teachers indicated helping learners to select library materials. Four (6.45%) teachers cited that they assist pupils in recommending library resources while other 4 (6.45%) teachers stated that their role was to give learners projects to do in the library thus enhancing use of library resources. Two (3.23%) cited that they assisted in managing the school library thus enhancing the pupils use of library services.

The study further investigated the role of teachers in motivating learners to use library facilities. The findings are illustrated in figure 8 below.
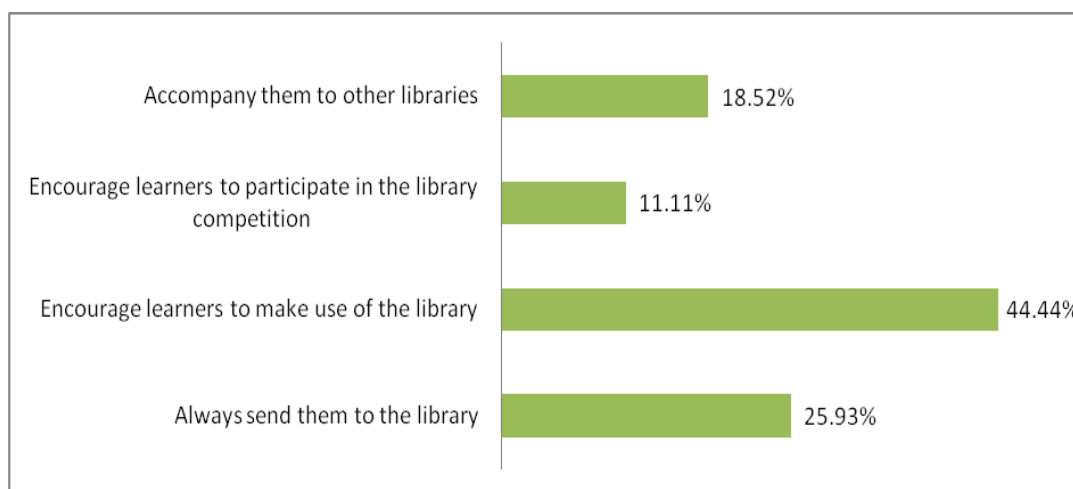
Figure 8: Motivating Learners in using the library

Figure 8 above shows that most of the teachers 36 (44.44%) in the primary schools in Kibera, Mukuru and Mathare slums encouraged learners to make use of the library. Meanwhile, 21 (25.93%) always send them to the library, 15 (18.52%) accompanied them to other libraries while 9(11.11%) encouraged learners to participate in the library competition.

The findings further illustrated that there was a dedication on the part of teachers to help slum children overcome social deprivation by mostly encouraging them to visit the library, helping them in choosing reading books as well as searching for information in books. Further, the teacher librarian in St. Elizabeth Primary School motivated both the children and staff to use the Library by allowing them borrow story books and books

from the library, offering new books and books and newspaper extracts. The study further established from the teacher librarian at Reuben Primary School that children and staff were motivated to use the Library through creation of time on the time table and display of newly purchased books.

4.2.7 Role of Information Communication and Technology (ICT) in Enhancing Access to Information Services

The study sought to find out whether Information Communication and Technology (ICT) enhance access to information. From the findings of the study, all the respondents (100%) agreed that information communication and technology (ICT) enhances access to information. The study further sought to find out the role of information communication and technology (ICT) in accessing information. From the findings of the study, the teacher librarians stated that Information , communication and technology is one of the areas of continuous development that reshape the way that libraries access, retrieve, store, manipulate and disseminate information to users. KNLS director stated that;-

> "Information communication and technology (ICT) has impacted on every sphere of school library activity especially in the form of the library collection development strategies, library building and consortia". The KNLS director further observed that "automated library services in Nairobi area library had encouraged pupils to visit the library due to enhanced interactive learning programmes".

The director of the ministry of Sports, Culture and Arts stated that;-

> "ICT presents an opportunity to provide value-added information services and access to a wide variety of digital based information resources to the school children".

The head teachers in all the public schools stated that school libraries could use modern technology to automate their core functions, implement efficient and effective library

cooperation and resource sharing networks, implement management information systems, develop institutional repositories of digital local contents, and digital libraries: and initiate information communication and technology (ICT) based capacity building programmes for library users. Children on the other hand stated that information communication and technology (ICT) would help them get used to computers at early stages of their lives; hence they would be able to apply the same in their daily lives particularly to earn a living. Further they stated that information communication and technology (ICT) would also help them to be more exposed to knowledge since they can use the internet for searching information materials like their colleagues in the developed world.

 The teachers stated that information communication and technology (ICT) would help them handle many students than they do currently due to the use of modern tools like projectors and computers. Teachers also stated that information communication and technology (ICT) would facilitate access to information (learning and teaching materials beyond the national boundaries by both pupils and teachers and the application of information communication and technology (ICT) would continue to produce, a new class of well-informed and knowledgeable citizens who are empowered to actively participate in decision making, new experiences and practices at all levels.

The community librarians stated that application of ICT has improved productivity in various sectors of the economies. For example, the use of desktop publishing had promising to rescue the weak publishing industry. In addition, community librarians stated that the use of modern ICT has made library searches more efficient and effective

through the use of computers and Internet, it is now possible for people to access any type of information(e.g. Research, leisure or work-related) beyond their national borders).

The director of ministry of education stated that information and technology facilitated the flow of knowledge in modern society since ability to read and type enhances one's computer literacy. Further, he stated that information communication and technologies (ICTs) offered many opportunities for women and girls to gain education and technical skills required for them to participate equally in the information technology (IT) economy due to the fact that information communication and technologies (ICTs) represent an opportunity to ensure equal access to quality education and therefore, adoption of the information communication and technologies (ICTs) within the education sector was therefore necessary to improve the performance of the sector

4.3 Qualitative Data

Qualitative data was analyzed through content analysis. Content analysis is used when the researcher uses a set of existing written or visual documentation for purposes of analysis (Grbich, 2007).

4.3.1 Information Needs of Children in the Slums

The study investigated the information needs of children in the slums and its contribution towards alleviation of social deprivation. The pupils from the public schools in Mukuru, Kibera and Mathare slums cited the need for improvement of knowledge in social integration, provision of information on morals, pollution, emergency procedures; safety related information gender sensitization as well as talent identification through extracurricular activities and creative arts.

The head teachers pointed out that the library was important in improving languages, gaining knowledge on diverse matters affecting the society and offering relaxing facilities.

The pupils from the public schools stated that some books have inspiring stories and information on how to integrate and mingle peacefully with strangers which helped to avoid violence. They also argued that pupils obtained information which imparted knowledge on problem solving skills and moral teachings. In addition the information helped the children care for others and the environment and also imparted to them knowledge on drugs and generosity. Further, the information obtained helped the pupils improve their performance in school which helped them pass their exams.

In meeting the day to day social challenges, the pupils stated that the information helped them improve on their social life and also enlightened them on environmental conservation (planting trees). Further the information helped to give the pupil encouragement, academic improvement and motivation. It was further established that the information obtained was useful in helping the pupils avoid drug abuse, curb the spread of HIV/AIDs and helped them in choosing friends. The pupils also said that the information obtained from the library had enabled them to know their (children) rights. The pupils in all the three slums also indicated that:-

> "The information had enabled them avoid conflicts among themselves and enhanced their skills in dealing with situations e.g. fire outbreak and conflict resolution".

The librarians in the community libraries in the slums cited several roles played by libraries in meeting social needs of slums children. The libraries provided magazines with

exciting and inspiring stories. These added knowledge to children on how to adapt to challenges of the slums. By coming to the libraries, there was interaction and integration among the slum children thus this contributed to the learning of behaviours and morals. In addition, through reading of various books on various topics, the children were able to apprehend knowledge on different cultures of different communities in Kenya and the world. The libraries also provided life skills, books, provision of reading area, as well as assisting children in mathematics for knowledge improvement. According to the teacher librarian in St. Elizabeth Primary School (Mukuru), the role of the library is to ensure that the pupils got exposure especially in languages.

According to the Kenya National Library Service (KNLS) director, the libraries act as centre's for social activities, offers reading space and games (indoors and outdoors). On how libraries can be used to empower children to overcome social deprivations, the study showed that libraries provided reading space that is not available in homes of most school children to enable them read and do their homework. Furthermore libraries train children besides offering space and recreation facilities.

According to the director from the Ministry of Education;-

> "The role of the library in meeting social needs of slum children was through providing quality information for development and enabling slum children integrate into the society as productive and civic individuals".

Further roles of library were found to be provision of information, lifelong learning, and provision of recreation and leisure facilities. Also libraries are important as they support formal education and act as centres for social connections that promote cultural diversity and identity. Libraries also empower children to overcome social deprivations by serving

as used as power houses of information. Therefore they prepare the children to overcome these challenges.

Even though a school library is an essential facility in the school, the Ministry of education does not enforce it as a mandatory requirement during the establishment or management of a school. Such lack of an official directive for schools to have school libraries implies that every school is left to determine for itself and chart their own course. The Kibera primary school head teacher stated that:-

> "The establishment and management of school libraries were mainly as a result parents and well-wishers".

The teacher librarian at Reuben Primary School saw the role of the school library as being to offer reference, revision and information material, reading programmes. This helped to create a reading culture among pupils and provided a conducive environment for reading in an effort to meet the requirements of the school curriculum.

The librarians in the community libraries indicated that by visiting the library for reading, the time was well spent doing a constructive activity, thus eliminating idleness which influenced pupils to indulge in defiant behaviors such as drug abuse, stealing or irresponsible sexual activity. Libraries encouraged pupils to focus on the future rather than concentrate on their current problems in the slums. The Mathare Youth Sports Association (MYSA) community librarian noted that:-

> "It was through offering life skills, monitoring a child's school performance, offering mentorship and positive role modeling as well as motivation through gifts and trips that libraries were able to empower children to overcome social deprivations". The SIDAREC librarian noted that "libraries were the key to better education and could be used as tools

for, bridging digital divide through access to ICT by marginalized communities".

These findings show access to information by slum children in Mukuru, Kibera and Mathare was geared towards alleviating social deprivations through; social integration, information on morals, pollution, gender sensitization and talent identification through extracurricular activities and creative arts. Therefore access to information helped them to care for others and protect the environment, gain knowledge on drugs and generosity and enhanced the children's development as productive and civic individuals.

4.3.2 Types of Library Information Services Available in the Slums

4.3.2.1 Types of Libraries in the Slums

As noted by most pupils in Kibera, SIDAREC, and Global alliance for Africa were the only community libraries known in the neighborhood. Majority of the pupils in upper primary of the public schools in Mathare and Mukuru were not aware of the existence of community libraries in the neighbourhood. This depicted poor sensitization of the library services in the area to the slum children.

The Global Alliance for Africa library and SIDAREC are run by trained librarians with certified diploma qualifications. Their duties included: overseeing the operations of the library; creation of order for reading; issuing books to readers; monitoring the stock of books; receiving new books; making catalogue cards for book identification; as well as maintaining cleanliness within the library premises.

In Mathare slum, there existed Mathare Youth Sports Association (MYSA) community library. The library as the study noted is run by untrained librarians who have only basic knowledge of library services. The librarian is charged with several responsibilities such as making catalogue cards for books identification, data recording (library information system), coordinating library clubs, training users on languages and computers services as well as labeling and classifying the books. The study findings revealed that most the schools in the area had no structured library systems.

In Mukuru slum, Makadara District Commissioner's' Office Library was run by a diploma holder in Information Science while the SIDAREC community library (Mukuru slums branch) was run by trained librarian with certified diploma qualifications. In all the public schools in Mukuru two (St. Elizabeth Primary School and Reuben) had a library. In St. Elizabeth Library, the study noted that most of the time, the children visited the library to practice silent reading and to search for information.

As the above findings indicate libraries existed in all three Slums of Kibera, Mukuru, and Mathare. These provided information which contributed towards alleviation of information poverty and social deprivation aspect. However, not many of the children were aware of the existence of these libraries in their neighbourhouds. Moreover, at the moment, SIDAREC library lacks local contents that can pool the locals to read. There is need for Kiswahili, African Languages and Oral Literature books.

4.3.2.2 Use and Reliability of Library Information

On use and reliability of library information, the pupils in upper primary schools in Kibera (Olympic, Toi, Ayany and Kibera), Mathare (Daima, Ndururuno and Salama) Mukuru (Reuben, St Elizabeth, Star of Hope, Mukuru Kwa Njenga) use the information obtained from the Library for reference, knowledge, leisure, homework and to supplement school notes. In addition, class six and eight pupils in Mathare 4A School and Reuben Primary School indicated that they used the information obtained from Libraries to write English composition, this helped improve on their language skills acquisition of new vocabularies.

All the pupils in the upper primary in the public schools stated that they preferred information in diversified formats. In addition pupils from Ayany and Salama schools indicated that they accessed audio and electronic information.

The study required the respondents to state whether they found the information they needed in the library (reliability). All the pupils in the public schools in Kibera (Olympic, Ayany) admitted that they always found the information needed during their library lesson. However, some in Kibera (Toi and Kibera), Mathare (Ndururuno, Salama) and Mukuru (Reuben, St Elizabeth, Star of Hope, and Mukuru Kwa Njenga) refuted this and suggested that more information resources be bought. They further suggested the introduction of computers, audio and visual lessons and purchase of exercise books as well as provision of information on relevant topics.

The librarian in Reuben Primary School indicated that the pupil's information needs were met and that facilities and resources were adequate to meet the needs of users although there was need for improvements. The librarian in St. Elizabeth primary school on the other hand stated that:-

"The facilities and resources in the Library were not adequate to meet the needs of the users".

4.3.3: Information Services Provided for Slum Children by School, Community Libraries and Kenya National Libraries Services

The study further noted that Global Alliance for Africa in Kibera donated books to the slum children without charges; created an area for the children to do homework; and also assisted the children in reading as well as offering non book facilities such as charts and maps for the children. Mathare Youth Sports Association (MYSA) community library in Mathare slums and Makadara District Commissioner's office library on the other hand provide several other services such as computer packages training, school visits, organizing poetry and drama as well as training on languages (Norwegian and sign languages).

The librarian at Global Alliance for Africa reported being unaware of any government policies regarding provision of information services in the community. Mathare Youth Sports Association (MYSA) librarian and Mukuru's DCs librarian cited government policy as children's right to education and access to information. Several policies were adopted by Global Alliance for Africa library in provision of library information services in slum areas. These are; enforcement of restriction in lending of books, where the library

has implemented a form of membership for the books borrowers (to build trustworthiness and efficiency in lending) and not lending to the strangers; no age limit; and operating time was from 8am to 8pm, these were not noted in Mathare and Mukuru slums.

The librarian at SIDAREC community Library stated that:-

> "the library was a response to the lack of a conducive-studying environment, which is miserably lacking in many areas within the country especially slums. The inadequate or lack of these facilities in the slums denies the community members especially school going children and young people reference and other reading materials, which enhances their knowledge levels".

Most of the children from the slums lack funds to purchase textbooks, which are essential for their studies. The library serves as a reference point for many learners in terms of accessing reference material.

On availability of non-book media, out of the 16 public schools in Kibera, Mukuru and Mathare 75% had no non-book media. It can also be noted that the majority of the teachers from the three slums stated that the conditions in the library in terms of resources were fair and needed improvement owing to inefficient books, non-book media, inadequate finances, old worn out books as well as poor management.

The study sought to identify how the library services to the children had changed in the past five years before the study. The Kenya National Library Service (KNLS) director indicated that the KNLS libraries in the country had significantly improved in terms of books stock; this has encouraged frequent visits into the libraries. In addition, there has

been introduction of computers; audio visual centre's, teen centres' and parent-baby reading programmes.

From the findings it can be concluded that books, computer packages training, school visits, organizing poetry and drama, as well as training on languages (Norwegian and sign languages) non book facilities such as charts and maps for the children, are available facilities used by the children in eradicate social deprivation.

4.3.3.1 Accessibility of Information to School Children in the Slums

Regarding accessibility of information by school children in the slums, the director of children services (Ministry of Sports Culture and Arts) stated that their department was able to get facts about the problems of children living in the slums through periodic monitoring and evaluation. However, the focus of their monitoring was to compare the educational performance of children from supported households and those from households, which are not catered for, and who mostly obtained information from the head teachers.

The study sought to establish whether the Kenya National Library Service (KNLS) offered information to children in slums. According to the Kenya National Library Service (KNLS) director*;-*

"the institution treated all children without discrimination".

4.3.3.2 Improvement of Access to Information by Slum Children

The study aimed at establishing how the teacher librarians ensured that users accessed to information which were relevant to their needs. According to the teacher librarian at St. Elizabeth primary school, the library provided different story books and books for different levels. They labelled the information sources for easier access by the users and at times the librarian advised and selected books for users. The teacher librarian at Reuben Primary School indicated that the books in the library were categorized in classes, the teachers also requested books for their pupils and a librarian provides reference materials.

On ways to enhance library services, the librarian at St. Elizabeth Primary School indicated that this was done by teachers while helping the pupils understand the use and importance of the library and also the contents of the books they read. Further, he said that the teachers should be involved in selection of story books. Meanwhile, the librarian at Reuben Primary School indicated that library information services were enhance through diversification of library materials (different types of books to be provided), having adequate books in the library and through provision of computers in the library.

Further, the teacher librarian stated that the government should enhance information services including, introduction of computers and internet service and provision of more reading space.

From these findings, it is clear that, school and community librarians in the three slums ensured that users accessed information which was relevant to their needs, provided different story books and books for different levels, labelled the information sources for easier access by the users, and at times, the librarian advised and selected books for users; helping the pupils understand the use and importance of the library and also the content of the books they read.

4.3.4 The role Played by Service Providers in the Provision of Information Services

The following is a presentation of study findings on the role played by service providers in the provision of information services.

4.3.4.1 Collaboration between Libraries (KNLS, Community Libraries and School Libraries)

Most of the head teachers, for example, in Olympic, Ndururuno, Salama, Mukuru Kwa Njenga schools indicated that there was no support received from various stakeholders (KNLS, community libraries and other information service provider's). However, the head teachers in Toi Primary school and St. Elizabeth noted that there were organized, mobile services, library visits, training and book reading day by Kenya National Library Services (KNLS) where reading competition was conducted for the children in all classes.

On collaboration with other libraries such as public libraries, school libraries, it was noted that Global Alliance for Africa library had no collaboration with other libraries

such as public libraries and school libraries. However, Mathare Youth Sports Association (MYSA) and Mukuru Dc's community libraries were engaged in lending of books to schools in the area, conducting training in collaboration with Kenya National Library Services as well as lending books to the children during the holidays.

Further, the study enquired if the government supported library information activities The Kenya National Library Services (KNLS) director indicated that;-

> "the government gave constant financial support, though this has notably been reducing".

This was an indication that the government was reducing its support to the libraries.

Concerning the source of library resources, the teacher librarian in St. Elizabeth Primary School said that the school purchased its library resources through government support. However, they also obtained donations from other well-wishers such as from Kenya Commercial Bank (K.C.B). The teacher librarian in Reuben Primary School indicated that the government provided books and the school received donations from Christian Brother Foundation.

These findings indicate impediments in the move towards reducing social deprivation among slum children due to inadequate collaboration between the Kenya National Library Services (KNLS), the community libraries as well as the school libraries. However, Mathare Youth Sports Association (MYSA) and Mukuru community libraries were engaged in lending books to schools in the area, conducting training in collaboration with Kenya National Library Services (KNLS) as well as lending books to the children

According to the Director Children Services Ministry of Sports, Culture and Arts (formerly, Ministry of Gender and Children), the children's department was tasked to ensure that the families where the children came from were empowered socially so that they are able to access all their rights and privileges as spelt out in different national legal instruments. To this end, he notes that the ministry had a cash transfer programme whereby Ksh. 1500 was provided to selected OVC families, mostly drawn from the slum areas. Secondly, the department organizes children assemblies at district levels whereby selected children drawn from different schools came together and presented their grievances to children officers and where they are sensitized on their rights as per the Children's Act.

The interviewee further indicated that the sensitized children are expected to be the ambassadors on children rights afterwards in their localities. Thirdly, as indicated by the interviewee, the department has voluntary children officers (especially in slum areas) who play a watchdog role on children welfare in their localities and report cases of abuse. Finally, he indicated that the department supported the establishment of children's homes through private sector partnership.

4.3.4.2 Other Players in Children's Access to Education and Information

The study also reviewed the contributions of other organizations as well as the significance of government policies in children's access to education and information. The head teachers stated that the County Council of Nairobi formerly, the City Council of Nairobi through its county City Education Unit has developed guidelines for the

operation of schools in Nairobi's informal settlements. Many individuals, Central business organizations (CBOs) and local Non-Governmental Organizations (NGOs), some with the support of donor funds, have joined in the provision of informal education for slum children. They include organizations such as, Raila Education Centre in Kibera.

Supported by UN-Habitat through the Safer Cities Programme and UNDP, the County Council has been engaged in the Safer Nairobi Initiative for a number of years. The programme has acted as the impetus for a number of council activities including the installation of street lighting; city beautification; provision for informal trading; the upgrading of playing fields in support of youth activities; and safer neighbourhouds campaigns. According to majority of the respondents some of these aspects of the safety initiative have also been integrated in the informal settlements.

4.3.5 Government Policies Supporting Education and Library Information Services in the Slums

The study sought to establish Ministry of Education policy on school libraries. The head teachers in the public schools in Kibera, Mathare and Mukuru stated that the government through the Free Primary Education policy (2003) provided minimal funds for purchase of library facilities such as books. They also indicated that every school ought to have a fully equipped functional library. However, the government did not employ school librarians. In addition, the head teachers stated that the curriculum provided for library lessons once a week for primary schools.

The policy in the slums had not been fully implemented according to most head teachers. The head teachers stated that the free primary education is faced with challenges that have greatly inhibited the fight against illiteracy, some of them are as follows; under Staffing of teachers, Poor working conditions due huge pupils population and inadequate funding. Without clear guidelines or policy on the establishment of library infrastructure as well as the employment of trained librarians to manage school libraries, the government effort to access and use of information by children faces a huge challenge.

According to the head teacher of Mathare 4A School information policy should be implemented through Free Primary Education. Further, the head teachers of Kiboro Primary, Kibera and St. Benedict said that the policy had not been implemented, as the government was yet to build classes and to provide books. The Kibera head teacher adds that;-

> "when the pupils used to pay school fees, the school could channel some fund to the purchase of books but with free primary education that had ceased".

Further, the study aimed at finding out government's policy regarding provision of information services in schools. According to the Director of Education, The Ministry of Education is in charge of ensuring education for its citizen hence the government, through the Ministry of Education has formulated educational policies such as FPE.

According to director, all children are supposed to access all rights as stipulated in various official instruments and the Constitution (chapter four (4): right to information). However, the study found out that no FPE (Free primary education) policy had not been

fully implemented in the slum and that slums had often been marginalized. In addition, no policies that specifically mentioned information provision to children in Slums.

Regarding accessibility of information by schoolchildren in slums, it was found to be poor as most people struggled to meet other basic needs as food and shelter and thus not information.

The Global Alliance for Africa Librarian admitted not being aware of the existence of a national information, communication and technology policy in Kenya. She recommends that the government should build more libraries in slums as well as enhance mobile library services provision to facilitate knowledge as well as easy access to information in slum areas. The policy has an impact on enhancement of library information services and books with no age limitations. The MYSA, SIDAREC and the Mukuru Dc's community librarian were not aware of the existence of a national information policy.

According to the Director Children Services Ministry of Sports, Culture and Arts, their programme only indirectly affected information provision in the slums. Therefore, there were no programmes that provided information to schools in slums. In his opinion, issues pertaining to children and information fall in other jurisdictions such as: the city council by laws which run different libraries in the city, Kenya National library Services (KNLS) and the Ministry of Education.

In regard to the position of children's act on universal access to information, the Director Children Services Department, Ministry Sports Culture and Arts stated that the core mandate of the department is care and protection of the children. He further indicated that

all its programmes and activities revolved around care and protection of, children. He noted that the children Act provides that all children are entitled to access to information and education as a matter of right as part of universal declaration of children rights.

4.3.6 Challenges Faced in Provision of Information Services to Children in Nairobi Slum Areas

Lack of electronic media, inadequate print media (books and magazines), children's communication problems and book thefts were stated by the head teachers in the public schools in the slums as the main challenges when providing information services. Other challenges were identified as theft of books, inadequate finances and inadequate computerized information sources, in the libraries.

The teachers outlined various challenges learners faced in accessing and using library sources. Where a library existed these challenges were associated with locating of books due to improper shelving, inadequate time, overcrowding due to limited space, lack of computers as well as existence of old books with obsolete information. The major challenges encountered when providing information services to children in Nairobi slum areas as noted by the librarian at St. Elizabeth Primary School, was that the children often did not understand what they had read.

The children in the public schools in Kibera, Mathare and Mukuru slums, cited various challenges. These were noise emanating from loud music by neighbours and drunkards, water pollution and the risk of waterborne diseases, poor hygiene, inadequate clothing,

few toilet facilities, water shortage problems, orphanage, insecurity (harassment and insults from strangers, violence, rapes), poor road condition, child labour, frequent fires, small houses with big families as well as power failure. In addition, the pupils were forced to trek for long distances to the school. Poor road conditions make houses in slums inaccessible by fire fighters in case of fire outbreaks which are a common phenomenon in the area. All these social problems impacted negatively on the provision of information services to slum children. It's only in an ideal home environment where reading is encouraged.

Other Challenges as stated by all the pupils from the public schools in Kibera, Mathare and Mukuru slums were:- inadequate books, lack of reading and literacy skills, inefficient information providers, communication problems, lack of current information, poor sanitation, and restriction by the head teacher from visiting community libraries. For instance, pupils in Reuben Primary School cited constant blackouts in the library, stealing of books by some pupils while others made noise in the library. In those schools, which had computers (e.g. Ayany and Salama), there were problems of lack of a computer specialist/staff, faulty computers, lack of internet services as well as inadequate space for learning.

According to the pupils in Olympic Primary School and Kibera Primary School, they indicated that some pupils would skip classes and go to the library and that at other times pupils would lose books, which they were not able to pay.

There are other challenges in providing library information services in the slums. For instance, children prefer to go for menial casual jobs, instead of going to the library for

reading. There is also the challenge of power failure as most residents have executed illegal power connections within the slums. The study further identified inadequacy of reading materials, computers and space as the challenges in providing library information services in the slum.

On the challenges that the Government of Kenya is experiencing in fulfilling its mandate especially in regard to ensuring universal access to information, it was established from the KNLS director that the government had other priorities over the libraries and also experienced shortages of funds to run the libraries effectively. The study further found out from the interviewee that lack of libraries in many parts of the country and poverty (lack of fares to access the libraries) were major challenges hampering provision of information services to children in slum areas. This problem was found to be mitigated by mobile libraries in the slums and other areas to ensure accessibility.

On the challenges that the ministry was experiencing in implementing government policy on library information services, it was found that the government had failed to provide equal education opportunities to all owing to financial related challenges. Further, there were no clear policies regarding provision of information in slum areas. To curb these challenges, the ministry is introducing new modes of operation to promote and popularize ICT. The ministry is also committed to ensuring that objectives set to ensure learning and information needs for all are met through equitable access to appropriate learning, information and life skills programmes by 2015. The ministry is also working hard towards culminating regional disparities; construct/renovate facilities in learning institutions particularly in slums.

On challenges the Ministry of Sports Culture and Arts faced in implementing the policy on library information services, the respondent indicated that;-

> "there was no clear policy to guide libraries on issues especially for the OVCs, to the extent covered by the mandate of the department".

The Director, Children Services, Ministry of Sports Culture and Arts felt that the policy aspects on libraries should be factored into the programmes of the ministry in consultation with other stakeholders. On the way forward, he says that the information seems inadequate and therefore further interviews should be sought from relevant sources. The respondent apart from complaining about time seemed not to be conversant with the topic of the study. He felt that for adequate coverage of the study topic, the City Council, Ministry of Education and KNLS should form the focal point of the study.

From the findings, children communication problems, theft of books, inadequate finances and inadequate computerized information sources, overcrowding due to insufficient space, noise and water pollution, poor road conditions, lack of current information, lack of computer specialist, and lack of clear policies regarding provision of information in slum areas were the main information related impediments in alleviation of social deprivation among slum children.

4.3.7 Improvement of Access to Information

4.3.7.1 Future plans Regarding Provision of Library Information Services to Slum Children

Concerning plans to improve access to information for slums children the head teachers in the public schools without structured libraries (e.g. Olympic and Toi, Ndururuno, Salama and Mukuru Kwa Njenga) indicated that they planned to acquire fully stocked, spacious roomed libraries for this purpose. Those which had either a class library or a structured stocked library indicated they planned to expand the facility by increasing the number of books and by introducing audio, visual and electronic facilities.

The Global Alliance for Africa, SIDAREC and Mukuru Dc's Librarians cited several plans to enhance provision of information services in Kibera and Mukuru slums including acquisition of more books, expansion of reading rooms as well as provision of an equipped cyber café with internet services. On the other hand, MYSA community library planned to increase its stock to cover the school curriculum, increase the number of visits to schools, enhance the provision of information technology services to the children, expand the reading area and promote a reading culture.

On the library's future plans regarding provision of library and information services to the slum children, the KNLS Director indicated that;-

 "there were, no specific plans targeting the slums".

On whether the Library contributed to alleviation of social deprivation experienced by children in the slums, the Director KNLS indicated that;-

> "in deed the library was key to alleviation of social deprivations among slum children as it offered a door to better education".

He further pointed that community and school libraries alike should provide up to date and sufficient reading materials. The study established that the Ministry of Education future plan regarding provision of library and information service in slum areas in Nairobi was not specific for the slum children but the ministry intended to prioritize education and information as a foundation for development of the future generation and development.

The director ministry of education stated that Vision 2030 is the country's new development blue print covering the period 2008 to 2030. Its aim is to transform Kenya into an industrialized country and improve the quality of life for all Kenyans. The director further agreed that School libraries ought to be integral to the education process if quality education is to be achieved. On how the new Constitution was likely to impact on information provision especially in the slum areas, the respondents indicated that the new constitution would ensure equitable provision of information and other services to all children in Kenya.

According to the Director Children Services, Ministry of Sports Culture and Arts, Children welfare would be enhanced once all Acts and legislations touching on children

were amended to conform to the new Constitution. He hoped that the children's department would be expanded to cover issues of information and libraries.

4.3.7.2 Addressing Challenges Faced in Provision of Information Services

According to the head teachers, the challenges above may be addressed through provision of enough reading materials such as story books, encouraging teachers to communicated in English at all times while teaching, and exposure through debates and creative writing. These would encourage the pupils to use English more. The head teacher at St. Benedict School suggested that the challenges may also be addressed through listening to radio broadcasts in English and also teachers acting as role models to be emulated by the children. In addition text books should be provided in the library. Theft could be addressed with cooperation of local administration and moral teachings to the children. The study has further recommended that the government provide more rooms in schools to be used as libraries. The respondents further suggested that the challenges could be addressed through increased budgetary allocations by Government and donors. They could also assist by donating books and equipments to the school libraries.

The teachers further recommend that the government through the ministry of education ought to upgrade the existing library facilities in the schools in slum areas. Since most of the schools had no teacher librarians, there were suggestions for the management to employ teacher librarians to facilitate the management and efficient use of books. There was also a need to avail computers to the schools in the slum areas to augment the existing information provided through text books.

Various suggestions for improving library services to slum children were provided by the librarian's in charge of the community libraries who suggested teaching of morals to the children as a way of discouraging theft of books. They further suggested that the government ought to increase funding of Libraries to purchase more books, and computers. In addition mobile libraries and child library evaluations were cited in Mathare and Mukuru slums, for service improvement to slum children. On how to improve or change library information service to children in slums, the KNLS Director indicated that there was need to provide reading spaces in the slums as many people didn't make it to the libraries.

The Director further recommends the establishment of mobile library services, library visits, construction of KNLS branches in all corners of the city and construction of big halls that are well furnished to provide adequate reading space and provision book boxes programmes in liaison with social workers and other stakeholders. Providing well equipped spacious libraries is one way of improving the lives of slum children. He pointed out that insisting on equal opportunity was vague since the children in the slums were disadvantaged as their counterparts from well off families had enough space either in their school or in their home. He notes that it was important that the government increases funding for library services so as to facilitate the spread of libraries in the slums. This would supplement efforts made by NGOS to set up community libraries. The NGOs efforts are not sufficient as the population is large.

4.4 The Model

The proposed model for this study is a customized model from an original model dubbed Project CATE (Children's Access to [and use of] Technology Evaluation) model by Dresang et al (2003). The model responds to various challenges identified by the study pertaining to access and use of information by children in Kibera, Mukuru and Mathare slums. In addition, the social aspect which greatly features in the current study (alleviating social deprivation) is rarely addressed in original model. This aspect is well identified in the improved CATE model proposed by the study (as shown in the shaded areas).

The model focuses on outcomes that occur because of planned activities or processes for users or clients in terms of knowledge, skills, behaviour, or attitudes. The model provides outcome-based assessment criteria for evaluation of children's use of resources and services in a networked environment which the old model does not exclusively account for. It incorporates inputs, activities, and outputs all of which are used as part of defining and supporting appropriate outcomes for persons involved.

The customized model addresses the objectives of the study as follows:-

4.4.1 Information Needs of Children in the Slums

The knowledge on information need of children is important in designing suitable means of information delivery. The identified information needs of children in slums include the need for improvement of knowledge in social integration, information on morals, provision of knowledge on pollution, gender sensitization and information on talent

identification through extracurricular activities and creative arts. The model depicts the availability of teachers' expertise, community resources in meeting the information needs of students. The role of library in provision of information, lifelong learning, and recreation and leisure facilities is also significant.

4.4.2 Information Services

The study identified library as one of the most important tool in availing information to students. The model incorporates teacher expertise aspect that allows for the integration of networked services that most schools in the slums do not have. For example, all the public schools in Mathare slums had no structured library systems. They also lack computers, projectors, and other multi- media devices for use.

4.4.3 Accessibility of Information by School Children in the Slums

The model indicates a centralized system which puts together the teacher, librarian and community aspect to enhance accessibility of information to school children in the slums. The study revealed that teacher librarian ensures that users access information which is relevant to their needs. The model proposes a system which will ensure that pupils are provided with different books and digital learning materials, for different levels, targeting different users.

4.4.4 Use of Information in Eradicating Social Deprivation

The customized model allows for assessment of the outcome of the integrated aspects of teacher, community and librarians in availing day to day information to the pupils to improve on their social life. The assessment will focus on information on drug abuse,

spread of HIV/AIDs and pupil's socialization in the slum community. The assessment will also check on children rights, and conflict resolutions.

By assessment, there is interaction and integration among the slum children thus learning of behaviours and morals are enhanced among them. In addition, through reading of various books on various topics, the kids are able to apprehend knowledge on different cultures of different communities in the world.

4.4.5 The Four Phases of the Model

Figure 9 shows that the outcome-based model comprises four phases:

- Data collection (Phase I);

- Outcome-based assessment criteria development (Phase II);

- Products or services production (Phase III); and

- Evaluation (Phase IV).

The arrows in the model denote its interactive nature and indicate that the model is not one that operates in a step-through-time mode. The term phase refers to a set of actions that are taking place in a back-and-forth relationship to other actions rather than in a set period of time. This aspect has become increasingly important as the model has been applied. As can be seen there are block arrows and thin ones in the model. The block arrows represent an improvement on teacher's expertise, and community resources aspects based on the current study.
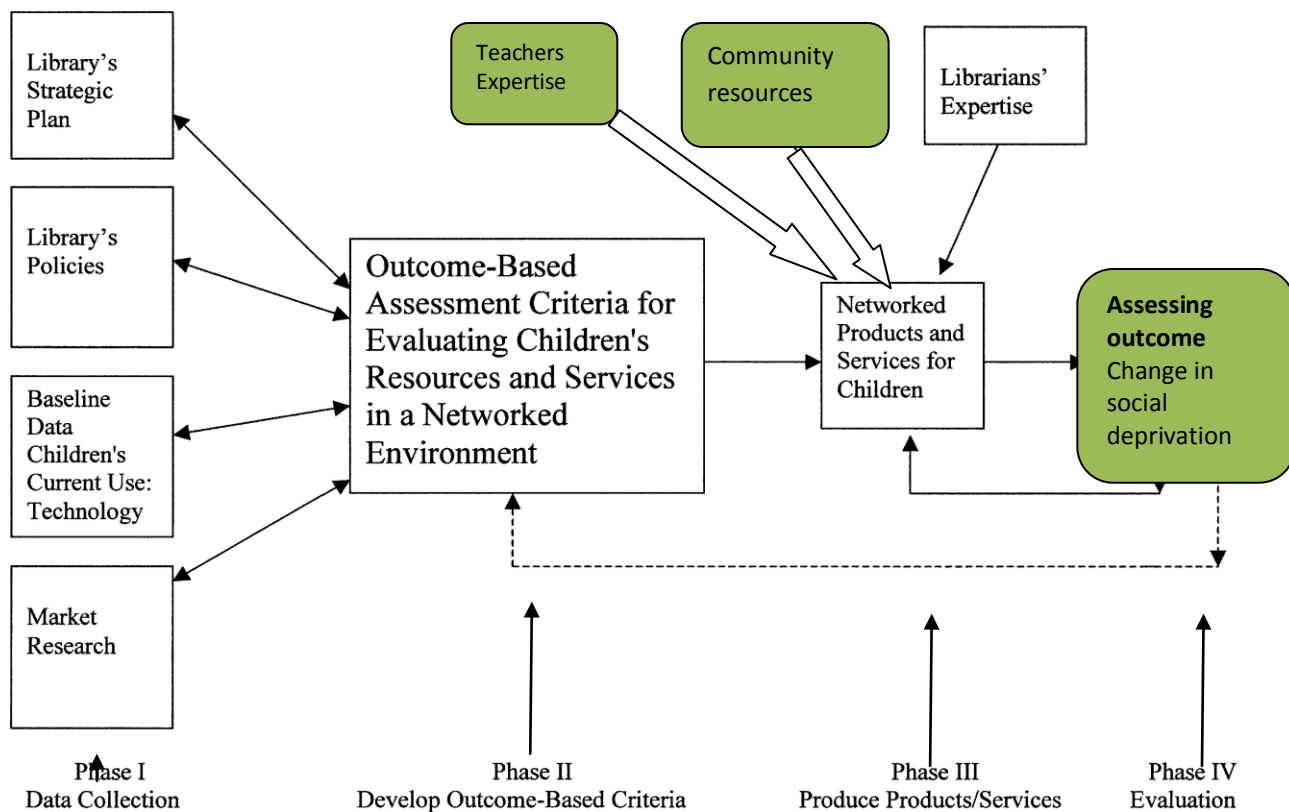
Figure 9 Evaluating children's Resources and Services in a Networked Environment: an Outcome-based Model (Dresang, Gross & Holt, 2003).

4.4.5.1 Phase I (Data Collection)

Phase I contains several unique features of this evaluation model. Often, the provision of resources and services for children is not integrated into the library's overall strategic plan, and it must be for this model to work. The vision and mission of a library are applicable to users of all ages. Specific internal strengths and weaknesses and external opportunities and threats apply specifically to children's services. Library policies have a significant impact on the possible outcomes for children's use of technology. For example, any national legislation limiting children's access to the internet is unconstitutional. Market research, in this instance, means assessing the desired outcomes

of the users, the children and the adults who have responsibility for their growth and development. It is more typical for libraries to produce questionnaires after a service or product has been in use to ascertain its success. The Project CATE model calls for and practices ongoing assessment of user desires, with planning dependent on the market assessment.

Baseline data, in part, refer to the present skills, knowledge, attitudes, and behaviours of the children in the identified age range in relation to technology. Part of these data is collected in-house at intervals throughout the year. Most of the in-library data are observational, but a few questions — for example, whether the students are there for play, to find information for a self-generated query, or because of a query imposed by a teacher or someone else — are asked directly. These questions were inserted to relate the findings of Gross (1999) about children's information seeking to children's use of technology. Other types of baseline data include demographics of users and existing library inventories of technology and other resources, and other library reports and documents.

4.4.5.2 Phase II (Outcome-Based Assessment Criteria Development)

All the data collected in Phase I come into play in the development of the outcome- based criteria. The skills, knowledge, behaviour, attitudes, and status are possible areas for change. The market research data and the baseline data provide direction for the areas an individual library wants to emphasize. This flexibility in determining the outcome-based assessment criteria allows the library to focus on user benefits and recognizes that the defined outcomes may vary from community to community. There is little interest or

need to work on improving attitudes, because the use and value of technology in the public library are highly regarded by children of all ages. Another choice libraries have in developing outcome-based assessment criteria is how many levels to assign to a particular outcome. Because this is a dynamic model, as children become more expert, these levels can be shifted.

4.4.5.3 Phase III (Products or Services Production)

Just as the data collected in Phase I lead to development of the outcome-based assessment criteria in Phase II, so the criteria provide a framework for the design, development, and evaluation of products and services. Thus, the resources are aimed, from the beginning, at achieving what the users want and what the environment can support.

One systematic way, which is emerging in the model, is to plan for development or acquisition of sources and services to help users reach projected outcomes through a service response diagram or chart. In essence, this means developing levels of service in particular areas (e.g., after-school computer activities) that will presumably provide different results or levels of outcomes. Community resources (e.g., the donation of more technology) teachers' expertise and librarians' expertise come into play at this stage. A conscious linkage must occur constantly between the services the library is providing and the outcomes enumerated for assessment.

4.4.5.4 Phase IV (Evaluation)

Formative evaluative should take place throughout the project. It can occur during any phase of the model. An assessment can be made, for example, of the services response, of the assessment criteria and indicators (which at this point may need to be modified), or of the entire process. In Phase IV, summative evaluation takes place. It may be time to revisit some of the users and user-surrogates to determine whether expectations for outcomes have been met or have, in fact, changed over time. This is the point in time when the indicators are applied to measure the level of outcomes achieved. The outcome-based criteria are not a static list of goals but are expected to be revisited and updated as data are gathered and analyzed and in response to future planning cycles, subsequent community analyses, and future gathering of market data (Dresang & Gross, 2001).

4.4.5.5 Contributions of the CAT Model

Project CATE departs from the traditional evaluation paradigm. It is constructivist, qualitative, pluralistic in approach. The project is intended to be a model that can be constructed and reconstructed in various library locations. The research methodology, qualitative and pluralistic in nature, allows for a duplicative social construction of meaning in an unlimited number of additional locations (e.g., libraries). Schalock (2001) reviewed predictions that he made in 1995 and offered his early-21st- century view of the future. He labelled one of these predictions ''Embracing the Postmodernist Paradigm.'' He observes that there will continue to be conflicts between logical positivists and social constructionists, but the prediction is that program evaluation will continue to embrace the postmodernist paradigm. Within that paradigm, we will continue to see a focus on

performance-oriented evaluation pragmatic evaluation paradigm context-specific knowledge decisions- oriented evaluation methodological pluralism.

Project CATE takes the postmodern methodological approach grounded in qualitative field research. It constructs a design that gives a holistic view of the process rather than relying on a series of data collection instances. It is an interactive, nonlinear, dynamic model, the content of which may change at any moment as new data and insights become available, suitable for use in the rapidly changing digital world. The model fits several of the projected needs: for example, mission-oriented research, relevant to stated needs with an impact on everyday information services, to slum children. Ultimately, with its outcome-based focus, the model will fulfill the call for research on the social effects of information structure and availability. Another contribution of the model comes from its collaborative structure. Its structure adds complexity to the evaluation process in the planning and the implementation phases and also adds to the richness of insights and depth of analysis of the data collected.

4.5 Summary

This chapter focused on the presentation analysis of the data collected. The researcher analyzed the data provided by Head teachers, Class teachers,   Persons in charge of library, Pupils, Director Ministry of Education, Director of KNLS, Director the Ministry of Sports, Culture and Arts and Community libraries. The results in this chapter were analyzed using both Quantitative and qualitative data analysis.

The chapter proceeded to present results on :- biographical data, information needs of children in slums, information services provided for slum children, accessibility of information to school children in the slums, teachers' role in the use of school library services ,the role played by service providers in the provision of information services and collaboration between libraries (KNLS, community libraries and school libraries), other players in children's access to education and information ,government policies supporting education and library information services in the slums, challenges faced in provision of information services to children in Nairobi slum areas, improvement of access to information, future plans regarding provision of library information services to slum children and provision of Free Primary Education.

The identified information needs of children in slums to include the need for improvement of knowledge in social integration, information on morals, provision of knowledge on pollution, gender sensitization and information on talent identification through extracurricular activities and creative arts. Among the schools that have libraries, there was no noted satisfaction with the provision of services due to shortage of books, space and time limitation for the pupils to use library services. The study notes that the government, through the Ministry of Education Science and Technology has formulated policies on policy on information service provision in education sector.

The chapter ends with presentation of Project CATE model which departs from the traditional evaluation paradigm. It is constructivist, qualitative, pluralistic in approach. The project is intended to be a model that can be constructed and reconstructed in various library locations. Project CATE takes the postmodern methodological approach grounded

in qualitative field research. It constructs a design that gives a holistic view of the process rather than relying on a series of data collection instances. It is an interactive, nonlinear, dynamic model, the content of which may change at any moment as new data and insights become available, suitable for use in the rapidly changing digital world. The major discussions and findings are presented in chapter five.

CHAPTER FIVE

DISCUSSION OF THE STUDY FINDINGS

5.1 Introduction

This chapter provides a discussion of data presented in Chapter Four. Newman (2006) points out that the discussion chapter should be separated from the results, so that readers can examine the data and arrive at their own conclusions. It is only through interpretation that the researcher can expose relations and processes that underlie the findings (Kothari, 2004). Interpretation involves searching for the broader meaning of the research findings, as well as relating the findings to the literature reviewed and the objectives of the study. In the context of this study the interpretation involved relating the findings to the current theories and finding out whether or not they are consistent with them.

In this chapter the discussion is informed by the findings of the study and other empirical data illustrations provided in Chapter Four.

5.2 Information Needs of School Children in the Slums

Knowledge of information needs of school children living in the sums is important in designing suitable means of information delivery. Walter (1994) asserts that an important aspect of children's information needs is based on the fact that people frequently need things without being aware of the need. The importance of identifying the information need is emphasized in Piaget's Cognitive Development Theory (Piaget, 1932). He notes that in concrete operational stage (7-11 years) at which children join compulsory education the operation of a child is still concrete even though he or she can reason about

transforming and conserving quantity. The language acquired by a child at this stage helps in the formation of concepts hence the need to expose a child to the right information that assists in the transformation from egocentric patterns of thought to accommodation of different points of view (Huck, 1979). It is in this regard that the study identified information needs of children who live in the sums as being important in determining the library information services that should be provided to them. It is regrettable that no user needs assessment was conducted in the slums for the children.

Concrete operational stage (First grade to early adolescence) involves demonstration of intelligence through logical and systematic manipulation of symbols related to concrete objects. The child develops an ability to think in abstract ways and makes rational judgments about concrete or observable phenomena, which in the past he/she needed to manipulate physically to understand. Piaget determined that children in the concrete operational stage were able to incorporate inductive logic. On the other hand, children at this age have difficulty using deductive logic, which involves using a general principle to predict the outcome of a specific event. The abstract quality of the adolescent's thought at the formal operational level is evident in the adolescent's verbal problem solving ability. During this stage, the young person begins to entertain possibilities for the future and is fascinated with what they can be.

The identified information needs of children in the slums included the need for improvement of knowledge in social integration, morals, provision of knowledge on pollution, emergency procedures, safety related information, sex education, and gender sensitization and information on talent identification through extracurricular activities

and creative arts. School libraries are important in improving languages, gaining knowledge on diverse matters affecting the society and offering relaxing facilities. Pupils need books that have inspiring stories and information on how to integrate and mingle peacefully with strangers in the slums thus avoiding violence. Information which imparts to pupils knowledge of problem solving skills and moral teachings is very important. The need for knowledge on problem solving skills is in tandem with Brenda Dervins Sense Making Theory (2003) which posits that people seek, process and use information to make sense out of their situations (Dervin, 2005). By acquiring information the users are able to decide what informs the challenges in which they find themselves. Learners need information that helps them to abstain from vices in the society, care for others and the environment and gain knowledge on dangers of drug abuse. Further, there is a need for information on performance improvement of pupils in the slums in order to remain competitive with urban counterparts.

Provision of information on life skills is necessary in slums where children face a lot of social and economic challenges. In meeting the day to day social challenges, learners should be equipped with information that helps them to improve on their social life and which also enlightens them on various economic activities. Slum children need information on drug abuse, HIV/AIDs and conflict resolution. Pupils need encouragement and motivation in their lives. Pupils need information that offers mentorship and positive role modeling as well as motivation through gifts and besides, trips to libraries can be used to empower children to overcome social deprivations. It is therefore important for providers of information to factor in motivation in the available

sources of information. The pupils also need information that enables them to know their (children) rights.

In order to meet the information needs of children, there is need to recognize the role of the library in provision of information, lifelong learning, recreation and leisure facilities. Librarians meet the social needs of slums children by providing magazines with exciting and inspiring stories, which add knowledge to children on how to adapt with the challenges of the slum. Libraries serve as places for interaction and integration among the slum children thus learning of behaviours and morals is enhanced among them. In addition, through reading of various books on various topics, the kids are able to apprehend knowledge on different cultures of different communities in the world. Libraries can be used to empower children to overcome social deprivations by providing reading space that is not available at homes for reading and doing homework, training in life skills and offering space for recreation facilities. The library plays an important role in meeting social needs of slum children by providing quality information for development and enables slum children to integrate into the society as productive and civic individuals. Also libraries are important as they support formal education and act as centre's for social connections that promotes cultural diversity and identity. School libraries should offer reference, revision and information material and comprehensive reading programmes that create a reading culture to pupils and provide a conducive environment for reading in an effort to meet the requirements of the school curriculum.

5.3 Information Services

The study established that various information services were available in primary schools in the slums. It identified libraries as some of the most important means in availing information to students. However, study found out even though a school library is an essential facility in the school, the Ministry of Education does not enforce it as a mandatory requirement during the establishment or management of a school. Such lack of an official directive for schools to have school libraries implies that every school is left to determine for itself and chart their own course. The study findings further reveal that most schools in the slums did not have well-equipped libraries. For example, all the public schools in Mathare slums had no structured library systems. Among the schools that had libraries, there was all round disatisfaction with the quality of services provided such as shortage of books, limited space and time for the pupils to use library services.

The study notes that four community libraries existed in the slums, among them SIDAREC and Global Alliance for Africa library. The Libraries were run by Diploma certified librarians. In Mukuru slum, Makadara District Commissioner's' Office Library was run by a diploma holder in Information Science while the SIDAREC community library (Mukuru slums branch) was run by trained librarian with certified diploma qualifications. In Mathare slum, there is the Mathare Youth Sports Association (MYSA) Community library, which is run by an untrained librarian who has only basic knowledge on library services. Despite the existence of Community libraries, majority of the pupils in upper primary of the public schools denied any knowledge of the existence of these community libraries which are in the neighbourhouds, depicting poor sensitization of the library services to the slum children.

The main reasons why teachers sent pupils to libraries are revision, to gain familiarity with information sources and to gain knowledge in the use of reference sources. Pupils also visit libraries to watch videos, borrow books, to collect information for school projects, for note making, to read newspapers and to listen to radio. Some libraries also offer typing/printing service for teachers. Libraries also provide information, which sensitizes public on HIV/AIDS and environmental conservation. Libraries provide different information to children in different age groups. This important aspect needs consideration when designing information availability for different age groups. In his Cognitive Development Theory's (1932), cites the importance of recognizing various stages in child development. During the concrete operational stage (7-11 years) and formal operational stage (11 years and above) when children are exposed to formal education, their cognitive, affective and emotional development takes shape, hence the need of access to appropriate information. The study established that majority of pupils in the upper primary in the public schools preferred information in print format.

The study established that availability of required information in libraries varied from School to School. While some pupils admitted that they always found the information they needed during their library lessons; some refuted this recommending introduction of computers lessons, audio and visual lessons as a construction of fully stocked library. They also recommended the purchase of books on various topics such as books on politics, HIV/AIDS, health education and history. Some librarians however indicated that facilities and resources were adequate to meet the needs of the users but improvements were needed. The focus on users is in line with Brenda Dervin's Sense Making Theory which lays emphasis on the shift from an early focus on information

sources and users to the users. Sense making can elicit information from participants to discover what they are doing with the information and what suggestions they can give to the designers when constructing their information systems (Dervin, 2003).

Community libraries play a very important role in provision of information. The study established that Global Alliance for Africa in Kibera availed books to the slum children without charges and had set aside a reading area for children to do their homework. They also helped the children to improve on their reading skills, spelling of names and offered non –book facilities, such as charts and maps for the children. Other Community Libraries such as SIDAREC in Mukuru and Kibera, MYSA in Mathare slums and Makadara District Commissioner's office Library provided other services among them; computer packages training, school visits, poetry recitations and drama as well as training on languages (Norwegian and sign languages).

5.4 Role of ICT in Access to Information

Wijayasundara (2005) in his study identified various barriers in the application of ICT in libraries which ranged from technological, managerial, infrastructure, human, and political and social.

Information and Communication Technology (ICT) is widely considered as the most important revolution humankind has experienced since the industrial revolution. A country's development depends on the extent of use, speed of access, and skilled application of ICT systems. Computer and communications technologies have drastically revolutionized human activities including library and information field. Technology can

equip learners to independently organize their learning process. Instead of being passive recipients of information, students using technology become active users. At the same time, technology transfers some responsibility for learning to learners (Groff, Haas, Klopfer, & Osterweil, 2009).

The government plays a vital role in enhancing accessibility to information. The developments/improvements that the government undertakes in enhancement of access to information services include introduction of computers and internet and provide more reading spaces. The introduction of ICT to library service available to slum children is important in ensuring ease of access to information. Automated library services encourage the numbers of individual visiting the library due to enhanced interactive learning programmes. Further, Information Communication Technology is one of the areas of continuous development that reshape the way the libraries access, retrieve, store, manipulate and disseminate information to users; ICT has impacted on every sphere of library activity especially in the form of the library collection development strategies, library building and consortia. ICT presents an opportunity to provide value-added information services and access to a wide variety of digital based information resources to the libraries. Furthermore, school libraries are also using modern ICTs to automate their core functions, implementing efficient and effective library cooperation and resource sharing networks, implementing management information systems, developing institutional repositories of digital local contents, and digital libraries, and initiate ICT based capacity building programmes for library users.

Further, the study found that information communication and technology (ICT) has made library searches more efficient and effective through the use of computers and Internet, it is now possible for people to access any type of information (e.g., research, leisure or work-related) beyond their national borders. And it represents an opportunity to ensure equal access to quality education to school children and therefore, adoption of the information communication and technologies (ICTs) within the education sector is therefore necessary to improve the performance of the sector.

5.5 Accessibility of Information to School Children in the Slums

Accessibility of information by school children in slums was found to be poor as most parents struggled to meet other basic needs as food and shelter and thus paid little attention to books or other information sources.

Commenting on accessibility of information by school children in the slums, the director (Ministry of Sports, Culture and Arts) stated that their department was able to get facts about the problems of children living in the slums through periodic monitoring and evaluation. However, the focus of their monitoring was to compare the educational performance of children from supported households and those from households, which are not catered for, and who mostly obtained information from the head teachers.

Further, the study sought to establish whether the Kenya National Library Service (KNLS) offered information to children in slums. According to the Kenya National Library Service (KNLS) director, the institution treated all children without discrimination.

The study revealed that teacher librarians ensured that users accessed to information which was relevant to their needs. Pupils were provided with different novels books and books for different school grades. The information materials were labelled for easy access by the users and the librarians advised and selected books for users. Books in the available libraries were categorized in classes and teachers placed requests for books for their pupils. According to Piaget's Cognitive Development Theory (1932), the understanding of different stages of child development was a prerequisite to understanding how they react to different sources of information and hence the need to provide information that suits each stage of development. The Accessibility of information can be enhanced by teachers helping the pupils understand the use and importance of libraries and the content of the books they read. Teachers should be involved in the selection of books meant for school children. Accessibility of library information services is enhanced through diversification of library material (different types of books to be provided), having adequate books in the library and through provision of computers in the library.

The government plays a vital role in the establishment of infrastructure and provision of resources to enhance accessibility to information. Information communication and technology (ICT) and library services in slum areas will go a long way in ensuring ease of access to information. Automated library services on the other hand encourage more users to visit the library due to enhanced interactive learning programmes.

5.6 Role Played by Information Service Providers in the Provision of Information

Presence of various service providers is key to ensuring availability and ease of access to information. Service providers range from teachers, parents government agencies and non-governmental organizations.

Teachers assist students in choosing books for reading, encouraging the learners to visit the library, helping learners to search for information in books, assisting in selecting library materials, assisting in recommending library resources, giving the projects to do in the library and assisting in managing the school library. Still teachers motivate learners and staff to use the library by allowing them to borrow books from the library, offering new books and newspaper extracts.

The study recorded varying responses from head teachers on availability of support in the provision of information to users. While some head teachers indicated that there was no support received from various stakeholders (KNLS, community libraries and other information service provider's), others indicated that there was support from KNLS through organized book reading days where reading competition was conducted for the children in all classes. MYSA and Mukuru community libraries are engaged in lending books to schools in the area, conducting training through the collaboration with Kenya National Library Service as well as donating books to the children during the holidays.

The study further sought to find out if the government supported library information activities. KNLS Director indicated that the government gave a constant financial support, which had reduced. This was an indication that the government was reducing its support for the library services.

The head teachers agreed that the County Council of Nairobi formerly, the City Council of Nairobi through its county City Education Unit developed guidelines for the operation of schools in Nairobi's informal settlements and facilitates the registration of these facilities. Supported by UN-Habitat through the Safer Cities Programme and UNDP, the County Council has been engaged in the Safer Nairobi Initiative for a number of years. The programme has acted as the impetus for a number of council activities including the installation of street lighting; city beautification; provision for informal trading; the upgrading of playing fields in support of youth activities; and safer neighbourhood campaigns. According to majority of the respondents some of these aspects of the safety initiative have also been integrated in the informal settlements.

The head teachers in the public schools in Kibera, Mathare Mukuru stated that the government through the Free Primary Education provides funds for purchasing libraries facilities such as books at a very minimal level.

Both local and international donors participate in the provision of reading materials to children in the slums. For example, Kenya Commercial Bank donates money to St. Elizabeth primary in Mukuru slums for purchase of books. The teacher librarian in Reuben primary school indicated that the government provided books and that the school received donations from Christian Brother Foundation. Many individuals, Non-Governmental Organizations' (NGO), some with the support of donor funds, have joined in the provision of informal education for slum children. They include organizations such as, Raila Education Centre in Kibera.

5.7 Government Policies Supporting Education and Library Information Services in the Slums

The government, through the Ministry of Education has formulated educational policies e.g. FPE policy. The task of the Ministry includes: employment of teachers for public schools, distribution of learning resources and the implementation of education policies. According to director all children are supposed to access all rights as stipulated in various government documents, children's Act and in the Constitution (chapter four (4): right to information). However, the study found out that no FPE (Free primary education) policy had not been fully implemented in the slum and that slums had often been marginalized.

With regard to how the Kenyan National Information Policy contributed to library information services in the slums, the Director Ministry of Education indicated that there are no policies that specifically mention information provision to children in Slums, although the policies advocated for equitable access to information. Moreover, the Free Primary Education policy had not been fully implemented in the slums and that slums had often been marginalized. Without clear guidelines or policy on the establishment of library and information services infrastructure as well as the employment of trained librarians to manage school libraries, the government effort to access and use of information by children faces a huge challenge.

According to the Director Children Services Ministry of Ministry of Sports Culture and Arts, their programme only indirectly affected information provision in the slums. Therefore, there were no programmes that provided information to schools in slums. In

his opinion, issues pertaining to children and information fall in other jurisdictions such as: the city council by laws which run different libraries in the city, Kenya National library Services (KNLS) and the Ministry of Education.

In regard to the position of Children's Act on universal access to information by children, the Director, Children Services (Ministry of Sports, Culture and Arts) the core mandate of the children's department was care and protection of the children. He further indicates that all its programmes and activities revolved around care and protection of the children. He notes that the children's Act provides the right of access to all children.

The Kenyan Constitution is an extremely important instrument as it provides a framework for reforms in all sectors and guarantees equality for all citizens. The right to information is a tool for promoting progressive change. The role of a National Information Policy (NIP) is to harmonize information activities to make them more accessible and effective; minimize duplication of information activities with the hope of improving existing resources to make them more effective in meeting the needs of users; and ensure that the limited resources in the country (financial, material or leisure) are fully utilized. The development of a national policy on the acquisition, management, and use of information is driven by recognition of the value of information as an important national resource. The recognition of the importance of information will go a long way in ensuring that matters pertaining to its development are given maximum attention.

The Information Policies that exist in Kenya are however fragmented, unclear and have not been fully implemented in the slums as the government is yet to build classes and to

fully provide books. In order to enhance effectiveness of the policies, the government should build more libraries in slums as well as enhance provision of mobile library services to facilitate knowledge as well as easy access to information in slum areas.

5.8 Challenges Faced in Provision of Information Services to Children in Nairobi Slum Areas

The study established various challenges encountered in the provision of information services to children in Nairobi slum areas. These included lack of electronic media, inadequate number books and magazines, children communication problems and book theft. These were mentioned by all teachers in the public schools in the slums as the main challenges when providing information services to children.

Access and use of libraries by learners was hindered by improper arrangement, inadequate time, inadequate books, overcrowding due insufficient space, lack of reading and literacy skills, inefficient information providers, communication problems, lack of computers, as well as, existence of old books with obsolete information. Some learners also did not understand what they had read. This lack of understanding can be attributed to differences between adults and children in conceptualization of issues, events and situations presented to them. As Piaget (1932) argues, children reason differently from adults and hold different philosophies. Huitte and Hummel, (2003) add that children think in qualitative not quantitative ways as opposed to adults hence the need to acknowledge the uniqueness of children in their conceptual make-up.

Pupils in slums cited social challenges such as noise pollution due to loud music by neighbours and drunkards, water pollution, risk of waterborne diseases, poor hygiene, poor clothes, few toilet facilities, water shortage, orphanage, insecurity (harassment and insults from strangers, violence, rapes), poor road condition, child labour, frequent fires, small houses with big families as well as power failure. In addition the pupils trek for long distances to school. Poor road conditions make houses in slums inaccessible by fire engines in case of fire which is a common phenomenon in the area. Challenges of inadequate books, lack of current information, inability of pupils to pay for lost books and theft of books were cited by pupils from the public schools. In those schools which had computers (e.g. Ayany and Salama) there were problems of lack of computer specialists, faulty computers, lack of internet services as well as inadequate space for learning.

The Government of Kenya is experiencing challenges in fulfilling its mandate especially in regard to universal accessibility of information. The Government had other priorities over libraries and also experienced a shortage of funds to run the existing libraries effectively. Lack of libraries in many parts of the country and poverty (lack of fares to access the libraries) were major challenge hampered provision of information services to children in slum areas. The Government had failed to provide equal education opportunities to all owing to financial related challenges. Further, there were no clear policies regarding provision of information in slum areas.

The Ministry of Sports, Culture and Arts faced challenges in implementing the policy on library information services, the respondent indicated that there was no clear policy to guide libraries on issues especially for the OVCs, to the extent covered by the mandate of the department. The Director, Children Services, Ministry of Sports, Culture and Arts felt that the policy aspects on libraries should be factored into the programmes of the ministry in consultation with other stakeholders. The respondent apart from complaining about time seemed not to be conversant with the topic of the study.

These findings indicate impediments in the move towards reducing social deprivation among slum children due to inadequate collaboration between the Kenya National Library Services (KNLS), the community libraries as well as the school libraries.

5.9 Improvement of Access and Use of Information

Several plans have been put in place to improve access of information services by slum children. The head teachers in the public schools, which had no libraries, indicated attainment of fully stocked, spacious roomed libraries as part of the expansion programme meant to address the cited challenges. Those which had either a class library or a structured stocked library also indicated that there were plans to expand the facilities and introduce audio-visual and electronic facilities.

The librarians for Global Alliance for Africa, SIDAREC and Mukuru indicated they planned to increase the stock of books, add books dealing with local issues, expand reading room as well as make room for a cyber café with internet services. The Mathare Youth Sports Association (MYSA) community library planned to include Library studies

in its programmes, increase the number of visits to schools in the slums, increase information technology services to the children, expand the reading area and promote a reading culture through book competition and storytelling.

The KNLS Director indicated that there were, no specific plans targeting the slums. However, the institution offered equitable information services without discrimination.

The study established that the Ministry of Education future plan regarding provision of library and information service in slum areas in Nairobi was not specific for the slum children but the ministry intended to prioritize education and information as a foundation for development of the future generation and development. He retaliated that Vision 2030 is the country's new development blue print covering the period 2008 to 2030. Its aim is to transform Kenya into an industrialized country and improve the quality of life for all Kenyans. The vision for the education sector for 2030 is to have globally competitive quality education, training and research for sustainable development (Government of Kenya, 2007). However, if Kenya is to produce globally competitive students, it must set specific strategies to guarantee quality learning. One of the strategies should be to ensure appropriate information resources commensurate with recent trends in technology and information changes. The Internet is an increasing part of today's culture, especially for children and youth, for whom schoolwork, online gaming, and social networking are among the most popular activities. The director further agreed that School libraries ought to be integral to the education process if quality education is to be achieved. On how the new Constitution was likely to impact on information provision especially in the slum

areas, the respondents indicated that the new constitution would ensure equitable provision of information and other services to all children in Kenya.

According to the Director, Children Services, Ministry of Sports Culture and Arts, the children's department was tasked to ensure that the families where the children came from were empowered socially so that they are able to access all their rights and privileges as spelt out in different national legal instruments. To this end, he notes that the ministry had a cash transfer programme whereby Ksh. 1500 was provided to selected OVC families, mostly drawn from the slum areas. Secondly, the department organizes children assemblies at district levels whereby selected children drawn from different schools came together and presented their grievances to children officers and where they are sensitized on their rights as per the Children's Act. The interviewee further indicated that the sensitized children are expected to be the ambassadors on children rights afterwards in their localities. Thirdly, as indicated by the interviewee, the department has voluntary children officers (especially in slum areas) who play a watchdog role on children welfare in their localities and report cases of abuse. Finally, he indicated that the department supported the establishment of children's homes through private sector partnership.

Concerning the position of children's act on universal access to information, the Director Children Services Department, Ministry of Sports Culture and Arts stated that the core mandate of the department is care and protection of the children. He further indicated that all its programmes and activities revolved around care and protection of, children. He

noted that the children Act provides that all children are entitled to access to information and education as a matter of right as part of universal declaration of children right.

According to the Director, Children Services, Ministry of Sports Culture and Arts, the mandate of the Children Department may be expanded to cover issues of information and libraries. The Free Primary Education (FPE) programme by the Government of Kenya also aims to provide learning facilities, teachers and other incidentals to learning. The program requires parents to provide school uniform as well as pay national examination fees. These guidelines are contained in a statement of rules that form part of the policy on free primary education.

The challenges pertaining to access to information by primary schools in slums can be addressed through provision of adequate reading materials such as story books and encouraging communication in English. Challenges relating to theft of books and equipment can be addressed through cooperation with local administration. The teachers recommended that the Government through the Ministry of Education should upgrade all the existing library facilities in the schools in slum areas. They further recommend that more teacher librarians should be employed to manage libraries in the schools. They were of the view that availability of computers would augment the existing information provided in the books.

5. 10 Chapter Summary

In this chapter, findings from the Head teachers, Class teachers, Persons in charge of library, Pupils, Director Ministry of education, Director of Kenya National Library Service, Director Ministry of Sports, Culture and Arts and community libraries have been presented and discussed with a view to showing access and use of information by children in the slums in Nairobi county to alleviate their social deprivations. The chapter presents findings on information needs of children in the slums, information services, accessibility of information to school children in the slums, the role played by service providers in the provision of information, government policies supporting education and library information services in the slums, areas, improving and the proposed for this study and its contributions.

CHAPTER SIX

SUMMARY OF THE STUDY FINDINGS, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This Chapter presents the summary of study findings, conclusion and recommendations which are provided below based on the objectives of the study.

6.2 Summary

The Summary on research findings was based on research questions

6.2.1 Information Needs of Children in Kibera, Mathare and Mukuru Slums

In response to the above question, the study identified various information needs of children in Kibera, Mathare and Mukuru slums. These include;

- The need for improvement of knowledge in social integration and avoidance of violence;

- Information on morals;

- Provision of knowledge on pollution;

- Emergency procedures;

- Safety related information;

- Sex education

- Gender sensitization;

- Information on talent identification through extra-curricular activities and creative arts;

- Improving languages;

- Information which imparts pupils with experience on problem solving skills and moral teachings.

It was clear that most of the critical information needs of the children were not being met. The study revealed that no assessment on children's information need had been conducted.

6.2.2 Information Services in Kibera, Mathare and Mukuru Slums

One of the objectives of the study was to determine types of information services available for children in Kibera, Mathare and Mukuru slums.

The study revealed that:

- Library and Information services were either inadequate or nonexistent for the children in slums. The study found out even though a school library is an essential facility in the school, the Ministry of Education does not enforce it as a mandatory requirement during the establishment or management of a school. Such lack of an official directive for schools to have school libraries implies that every school is left to determine for itself and chart their own course

- Most schools in the slums do not have well-equipped libraries, for example, all the public schools in Mathare slums had no structured library systems. Nevertheless, some schools had classroom libraries.

- It is not clear how well the school libraries in the area funded and managed. The director ministry of education stated that the main challenge in setting up school

libraries was insufficient government funding as well as a lack of guidelines and policy.

- Among the schools that had libraries, there was no noted satisfaction with the provision of services due to shortage of books, lack of trained library personnel, and space and time limitation for the pupils to use library services.

- Pupils and Teachers lacked adequate ICT skills to access information and that the new technology had not quite caught up in the slums.

- Most of these information services are designed without proper analysis of school children

6.2.3 Role Played by Service Providers in Provision of Information to Children in Kibera, Mathare and Mukuru slums

The study identified four community libraries, which included SIDAREC and Global Alliance for Africa libraries in Kibera. Diploma certified librarians run the community libraries in Kibera. In Mukuru slums, there exists Makadara DC's office Library and SIDAREC library that are run by a diploma in information science certified personnel. In Mathare slum, there exist Mathare Youth Sports Association (MYSA) community library, which is run by untrained personnel with only basic knowledge on library services.

The Community libraries play a very important role in provision of information. The study established that Global Alliance for Africa and SIDAREC played roles in the slums such as:

- Issuing books to the slum children without charges,

- Creation of an area for the children when doing homework or when reading,

- Assisting the children in reading e.g. spelling of names as well as offering non book facilities such as charts and maps for the children.

Mathare Youth Sports Association (MYSA) community library in Mathare slums and Makadara DC's office Library on the other hand played key roles in;

- Providing computer packages training,

- School visits,

- Organizing poetry and drama as well as training on languages (Norwegian and sign languages)

KNLS director indicated that KNLS offered mobile services, book reading day and competitions and weekly visits to all schools in Nairobi County including slums.

The County Council of Nairobi formerly, the City Council of Nairobi through its county City Education Unit developed guidelines for the operation of schools in Nairobi's informal settlements and facilitates the registration of these facilities.

Both local and international donors participate in the provision of reading materials to children in the slums. For example, Kenya Commercial Bank donates money to St. Elizabeth primary in Mukuru slums for purchase of books.

The director of children services (Ministry of Sports Culture and Arts) stated that the core mandate of the department is care and protection of the children. The department was able to get facts about the problems of children living in the slums through periodic monitoring and evaluation. However, the focus of their monitoring was to compare the educational performance of children from supported households and those from households, which are not catered for, and who mostly obtained information from the head teachers.

Secondly the department was tasked to ensure that the families where the children came from were empowered socially so that they are able to access all their rights and privileges as spelt out in different national legal instruments. To this end, the ministry had a cash transfer programme whereby Ksh. 1500 was provided to selected OVC families, mostly drawn from the slum areas. Further, the department organizes children assemblies at district levels whereby selected children drawn from different schools came together and presented their grievances to children officers and where they are sensitized on their rights as per the Children's Act. The sensitized children are expected to be the ambassadors on children rights afterwards in their localities.

The department has voluntary children officers (especially in slum areas) who play a watchdog role on children welfare in their localities and report cases of abuse. Finally, he indicated that the department supported the establishment of children's homes through private sector partnership. However the department's programmes indirectly affected information provision in the slums. Therefore, there were no programmes that provided information to schools in slums. In his opinion, issues pertaining to children and

information fall in other jurisdictions such as: the city council by laws which run different libraries in the city, Kenya National library Services (KNLS) and the Ministry of Education.

6.2.3 Government Policies on Access and Use of Information

On the question regarding the existence of Government policies on access and use of information, the study noted the following:-

- The Government, through the Ministry of Education had formulated policies in education sector although it is clear that the country lacks a national policy on school libraries.

- According to the Ministry of Education Director, all children are supposed to access all rights as stipulated in various instruments and in the constitution (chapter four (4): right to information).

- That there are no policies that specifically mention information access and use by children in Slums although there exists policies advocated for equitable access to information.

- Free Primary Education policy had not been fully been implemented in the slums and that slums had often been marginalized.

Without clear guidelines or policy on the establishment of library and information services infrastructure as well as the employment of trained librarians to manage school libraries, the government effort to access and use of information by children faces a huge challenge.

The Kenyan Constitution is a critical milestone towards creating reforms and quantifiable equity. The right to information is a much-needed tool for causing and affecting progressive change.

6.2.4 Role of ICT in Enhancing Access to Information

The ICT played vital roles in the provision of information services to children in Nairobi slum areas. These include;

- Helping libraries access, retrieve, store, manipulate and disseminate information to users.

- It has impacted on every sphere of school library activity especially in the form of the library collection development strategies, library building and consortia.

- Presents an opportunity to provide value-added information services and access to a wide variety of digital based information resources to their clients.

- Libraries are using modern ICTs to automate their core functions of implementing efficient and effective library cooperation and resource sharing networks, implementing management information systems, developing institutional repositories of digital local contents, and digital libraries: and initiating ICT based capacity building programmes for library users.

- It would facilitate access to information (learning and teaching materials beyond the national boundaries by both pupils and teachers.

- It continues to produce, a new class of well-informed and knowledgeable citizens who are empowered to actively participate in decision making, new experiences and practices at all levels.

6.2.5 Challenges in the Provision of Information Services in Kibera, Mathare and Mukuru Slums

Various challenges are encountered in the provision of information services to children in Nairobi slum areas. These include;

- Lack of School Libraries and information services. Where school libraries existed, their establishment and management were mainly as a result parents and well-wishers. Furthermore primary schools have no official policy requiring them to have libraries. In other words, the school libraries are not given any official support from the government.

- Ministry of Education does not enforce school libraries as a mandatory requirement during the establishment or management of a school

- Lack of electronic media (The Internet is an increasing part of today's culture, especially for children and youth, for whom schoolwork, online gaming, and social networking are among the most popular activities).

- Lack of user needs assessment

- Failure of children to articulate their information needs

- Inadequate books and magazines,

- Children communication problems and books theft

- Book theft and book mutilation

- Inadequate finances

- lack of reading and literacy skills

- Inefficient information providers

- Restriction by the head teacher from visiting community libraries

- Inadequate computerized information sources, in the libraries.

- Noise pollution due to loud music by neighbours and drunkards

- Water pollution, waterborne diseases, poor road conditions

- Poor hygiene, inadequate clothing, few toilet facilities

- Insecurity (harassment and insults from strangers, violence, rapes),

- Pupils and Teachers lacked adequate ICT skills to access information and that the new technology had not quite caught up in the slums services

- Lack of physical and ICT infrastructure due to lack of a budgetary allocation

- Failure to include library lessons in the time table,

- Further, there were no clear policies regarding provision of information in slum areas.

- The Government of Kenya is experiencing challenges in fulfilling its mandate especially in regard to ensure universal accessibility of information. It had other priorities before the libraries and also experienced shortages of funds to run the libraries effectively

- Lack of library in many areas of the slums and poverty (lack of fares to access the libraries) was major challenge hampering provision of information services to children in slum areas.

- The government has failed to provide equal education opportunities to all owing to financial related challenges,

These findings further, indicate impediments in the move towards reducing social deprivation among slum children due to inadequate collaboration between the Kenya National Library Services (KNLS), the community libraries as well as the school libraries

6.2.6 Enhancing Access of Information Services to Slum Children

The study notes that several plans have been put in place to improve access of information services to slum children. The plans include:-

- Attainment of fully stocked libraries in public schools in the slums that had no libraries.

- Spacious roomed libraries.

- Plans by the Global Alliance for Africa Librarian and Mukuru librarian to add more books dealing with local issues, expansion of reading room as well as provision of a complete cyber café with internet services.

- Plans by Mathare Youth Sports Association (MYSA) community library to include a school curriculum in its programmes, increase the number of visits to schools in the slums, increase information technology services to the children, expand the reading area and promote a reading culture through book competition and storytelling in the slum.

- Ministry of Education future plan regarding provision of library and information service in slum areas in Nairobi was not specific for the slum children but the ministry intended to prioritize education and information as a foundation for development of the future generation and development. The vision for the education sector for 2030 is to have globally competitive quality education, training and research for sustainable development. However, if Kenya is to produce globally competitive students, it must set specific strategies to guarantee quality learning. One of the strategies should be to ensure appropriate

information resources commensurate with recent trends in technology and information changes. The Internet is an increasing part of today's culture, especially for children and youth, for whom schoolwork, online gaming, and social networking are among the most popular activities.

- KNLS Director indicated that there were, no specific plans targeting the slums but he indicated that there was need to provide reading spaces in the slums as many people didn't make it to the community libraries.

- The Director further recommends the enhancement of mobile library services, library visits, construction of KNLS branches in all corners of the city and construction of big halls that are well furnished to provide adequate reading space and provision book boxes programmes in liaison with social workers and other stakeholders.

- The KNLS director notes that it was important that the government increases funding for library services so as to facilitate the spread of libraries in the slums. This would supplement efforts made by NGOS to set up community libraries. The NGOs efforts are not sufficient as the population is large.

- According to the Director Children Services, Ministry of Sports Culture and Arts, Children welfare would be enhanced once all Acts and legislations touching on children were amended to conform to the new Constitution. He hoped that the children's department under the Ministry of Sports Culture and Arts would be expanded to cover issues of information and libraries.

- Kenya National Library Service (KNLS) director affirms that the institution will not waver on its mandate to treat all children without discrimination.

6.3 Conclusion

The study established that children in Kibera, Mathare and Mukuru slums had various information needs. However, it is apparent that the information services that were provided for the pupils did not sufficiently meet their needs. Case (2002) defines information need as a recognition that one's knowledge is inadequate to satisfy a goal that one has. On the other hand, Kaniki (2001) agrees that information need is a lack of desired commodity (that is, information) necessary to deal with a situation as the individual sees fit. An information need arises when a person recognizes something is wrong in his or her state of knowledge and wishes to resolve it. From the foregoing, the study concludes that majority of the schools in Kibera, Mukuru, and Mathare had classroom libraries which the pupils accessed when the timetable provided a lesson.

The children in these slums used the information obtained from the library for reference, knowledge, leisure, homework and to supplement school notes. However, the pupils stated that they were not satisfied with the provision of the information services. This was due to, among other factors, shortage of books, space and time limitation for the pupils to use the library services. Odini, (1995) agrees that the prevailing information systems in the country have been designed without a proper analysis of the needs of users. The approach in user studies has been piecemeal and fragmentary. The study therefore concludes that pupils in the said slums had the same information needs to meet as any other pupils in public schools and that these needs must be met to alleviate social deprivations and to better their lives. Titumir and Hossain (2004) admit that services

should be made available to all citizens on a uniform basis regardless of income, status or power.

Lack of electronic media, inadequate books and magazines, children communication problems and book theft were stated by the head teachers in the public schools in the slums as the main challenges they faced in providing information services to children in Nairobi slum areas. In addition the study found out even though a school library is an essential facility in the school, the Ministry of Education does not enforce it as a mandatory requirement during the establishment or management of a school. Such lack of an official directive for schools to have school libraries implies that every school is left to determine for itself and chart their own course. Other challenges were identified as inadequate finances, inadequate computerized information sources, improper book arrangement, inadequate time, inadequate books, overcrowding due insufficient space, lack of computers as well as, existence of old books with obsolete information. Some children admitted that often they did not understand what they had read. Problems of noise pollution, water pollution and the risk of waterborne diseases, poor hygiene, poor clothes, few toilet facilities, water shortage, orphan hood, insecurity (harassment and insults from strangers, violence, rapes), poor road condition, child labour, frequent fires, small houses, fire outbreaks as well as power failure hampered children from proper social integration as well accessing, seeking and use information. These barriers will have to be addressed first before the information needs of these pupils in slums could be met.

Based on the above facts it was unanimous that the Ministry of Ministry of Sports Culture and Arts should systematically gather facts about the problems of children living in the slums through periodic monitoring and evaluation to enable it compare the educational performance of children from supported households and those from households, which are not catered for. However the children should be involved in this process.

The study findings further reveal that community librarians in the slums were involved in overseeing the operations of the libraries by focusing on activities such as scheduling of library lessons, circulation, acquisition and technical services, as well as maintaining cleanliness within the library premises The study however noted there was need for these Community libraries to play a more active role in enhancing and upgrading information services in the slums. Libraries too should take the initiative to improve children's reading by working in conjunction with other agencies. Perkinson, (1993) states that public libraries offer many services and programs that can help School-Aged Children, parents and the people who care for them.

Libraries require purpose-built facilities and can only be established after extensive consultation with all stakeholders. For many libraries it is the general efforts at co-operation and collaboration which will enhance service delivery for children, particularly in relation to reference and information services (Fitzgibbons, 2000). In the Kenyan context it is to be noted that the few school libraries in slums do not receive any support from Kenya National Library Services (KNLS) due to reduced constant financial support from the government.

Service is provided as a public good. Accessibility to all helps redress inequality that results from social exclusion. Not all schools in the slums had libraries and therefore without public libraries, majority of slum children are denied the right to information which is a democratic right of all citizens as per the Kenyan Constitution. Libraries help children from different economic background to be able to interact freely when navigating through the information resources. The idea that the public library has a social responsibility to provide equity of access to reference and information services to children was discussed earlier. It can also be argued that it should contribute to the learning process of the child by investigating and pursuing options which facilitate the best delivery of reference and information services to facilitate the child's learning. The public library can undoubtedly make an important contribution to children's learning (Krolak, 2005; Montagnes, 2001 & Elley, 1996).

Kumar (1996) assert that in today's information society, information is considered a basic resource. Information is as essential as minerals and other natural resources. The school library offers lifelong learning, recreation and leisure facilities which are crucial in meeting social needs of slums children. To further enhance information/knowledge provision and sharing to all citizens including school children in slums areas, the Government came up with vision 2030 which is the country's new development blue print covering the period 2008 to 2030. The development strategy aims at transforming Kenya into an industrialized country through Sports, Culture and Arts, and improving the quality of life of all Kenyans. Further the Government will need to establish a strong information infrastructure to enable people of any region or country to access global

information. This view is supported by Adimorah & Ugoji (1997), who have called for skill, knowledge up gradation and technological appropriation.

6.4 Recommendations

The following recommendations are suggested for the purpose of addressing the gaps identified in the study with regard to access and use of information services by children in the slums in Nairobi. The recommendations are based on the findings of the study.

6.4.1 User Needs Assessment

One of the key findings of the study was that school children in the slums had various information needs that were hardly met and which contributed to social deprivations. In view of the above, it is recommended that the teacher librarians and community librarians conduct periodic user needs studies which will provide information to enable the design of information and knowledge systems that address not only the learning needs of school children but also their societal needs. This should include investigating the existing information and knowledge system to identify gaps and to strengthen what is already in place. An important part of the process will be to have robust mechanisms to measure the impact that information and knowledge centre's have in achieving social change.

6.4.2 Feedback from School Children

The study further identified a gap whereby school children did not actively participate in the identification of their information needs hence provided no feedback to school authorities. The study recommends that school children should be involved in any endeavours to identify their various information needs including those to do with information services. This will ensure that information providers get feedback that will

enhance information provision to the children thus enhancing their cognitive abilities and alleviate social deprivation.

6.4.3 Enhancement of Library and Information Services

The study further established that there was lack of or inadequate library and information services provided to school children in the slums. This was noted to undermine cognitive development of the children and besides enhancing social deprivation. The study recommends that the Government through the Ministry of Education should as a matter of urgency address the inadequacy of libraries in slum area by setting aside a special fund for the construction of school libraries as a means of enhancing learning as well as addressing social deprivation.

6.4. 4 Use of Information Resources and Services

The study found that most children rarely visited the libraries and more so some stated that they were not aware of the existence of community libraries in the slums. The study recommends that teachers should provide pupils with projects/assignments based on library information resources. This would encourage the pupils to visit the libraries in their schools and also in the slums regularly. It is further recommended that the schools should strive to create an environment conducive to reading so that the children feel at home and comfortable whenever they visit the library.

6.4.5 User Education

 The study established that one of the major challenges faced when providing information services to children in Nairobi slum areas was that the children often did not know how to access or find information. It is recommended that pupils should be oriented by teacher

librarians towards effective use of libraries. The teacher and/or Librarians should be sensitized to the fact that they have a duty to provide an environment conducive to accessing information. They should therefore come up with mechanism aimed at developing attitude in children towards reading; in addition, they would need to learn how to motivate reluctant readers exposing them to the joys and benefits of reading by organizing book fares and reading competitions etc.

6.4.6 Role of Kenya National Library service and other Information Service Providers in the Slums

The study revealed that KNLS and other service providers gave minimal information support to schools in the slums. Based on this finding it is recommended that KNLS and other information service providers should establish more libraries and other value added services such as KNLS book box project.

6.4.7 Enhancing Security in Libraries

One of the challenges faced by libraries in the slums was theft of books and other information facilities. This problem should be addressed by the teachers and parents by educating the children on the moral values of their behaviour. In addition the teacher librarians should conduct security checks while the pupils are entering and leaving the library.

6.4.8 Appointment of Trained Staff in School Libraries

The study revealed that most of the staff manning libraries in schools in the slums was not qualified. The study recommends that the Ministry of Education should arrange for

all teachers to be given relevant training in librarianship. This will help them learn current and proven approaches, methods, techniques, strategies and skills for managing the libraries and guiding pupils in accessing and using the School libraries. Further the government should employ trained librarians in school libraries.

6.4.9 Provision of ICT to School Children

The study found that most schools lacked ICT infrastructure which inhibited computer access and use and where it existed it was used mostly for administrative purposes. It is recommended that the Government should introduce computers, audio and visual lessons in schools and that they be incorporated in the school curriculum. Further, the Government should allocate funds to schools to provide computer equipment and other accessories and include it in the school curriculum as a means of facilitating information access and use among school children. This would go a long way in actualizing the pledge made by the Jubilee Coalition Government that won the Kenyan election in March 2013. In its manifesto, the new government states that all children joining standard one in 2014 will each have a laptop. However there is divided opinion on whether laptops are a priority in schools. Critics say the idea is noble but many schools in Kenya lack basics and laptops are a mere luxury, (Kiberenge, 2013).

6.4.10 Strengthening of Information Policy

From the findings, it was established that although the Government of Kenya has put in place appropriate policies on information, these policies did not specifically address information needs of children in the slums. This is despite the fact that the existing

policies advocate for equitable access to information. Moreover the country lacks a national policy on school libraries. This therefore calls for the formulation of comprehensive national information and communication policy that addresses information provision to all children regardless of social background. The policy will need to provide for and ensure that there is a fully equipped library for every school.

6.4.11 Empowering School Children and the Community to alleviate social Deprivation

The study established that school children in the slums being a marginalized lot faced various challenges that enhanced social deprivations that raged from lack of information services to poverty, insecurity and lack of basic needs among many others. The study recommends that the government should incorporate educational programmes as part of slum upgrading programmes which have so far focused on housing and health.

6.5 Suggestions for Further Research

The suggestions for further research are as follows:

1. A study should be conducted to establish the relationship between availability of library information services and performance of pupils in slum areas. Although this aspect was highlighted in the study, it was not within the scope of this particular research to conduct a thorough investigation.

2. Further study should be carried out to establish how children choose what they read. Such a study will provide in-depth information on children's reading habits.

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APPENDICES

APPENDIX 1: INTERVIEW SCHEDULE FOR "TEACHER LIBRARIANS"

INCHARGE OF LIBRARIES

Name of the school………………………………………………………

Date of the interview…………………..……………………………………………

School Responsibilities--

1.   a)   For how long have you been teaching?

      b)   What is your level of training?

2.   a)   Does the school have a library?

      b)   If yes what services does the Library offer?

      c)   If no, how do you provide library information services to the school children?

3   a)   For how long have you been in charge of the Library?

      b)   What training do you have in librarianship?

4   What do the school children visit the library for?

5   What is the role of the school Library in meeting the requirements of the school curriculum?

6   a)   what is the source of library resources?

      b)   Are the facilities and resources adequate to meet the needs of your users?

7.   a)   How do you ensure that users access to information which is relevant to their needs?

      b)   Are the children's information needs always met?

c)   Do you conduct periodic user needs assessment?

8   How do you motivate both the children and staff to use the Library ?

9.   In what ways would you enhance library information services?

10.   a)   How can libraries be used to address children's social needs?

     b)   How can libraries be used to empower children to overcome social deprivations?

11.   If you had the opportunity to present a case to the government officials and other stake holders what developments/improvements would you ask for to enhance information services?

12.   What support does the school library receive from various stakeholders (KNLS, community libraries and other information service provider's)?

13   What challenges do you face when providing information services to children in Nairobi slum areas?

14.   What do you have any suggestions of how these challenges may be addressed?

15   a) Do you think ICT enhances access to information? ---------------------------------
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b) What is the Role of ICT in access to information'? ---------------------------------
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THANK YOU FOR YOUR PARTICIPATION

APPENDIX 2 FOCUS GROUP DISCUSSION FOR CHILDREN

CLASS/GRADE--DATE-----------------------------------

1. Does your school have a library?

2. a) How often do you go to the library?

>   (i) Once a week ( )   (ii) Once a month ( )

>   (iii) Once a term ( )

>   (iv) Others --

3. a) What do you read when you go to the library?

>   (i) Storybooks ( )   (ii) Textbooks ( )

>   (iii) Magazines ( )

>   (iv) Others ……………………………………………………….

    b) What do you use the information you obtain from the Library for?

>   i. Home work
>   ii. Leisure
>   iii. Reference
>   iv. Knowledge
>   v. To supplement school notes
>   vi. Others--

4. Which information format is preferable? (i.e. print, electronic, face-to-face, audio etc)

5. a) Do you always find the information you need in the library?

    b) If no, what kind of information should be provided for your school library?

6. As children living in Kibera, Mathare and Mukuru slums what are your day to day needs and challenges?

7. In what ways has information helped you to meet day to day social challenges?

8. Are there other types of libraries in your Neighborhood?

9 a) Do you think ICT enhances access to information?

    b) What is the Role of ICT in access and use of information'?

10. What problems do you face in accessing and using library information services?

APPENDIX 3: INTERVIEW SCHEDULE FOR HEAD TEACHERS

Date of the interview……………………………………………………………

Position--Name of school: _____

1   For how long have you worked as a teacher?

   i.   5 - 10 years ( )
   ii.   10 - 15 years ( )
   iii.   15 + years ( )

2.   How long have you been a Head teacher?

3.   What is the total number of pupils in upper primary classes?

4.   a)   Does your school have a library?

        b)   If no, how does the school provide for pupils information needs?

5.   If yes, are you satisfied with its services and resources?

6.   a)   What role does the teacher librarian play?

        b)   How satisfactory are the library resources and facilities?

7.   What type of information sources does the library keep?

8.   a)   Does the timetable provide a lesson for pupils to use the library?

        b)   If yes how many times in a week

9   a)   what is the Ministry of Education policy on school libraries?

        b)   How has this policy been implemented in the slums?

10.   a)   What is the role of the library in meeting children's social needs of slums

                Children?

        b)   How can libraries be used to empower children to overcome social
                deprivations.

11.   What are the futures plans regarding provision of library information services to
        slum   children?

12   What support does the school library receive from various stakeholders (KNLS,
        community libraries and other information service provider's)?

13.   What challenges do you face when providing information services to children in
        Nairobi slum areas? ---
        ----

14   What do you have any suggestions of how these challenges may be addressed? --

15 a) Do you think ICT enhances access to information? Please explain………………………………………………………………………………………………

………………………………………………………………………………………………

b) What is the Role of ICT in access and use of information? --------------------------------
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THANK YOU FOR YOUR PARTICIPATION

APPENDIX 4: INTERVIEW SCHEDULE FOR COMMUNITY LIBRARIANS

Name of the library---

Position ---

Date of the interview…………………………………………………………………..

1   a)   Are you a trained librarian? ---

     b)   What is your level of training?

2.   What are your responsibilities in the library?

3.   a)   What information services do you provide for slum children?

     b)   Do you conduct periodic user needs assessment?

4.   Are you familiar with any government policies regarding provision of information services in the community?

5.   Is there a policy for library information services provision in slum areas?

6.   a)   Are you aware of the existence of a national information policy in Kenya?

     b)   If yes, what comments can you make regarding its provisions?

     c)   How does this policy impact on library information service?

7.   What collaboration does your library have with other libraries such as public libraries, school libraries etc? --

8.   What plans do you have regarding enhancing provision of information services in the slums areas? ---

9.   a)   What is the role of the library in meeting social needs of slums children?--

     b)   How can libraries be used to empower children to overcome social deprivations. --

10. What challenges do you face in providing library information services in the slums? --

11. What suggestions do you have for improving library services to slum children? --

12   a) Do you think ICT enhances access to information? Please explain------------------
     b)   what is the Role of ICT in access and use of information'? --------------------
     THANK YOU FOR YOUR PARTICIPATION

APPENDIX 5: INTERVIEW SCHEDULE FOR DIRECTOR MINISTRY OF

EDUCATION

Position---

Date of the interview…………………………………………………………………

    1   What is the government policy regarding provision of information services in schools?

2.   How has this policy been implemented in slums?

3.   How has the Kenyan national information policy contributed to library information services in the slums?

4.   What are your comments regarding accessibility of information by school children in the slums

5.   a)   What is the role of the library in meeting social needs of slums children?

      b)   How can libraries be used to empower children to overcome social deprivations.

6   What are the futures plans that the ministry has regarding library information services in slum areas of Nairobi?

7   How is Kenya's new constitution likely to impact on information provision especially in the slums?

8 a) Do you think ICT enhances access to information? Please explain…………………

……………………………………………………………………………………………

……………………………………………………………………………………………

    b) What is the Role of ICT in access and use of information? --------------------------
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9   What challenges has the ministry faced in implementing government policy on library information services?

10   How is the ministry addressing the challenges of providing information services in slum areas?

THANK YOU FOR PARTICIPATION

APPENDIX 6: INTERVIEW SCHEDULE FOR KNLS DIRECTOR

POSITION---

Date of the interview…………………………………………………………………

1.   Does the library offer library information services to children in Nairobi slums?

2.   a)   How does the library meet the need for children in Nairobi slums?

   b) Do you conduct periodic user needs assessment?

3.   a) In what ways have library services to children changed over the past five years?

   b)   What new services have been introduced?

   c.   What services have been discontinued?

4   a) Do you think ICT enhances access to information?

b)   In what ways has the introduction of ICT affected accessibility and use of library services to slum children?

5.   In what way would you like to improve or change library information services to children in slums?

6.   Is the government becoming more or less supportive of Library information activities to children in Nairobi slum   areas?

7.   a)   What is the role of the library in meeting social needs of slums children?

   b)   How can libraries be used to empower children to overcome social deprivations.

8.   What is the future plans that the library regarding library and information

9.   Do you think the library is the key to alleviating social deprivations experienced in by slum children?

10.   a)   What are the major problems that the government is experiencing in fulfilling its mandate especially with regard to ensure universal accessibility of information?

   b)   What are the major challenges hampering provision of information services to children in Nairobi slum areas?

11.   What suggestions do you have for improving library services to slum children?

THANK YOU FOR YOUR PARTICIPATION

APPENDIX 7: INTERVIEW SCHEDULE FOR THE DIRECTOR THE

MINISTRY OF SPORTS CULTURE AND ARTS

Position--

Date of the interview……………………………………………………………..

1.   What is the position of Children's Act on universal access to information by children?

2.   What is the government policy regarding provision of information services in schools?

3.   How has this policy been implemented in slums?

4.   How has the Kenyan national information policy contributed to library information services in the slums?

5.   What are your comments regarding accessibility of information by school children in the slums

6.   a)   What is the role of the library in meeting social needs of slums children?

       b)   How can libraries be used to empower children to overcome social deprivations.

 7 a) Do you think ICT enhances access to information?

     b) What is the Role of ICT in access and use of information'?

8.   What are the futures plans that the ministry has regarding library information services in slum areas of Nairobi?

9.   How is Kenya's new constitution likely to impact on information provision especially in the slums?

10.   What challenge has the ministry faced in implementing government policy on library information services?

11.   How is the ministry addressing the challenges of providing information services in slum areas?

THANK YOU FOR PARTICIPATION

APPENDIX 8: TEACHERS' QUESTIONNAIRE

I am a student at Moi University Kenya studying doing a doctor of philosophy degree in information sciences. The purpose of the research is to determine accessibility and use of information services by children in Nairobi slum areas. The research is important in that it will assist to identify barriers that children in the slum areas in access to and use of information and how services that are provided for them can be improved. Please answer all questions as honestly as possible. The questionnaire is anonymous and all responses shall be treated with strict confidentiality.

1.   How long have you been teaching in this school? …………………………………

2.   What subject do you teach and at what level? ………………………………….

3.   What is the nature of your school library?

     i.   Well-equipped library   [   ]

     ii.   Classroom library   [   ]

     iii.   Only storeroom with books, not organized   [   ]

     iv.   Only printed materials   [   ]

     v.   Printed and audiovisual materials   [   ]

     vi.   Internet   [   ]

     vii.   No library   [   ]

4a)   Does the timetable provide time for pupils to use the library?

     i.   Yes   [   ]

     ii.   No   [   ]

  b)   If yes how many times in a week---

5.   Does your school have a teacher-librarian?

     iii.   Yes   [   ]

     iv.   No   [   ]

6 Does your school have non book media?

    i.   Yes   [   ]

    ii.   No   [   ]

7.   a)   How well resourced is the school library ?

    i.   Excellent   [   ]
    ii.   Good   [   ]
    iii.   Fair   [   ]
    iv.   Poor   [   ]

b)   If poor or fair, why is it like that? …………… …………………………………

8.   Do you send the learners you teach to the school library?

    i.   Always   [   ]

    ii.   Sometimes   [   ]

    iii.   Very often   [   ]

    iv.   Never   [   ]

9   For what purpose do you send your learners to the school library?

    I.   To collect information for school projects   [   ]

    II.   To practice silent reading   [   ]

    III.   To view a video   [   ]

    IV.   To listen to the radio   [   ]

    V.   Note making?   [   ]

    VI.   Using reference sources?   [   ]

    Vii   Borrowing books?   [   ]

    Viii   Using information sources?   [   ]

    Ix   Other uses (please specify)   ………………………………………………

10.   Do you give your learners project to do based on library resources?

    i.   Yes   [   ]

    ii.   No   [   ]

11.   What role do you play in the use of the school library services?

i. Encourage the learners to visit the library   [   ]

ii. Assist in managing the school library   [   ]

iii. Assist in selecting library materials   [   ]

iv. Assist in recommending library resources   [   ]

v. Help learners in choosing reading books   [   ]

vi. Help learners to search for information in books   [   ]
vii. Give the projects to do in the library   [   ]
viii. Other roles (please specify)……………… …………………………………
……………………………………………………………………………..

12. How do you motivate your learners in using the library?

i. Always send them to the library   [   ]

ii. Encourage learners to make use of the library   [   ]

iii. Encourage learners to participate in the library competition   [   ]

iv. Accompany them to other libraries   [   ]

13 a) Do you think ICT enhances access to information school children in the slums? -----
----
----

 b) What is the Role of ICT in access and use of information'? ------------------------------
----
----

14. What challenges do your learners have in accessing and using library sources?

15. What recommendations do you give regarding accessibility and use of information services by children in Nairobi slums? ------------------------------------
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THANK YOU FOR YOUR PARTICIPATION

APPENDIX 9 : CONSENT FORM FOR DATA COLLECTION IN SCHOOLS

I am a student at Moi University Kenya doing a doctor of philosophy degree in information sciences. I write to seek assistance with my study titled access to and use of information service to children in Nairobi slum to alleviate social deprivations.

The purpose of this research is to seek authorization to conduct research in your school. Permission to conduct the study has already been granted by the ministry of science and technology.

Authorization: I have read the above and understand the nature of this study. I understand that by agreeing to participate in this study the school has not waived any legal or human rights of the individual participants and the school may contact the researcher should there arise any concerns regarding the study.

The school agrees to participate in this study.

Head teacher's signature_____date_____

 Researchers signature_____date_____

APPENDIX 10 : INTRODUCTION LETTER

Tabitha Ndiku

P.O BOX 53253

CODE 00200

NAIROBI

28/08/2010

Moi University,

School of information science

P.O Box 3900, Eldoret.

TO WHOM IT MAY CONCERN

My name is Tabitha Mbenge Ndiku. I am a PhD student registered in the department of Library, Records management and Information studies, School of information sciences Moi University. I am conducting research on access to and use of information by children in selected Nairobi slum areas to alleviate social deprivations. The information given will be treated with confidentiality. Your assistance will be highly appreciated.

Thank you in advance.

Tabitha Ndiku.

IS/DPHIL/015/2009

APPENDIX 11 : LETTER OF INTRODUCTION (MOI UNIVERSITY)

MOI UNIVERSITY
SCHOOL OF INFORMATION SCIENCES
NAIROBI CAMPUS

Telephone: (020)-2211206
Fax: (020) 220247
Telex No: 35047 MOIVASITY

P.O. Box 63056-00200,
NAIROBI
Kenya

Our Ref: IS/DPHIL/015/09

10th February, 2011

TO WHOM IT MAY CONCERN:

Dear Sir/Madam,

RE: TABITHA MBENGE NDIKU – REG. NO. IS/DPHIL/015/09

The above named is a DPhil. candidate in the School of Information Sciences, Moi University undertaking thesis research on the following topic:

"Access to and Use of Information by School Children in Selected Nairobi Slums".

Any assistance accorded to Ms. Ndiku to enable her progress with her work will be highly appreciated.

Thank you.

Yours sincerely,

Evans Munge
School of Information Sciences
Nairobi Programme Coordinator

MOI UNIVERSITY
NAIROBI SATELLITE CAMPUS
SCHOOL OF INFORMATION SCIENCES
P.O. Box 63050 – 00200
NAIROBI

APPENDIX 12 : RESEARCH AUTHORIZATION LETTER

REPUBLIC OF KENYA

NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

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

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

Our Ref: **NCST/RRI/12/1/INF-011/07/5**

Date:
23rd February 2011

Tabitha Mbenge Ndiku
Moi University
P. O. Box 63050 - 00200
NAIROBI

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on **"Access to and use of information by school children in selected Nairobi slums to alleviate social deprivations"** I am pleased to inform you that you have been authorized to undertake research **in Nairobi Province** for a period ending *31st December 2013.*

You are advised to report to **the Provincial Commissioner and the Provincial Director of Education, Nairobi Province** before embarking on the research project.

On completion of the research, you are expected to submit **one hard copy and one soft copy** of the research report/thesis to our office.

P. N. NYAKUNDI
FOR: SECRETARY/CEO

Copy to:

The Provincial Commissioner
Nairobi Province

The Provincial Director of Education
Nairobi Province

APPENDIX 13 : CITY COUNCIL OF NAIROBI AUTHORIZATION LETTER

CITY COUNCIL OF NAIROBI

TELEGRAM "SCHOOLING"
TELEPHONE: 221166/224281
EXT: 2426 /2590

CITY HALL ANNEXE
P. O. BOX 30298 GPO
NAIROBI

CITY EDUCATION DEPARTMENT

Ref…GL/NC/141VOL IV/52
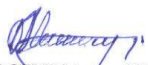
17th February, 2011

The Headteacher
Makadara, Embakasi, Kasarani, Starehe & Langata Districts
Public Primary Schools
NAIROBI.

RE: **RESEARCH AUTHORIZATION**

This is to certify that **Tabitha Mbenge Ndiku** of Moi University, School of Information Sciences has been granted authority to carry out a research in your school for academic purposes.

The title of her research is **"Access to and Use of Information by School children in Selected Nairobi Slums."** She has engaged the services of research assistants – *Sammy Gathiru and Martin Mwangi.*

You are therefore requested to accord them necessary assistance during this exercise. Upon completion of the study, the researcher is advised to submit a copy of the research report to this office.

JECINTA A. CHARLES
Ag. CHIEF ADVISOR TO SCHOOLS
For: DIRECTOR OF CITY EDUCATION

CC. Embakasi, Makadara, Kasarani, Langata & Starehe districts.