

**ANALYSIS OF ADEQUACY AND UTILIZATION OF INSTRUCTIONAL
RESOURCES FOR LEARNERS WITH MENTAL RETARDATION IN SPECIAL
SCHOOLS IN NYANZA PROVINCE, KENYA**

BY

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DECLARATION

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

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I/We confirm that the work reported in this thesis was carried out by the candidate under my/our supervision as University supervisors.

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DEDICATION

This thesis is dedicated to my family – you are more than the ballads that were ever sang or said.

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LIST OF ABBREVIATIONS AND ACRONYMS

ASK SHOW	-	Agricultural Society of Kenya Show
ATS	-	Approved Teacher Status
FPE	-	Free Primary Education
IDEA (1997)	-	Individual with Disabilities Education Act (1997)
KIE	-	Kenya Institute of Special Education
KISE DL	-	Kenya Institute of Special Education Distance Learning
KNUT	-	Kenya national Union of Teachers
NGO	-	Non-Governmental Organization
PL 94 –142	-	Public Law 94 - 142
SNE	-	Special Needs Education
TSC	-	Teachers Service Commission
UNESCO	-	United Nations Educational Scientific & Cultural Organization
UNICEF	-	United Nations International Children Education Fund

ABSTRACT

The major purpose of this study was to analyze the adequacy and utilization of instructional resources for learners with mental retardation in special schools in Nyanza Province. The study also aimed at finding out the type of instructional resources available in the schools and how they were acquired. The study was guided by five research objectives which were to find out the types of instructional resources that are available for learners with mental retardation; to determine teachers' opinions on the importance and suitability of resources in the instruction of the learners, to establish how teachers acquire the instructional resources and whether or not they were able to improvise some of them; to determine how teachers used teaching and learning resources in the instruction of learners with mental retardation. Descriptive survey design utilizing quantitative and qualitative approach was used in the study. The target population of the study comprised of four (4) special schools for learners with mental retardation, fifty (50) teachers and 300 learners. The schools were spread throughout the province. The four schools that participated in the study were the only fully fledged special schools in the province for learners with mental retardation. Simple random sampling was used to select one teacher each from schools that took part in the study. Complete questionnaires were received from 26 teachers, and this gave a return rate of 92.9%. Questionnaires for head teachers and teachers were used to gather information from the respondents. The questionnaire was piloted at St. Catherine Special School for the mentally retarded, Butula. Data was analyzed using Statistical Package for Social Science (S.P.S.S.) computer software employing descriptive statistics such as percentages, frequency distribution and mean scores. The findings revealed the following: graphic materials were the most commonly used type of resources by teachers, all the four main types of instructional resources namely visual materials, graphic materials, audio visual/ aural and equipment and facilities were either inadequate or not available, with audio visual/aural largely unavailable. Information about instructional resources was mainly obtained from K.I.E. media catalogue. Lack of sufficient and/ or inappropriate training negative attitudes and limited funds were established as some of the factors that hinder acquisition and effective use of instructional resources. On the basis of the findings, the study recommended the following: a similar study should be carried out in other provinces in Kenya to establish whether or not the study findings apply to other areas to enable generalization of the result of this study, a study of this kind should be carried out in other areas of special needs to determine the relationship of the findings of this study with other areas of disabilities, a detailed study should be undertaken to investigate the attitudes of teachers towards the use of instructional resources in teaching and leaning of persons with mental, retardation.

CHAPTER ONE

INTRODUCTION

This chapter presents the background information, statement of the problem, purpose of the study, research objectives, and research questions, significance of the study and delimitation and limitations of the study. Assumptions of the study conceptual framework and theoretical framework and operational definition of terms are also included in the chapter.

1.1 Background of the Study

The mythical birth of special education and systematic services for individuals with disabilities in general occurred in Europe in early 1800s (Smith 1998). A number of laws have been passed particularly in the United States to help protect the rights of exceptional learners and hence provision of services. The passage for example of the PL 94-142 in 1975 and Individuals With Disabilities Education Act (IDEA) 1997 both in the United States brought dramatic changes to traditional programmes for the educable mentally retarded (mild) and the trainable mentally retarded (severe). Formally programmes for the educable mentally retarded learners took place in a self-contained special class and all children in the class took the same programme with common objectives, resources, teaching strategies and evaluation criteria. Today, programmes are designed to meet the needs of individual children (Macmillan, 1982). The Universal Declaration of Human Rights states that all individuals irrespective of sex, race and economic status have a right to education. Education is thus a human right with power to transform an individual and

it is the cornerstone of freedom, democracy and sustainable human development (UNICEF, 2001).

Learners with mental retardation pose a unique problem to education, one not presented by any other exceptionality (Macmillan, 1982). While the visually impaired, hearing impaired or learning disabled require modification in the way they are taught, the mentally retarded require educators to decide what they should be taught and how. Mental retardation is not a unilateral concept. Persons who are mentally retarded can exhibit quite different kinds of behavior and adaptivity (Meece, 2001). Three criteria that must be met before a person should be classified as mentally retarded include sub average intellectual ability, problems in adaptive functioning and these should be manifested before age eighteen (Meece, 2001). In view of the cited criteria, the various limitations these learners have could only be addressed through modification of both social and educational environment.

While attitudes towards the treatment of persons with mental retardation trace back to ancient civilization (including Egypt, Sparta, Rome, China, and Early Christian World) a documented history relating to mentally retarded persons is rather brief spanning only the last 200 years (Smith, 1998). Before 18th century, the concept of mental retardation regardless of the term used to describe it was enigmatic to a world that did not have a sophisticated knowledge base with which to understand it. These individuals were given names all of which were derogatory.

Education of persons with mental retardation has never been of great concern to many in the world (Smith, 1998; Harman and Drew, 1990). In Kenya, it was not until 1948 when the first step was made towards providing these individuals with some form of education with the establishment St. Nicholas Special School (presently Jacaranda Special School) (Task Force, 2003).

Other schools that were started after Jacaranda included: Meru Special School, Embu Special School, Munyu Special School, St Catherine's Butula, Lutheran, Maranda, Kisii and Equator Round Table, among others (Task Force, 2003). These schools were expected to offer programmes that would help deliver services to individuals with mental retardation and aimed at addressing the difficulties they encounter in academic, social or behavioral requirements of general education. It was hoped that with the formal education, learners with mental retardation would be prepared to deal successfully with the demands of adulthood and to live as independently as possible (Kirk and Gallagher, 1997). Fundamentally, programmes were expected to develop the learners' competence in the following areas: employment or further education, community involvement, physical and emotional health, personal responsibility and interpersonal relationship (Macmillan, 1982).

This, however, has not been fully achieved to date. Majority of the learners with mental retardation are not employed, which would provide them with for instance opportunity for social interactions with non-handicapped people in the society. In Kenya persons with

mental retardation are estimated at 2.7 million, (Kenya society for the mentally handicapped, 2006). Out of the 2.7 million persons with mental retardation, less than 19,000 have access to education. There are 734 special schools and units for persons with mental retardation in the country which currently host only 18,000 pupils while 34 small homes and private schools currently care for only 438 persons (Kenya Society for the Mentally Handicapped, 2006).

According to the Kenya Education Sector Support Programme 2005-2010 the government is currently implementing measures aimed at improving the participation of children with special education needs including those with mental retardation. Despite the current initiative by the government access and quality in education for those with mental retardation remain limited. In order to increase access and improve quality availability, adequacy and utilization of teaching and learning resources is a critical consideration. The Ministry of Education Report on the Sector Review and Development, September 2003, points out that according to the survey carried out in public primary schools in Kenya in 1999 the shortage of textbooks and other learning materials were the most constraining resources as far as attaining quality education was concerned. Similar survey had not been carried out to establish the state of affairs in special schools and in particular schools for learners with mental retardation.

1.2 Statement of the Problem

Since success in learning is linked to appropriate and effective use of teaching and learning resources no learning can be effective without the use of the resources. Whatever the reasons learners with mental retardation's success and failure in school, like all other learners, are linked to the adequacy and utilization of resources. Instructional resources are used as an integral part of – learning activity in order to achieve the highest level of subject matter relationship (Patel and Mokuu, 1993). Inadequacy of instructional resources hampers learner's interest and progress and therefore it is imperative for teachers to arrange the environment to facilitate children's active exploration and interaction. Lack of instructional resources in the classroom has a cumulative negative impact on learners with mental retardation's ability to fit and function effectively in the community. Despite the fact that Special Schools in Kenya were established immediately after the 2nd World War not much has been done to improve the standard of education for learners with special needs. Lack of instructional resources and their ineffective use in teaching learners with mental retardation could probably be one area that has contributed to low enrolment of these learners in schools.

Most studies carried on instructional resources in Kenya have focused only on regular classroom teaching. For instance, Digolo (1997) focused on instructional resources for the teaching of music in secondary schools in Nairobi. Mwangi (2000) also looked at the instructional resources for teaching music in primary teachers colleges. Not much attention has been given to the area of special needs education and in particular education

of learners with mental retardation. Yet this is a critical requirement in their instructional process if they are to understand concepts better and transfer them to life after school. This study therefore specifically analyses the adequacy, types, importance, selection criteria and use of the instructional resources in the teaching and learning of individuals with mental retardation.

1.2.1 Purpose of the Study

The purpose of this study was to investigate the adequacy and utilization of resources available for the instruction of learners with mental retardation in special schools in Nyanza province. Further the study attempted to find out types, acquisition and use of the instructional resources in the teaching and learning of individuals with mental retardation.

1.3 Research Objectives

- i) To establish the types of instructional resources that are available for learners with mental retardation.
- ii) To determine teachers opinions on the importance and suitability of resources in the instruction of learners with mental retardation.
- iii) To establish the adequacy of the instructional resources.
- iv) To establish how teachers acquire the instructional resources and whether or not they are able to improvise some of the resources.
- v) To investigate how teachers use teaching and learning resources in the instruction of learners with mental retardation.

1.4 Research Questions

- i) What are the types of instructional resources available for the instruction of learners with mental retardation?
- ii) What is the opinion of teachers on the importance of instructional resources in the teaching of learners with mental retardation?
- iii) How adequate are the instructional resources to both the teacher and the learner?
- iv) How are the instructional resources acquired by teachers serving learners with mental retardation?
- v) How are the instructional resources used by teachers?

1.5 Significance of the Study

The findings of this study may serve as a contribution towards and improvement of education of learners with mental retardation in the following ways:

- ◆ The findings will help better understanding of the role of teachers in the use of teaching and learning resources to enable learners with mental retardation gain personal and basic academic skills such as use of language as a tool for communication to express for instance feelings of happiness anger and sadness.
- ◆ Teacher trainers could find the outcome of the research useful as they will lay some emphasis on the effective use of teaching and learning resources and their importance. Teacher trainees for learners with mental retardation would be required to pay careful attention to the use of instructional resources.

- ◆ Curriculum experts should find the information useful as they would draw a link between the content to be taught and the accompanying resources. For instance computers can be used for drill and practice – in reading and arithmetic particularly – tutorials, simulations and problem solving.
- ◆ The findings will provoke commercial agents to avail a wide range of learning resources especially those that could be used in the teaching and learning of persons with mental retardation. Use of varied instructional resources enable learners with mental retardation develop a sense of competence and self confidence.
- ◆ The findings could stimulate more researchers in the field of education of the mentally retarded particularly in areas not covered by the study and/or in some parts of the country to help generalize the findings.
- ◆ The result may influence the proposal of policy changes and practical measures to improve the quality of teaching and learning using resources.

1.6 Limitations and Delimitations of the Study

The study was limited to analysis of instructional resources in schools for learners with mental retardation in Nyanza Province. It was further limited to four schools for learners with mental retardation. There were other categories of learners with special needs in the province but the focus was only on the mentally retarded. Learners in special units and those in regular schools were not included in the study. Time constraints and financial limitations were some of the reasons for confining the study in Nyanza province. The study did not examine the adequacy of instructional resources in terms of the quality of

materials used. The study was delimited on the other hand in the province, as the schools were within reach of the researcher.

1.7 Basic Assumptions of the Study

The following were the basic assumptions of the study:

- a) That resources were available for the teaching and learning of learners with mental retardation.
- b) That teachers and pupils used relevant and have adequate resources in the teaching and learning of the mentally retarded.
- c) That teachers were familiar with the learning needs of the mentally retarded.

1.8 Theoretical Framework

Delayed development is a characteristic of people who are mentally retarded and the degree of delay is generally related to the severity of the mental retardation and the presence of other inhibiting conditions which could be attributed to inappropriate teaching strategies or inadequate instructional resources (Smith, 1998). People who expect a person with disabilities to acquire skills at the normal rate may end up frustrated and may fail in their attempts to teach new skills.

In this study, it was assumed that the effective use of teaching and learning resources is of paramount importance in an instructional process. Piaget's theory of cognitive development (1953) was used to relate the study to the teaching and learning of the mentally retarded. Piaget viewed mental development as a result of continuous

interactions with the adaptation of the environment, or the child's perception of it. According to Piaget (1969), each child progresses through stages of development where various cognitive skills are acquired. The main stages of development, along with appropriate age norms are:

- Sensorimotor stage-birth to two years.
- Pre-operational stage – two to seven years.
- Concrete operation – seven to eleven years.
- Formal or abstract operation – eleven years and older.

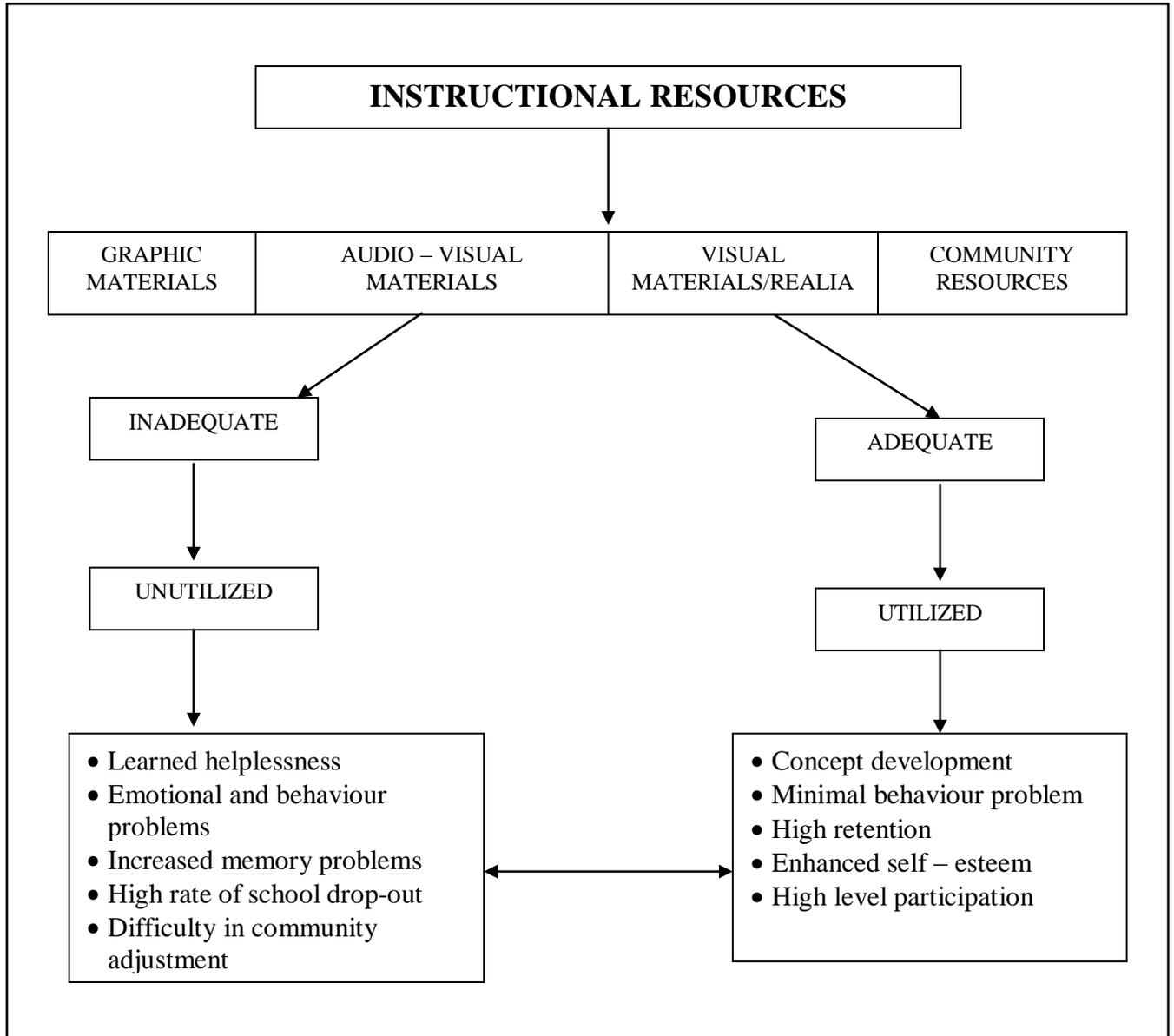
The sensorimotor stage is characterized by sensory experiences and motor activity. As young children become more aware of the surrounding environment, they begin to distinguish between and other persons and objects. The second stage preoperational involves more than purely physical operations. Children begin to use symbols for the people and objects around them to assimilate customs and to acquire new experiences by imitating the actions of others. During the concrete operations stage, children develop further abilities to order and classify objects. The ability to perform abstract thinking and reason by hypothesis is said to develop around the age of eleven or twelve and characterizes the formal operations or abstract stage.

Piaget's theory has been related to children who are mentally retarded by Inhelder (1968) and Woodward (1963, 1979), who viewed the child who is mentally retarded as progressing through the same stages of cognitive development as his peers who are not mentally retarded, with major differences being in rate and highest level achieved. The age at which a child who is mentally retarded will reach each stage will be later and the

more severe the mental retardation the slower the progression through the stages. In addition individuals who are mentally retarded may not achieve all stages of development. According to Inhelder (1968) children who are mildly mentally retarded may reach the concrete operation level, but individuals who have been called the moderately mentally retarded will go no further than the pre-operational stage. Those who are severely and profoundly mentally retarded will remain at the sensorimotor level.

According to Piaget's theory, mental development progresses as a result of children's interactions with the surroundings. The role of the teacher (educator) therefore, is that of a provider of materials (resources) and opportunities appropriate to children's stage of development with which they can interact. Teachers of students who are mentally retarded need to be aware of the developmental sequences in order to determine a child's readiness for a particular task and to consider the slow rate and the expected optimal level of functioning when planning learning materials for children with varying levels of mental retardation. It was in view of the above discussion that this study therefore attempts to investigate the use of instructional resources in helping enhance the mentally retarded learner's capacity to function to their full potential at every stage of cognitive development.

1.9 Conceptual Framework



Source: Developed by the candidate and his supervisors

The resources used by teachers and the techniques they employ together with them determine learners activities in the classroom. The more the learners are actively involved in the learning process and the more this is determined by adequacy of the resources the better the knowledge acquisition (Johnson 1995).

Teaching and learning resources are a variety of techniques used by the teachers to support their teaching and make it most effective. The resources should be appealing to the sight and senses of the learners. When teaching and learning resources are available, adequate and are used properly they may help the learners to perform concrete physical actions or use them to clarify concepts. A wide range of resources is used to increase learning, to generate more interest and to create a situation where the learners would fully engage classroom activities. In their absence, inadequacy or ineffective use difficulties in learning result.

The conceptual framework presented above portrays the critical role instruction resources play in the education of all learners including learners with mental retardation. It ties together the concepts of types, availability, adequacy and efficient utilization of resources in the instruction of learners with the mental retardation. Further more the conceptual frame work presents the negative impact inadequate and inefficient use of teaching and learning resource have on learning for individuals with mental retardation.

1.10 Operational Definitions

Adequacy –Instructional resources that are enough in quantity for the instruction of learners with mental retardation.

Attention Deficit Hyperactivity Disorder (ADHD) – These are learners that have difficulty settling down to do a particular task, especially desk work.

Autism – This is a neurological disorder that leads to deficits in functioning particularly in communication and social skills.

Community resources: These are resources that are found within the neighborhood of learners with mental retardation.

Functional academics: These are skills that are often the core of instructional programmes for individuals with mild or moderate mental retardation.

Functional curriculum: Is one that instructs pupils in the life skills they require for successful daily living.

Hearing impaired: Refers to slight to moderate hearing loss

Improvisation: An invention or production of what is needed for teaching and learning either due to unavailability or inadequacy of instructional resource.

Instructional resources: These are resources selected by a teacher of learners with mental retardation to help meet the needs of these learners in gaining information or understanding about a concept.

Learned helplessness: This is a condition in which one believes he/she is likely to fail even before attempting a task.

Learning disabled: These are learners who are not able to do what others with the same level of intelligence are able to accomplish.

Mentally retarded learners: These are learners who have substantial limitations in performing academic tasks and also have problems with adaptive skills.

Utilization: Making use of something in the form of for instance visual aids, tape and disc recorders, computers, study trips, etc.

Visually impaired: Refers to learners whose inability to see well interferes with the optimal learning and achievement, unless adaptations are made in the methods of presenting learning experiences.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

In this chapter, literature is reviewed on the general curriculum for learners with mental retardation, importance of instructional resources, and adequacy of the resources, acquisition and appropriate use of available ones for education of learners with mental retardation.

2.1 Curriculum for Learners with Mental Retardation

The important questions to be answered in the development of curriculum for learners with mental retardation are: “What are our goals? What are our immediate objectives to reach the goals?” For students who have moderate or severe retardation reasonable goals are to learn to read at least to the survival word’s level; to do basic arithmetic, to understand various denominations of money, to have some leisure time skills and to be able to communicate with peers (Kirk and Gallagher, 1997). It would be interesting to see the instructional resources that could be used to teach functional academic to learners with mental retardation.

Patton (1986) and supported by Gallagher (1997) asserts that the more difficult curriculum decision involves children with mild mental retardation who can be expected to reach a medium to high elementary school level of skills knowledge, equivalence of between classes 5, 6 or 7.

According to Patton (1986) it is possible to infuse relevant career education topics into regularly assigned lessons. More attention is given to community adjustment and work skills as this group of learners are introduced to vocational training programmes.

Kirk and Gallagher (1997: 208) argue that in most programmes for children with mild and moderate retardation, particularly for those grouped with other students with limited abilities or performance differential instructions take place in four major areas.

- Readiness and academic skills. With pre-schoolers and elementary school children, basic reading and arithmetic skills are stressed. Later the skills are applied to practical work and community settings.
- Communication and language development. The student gets practice in using language to communicate needs and ideas. Specific efforts are directed towards improving memory skills and problems solving skills at the level of the student's ability.
- Socialization. Specific instruction is provided in self-care and family living skills, beginning at the preschool level with sharing and manners, then gradually developing at higher levels into subjects like grooming, dancing, sex-education and avoiding drug abuse.
- Pre-vocational and vocational skills – The basis for vocational adjustment through good work habits (promptness following through on instructions, working cooperatively on group projects) is established.

In view of the above the researcher intended to establish how much for instance, the teachers used community resources to help facilitate acquisition of prevocational and vocational skills for learners with mental retardation.

Identifying functional curriculum goals for students with mental retardation has become a major priority for special education (Herward et al, 2000). Learning activities in a functional curriculum are chosen because they will maximize a student's independence, self-direction, and enjoyment in everyday school, home, community and work environments. Browder and Snell (2000:497) agree with Herward as they define functional academic as the most useful parts of the three R's – reading, writing and arithmetic. The scholars further argue that careful assessment of each student's current routines must be conducted to find those skills that are required and or could be used often including skills that are likely to be required by future environments.

Teachers of learners with mental retardation need to be aware of what procedures of intervention, action and assessing special education provisions are put in place. Management of a child's education becomes special when his needs are particularly different from his peers. A range of instructional resources used should therefore reflect the needs and positive images of disability. Snell (1987) asserts that when teaching reading for instance to learners with moderate retardation the focus is on functional reading. Although these individuals are unlikely to ever read for comprehension or recreation, they need to be able to identify key words in simple recipes to develop a

protective vocabulary. Traditionally whole word method is used to teach learners who are moderately or mildly retarded (Fisher, 2002). Mentally retarded learners, he further explains, can quantitatively learn concepts in mathematics such as more and less, big and little and the elementary vocabulary of quantitative thinking. How teachers of learners with mental retardation accommodate these curriculum requirements in the selection, adequacy and use of instructional resources was of interest to the researcher.

Fisher (2001) reiterates that language exercises for children with mental retardation aim to foster the development of speech and the understanding and use of verbal concepts. Communication skills such as the ability to listen to stories, discuss pictures and tell about recent experiences are stressed. Children learn about holidays, transportation, the months of the year and days of the week and contributions to home life. This practical approach to learning requires the teacher therefore to select available materials and develop an individual education programmes according to the age and ability of the learners.

Social skills are critical components of the primary schools curriculum for children who are mentally retarded. As part of their daily activities they can learn to take turns, share and work cooperatively (Snell, 1987). The lunch table is an excellent location for teaching social skills as many children with mental retardation lack these social skills and need direct instruction in them if they are to establish a useful community adjustment. Some types of counseling and role-playing of relationships or situations with the opposite

sex are often apart of the curriculum for students with mild or moderate retardation. Garguillo (2006) emphasizes that the instruction provided to learners with mental retardation must be comprehensive and functional, equipping them, to the maximum extent possible with the experiences they need to live and work in their respective communities. This view is supported by Kolstoe (1976) who emphasizes the development of work skills as the child reaches middle school or the vocational training programmes. The researcher contended that since learners with mental retardation, particularly mild and moderate will in most cases live in the community as parents, neighbours and citizens, it is important that their education should aim at developing the knowledge, skills and attitudes that will enable them to be active members of the adult community. And for this to be achieved learning activities should be enhanced by the relevant and effective use of instructional resources, including community resources to maximize their potential in all areas of development.

2.2 Importance of Instructional Resources

Drew (1984) has established that learners with mental retardation are known to be less able to grasp abstract concepts as opposed to concrete concepts when compared with individuals of normal intelligence. Therefore the more meaningful and concrete the material the more apt the retarded child is to learn. Penny (2003) supports Drew's view by stating that instructional resources enable children to gain a sense of pride in their own choices and differences. Giving children objects to handle helps them to listen and attend and enables them to remain alert as this acts as another sensory boost. Learners with

mental retardation have short attention span and memory problems and therefore, the use of instructional resources is of critical importance in their learning.

According to Edgington (1998) children find the familiar resources they need for security and self-esteem. Many children are reassured if they find equipment in school and in the classroom. Various types of instructional resources can be useful and developmentally appropriate tools for presenting activities that are engaging, interesting and appropriate for the wide range of abilities for learners with mental retardation (Herward 2000; Macmillan 1982). Learners with mental retardation require numerous verbal, physical and visual prompts to redirect their attention and encourage their participation in familiar activities and minimize distractive activities such as wiggling in their seats, engaging in inappropriate behaviour, attempting to escape or just gazing around the room (Herward 2000). He emphasizes that introducing new concepts and skills, while reinforcing previously learnt materials, requires upbeat, appropriately paced and highly interactive instructional strategies.

One way to incorporate these strategies and add dimensions and excitement to learning is by embedding the instructional resources into the learning activities. Learners who are mentally retarded frequently have difficulty expressing their emotions and interpreting the feelings of others. Using some instructional resources like puppets may help them to model appropriate emotion, enable them match their own experiences with language, teach them to be an attentive audience, as well as help them develop more elaborate socio-dramatic and symbolic play (Meece, 2001).

Research has shown that instructional resources and scheduled activities should provide a framework for maximizing learners with mental retardation opportunities to develop new skills and practice what they have learned while remaining manageable and flexible. Harris and Handleman (2000) argue that well scheduled and organized activities have considerable effect on the frequency and type of interaction that occurs between children with and without disabilities and the extent to which children with disabilities benefit from instructional activities. Bowder and Snell (2000) assert that students with mental retardation learn more efficiently and retain more if skill instruction occurs in a natural setting. Figuratively it is said “nothing should be taught indoors if we can teach that something outdoors.” The retarded learner grasps concepts more readily if the real object is present rather than for instance a picture of the object.

The importance of instructional resources for learners with mental retardation is also highlighted by Cartwright (1995) and Garguillo (2006) who argue that to help student with mild retardation generalize and apply what they are learning teachers may need to construct opportunities for real world problems solving. The teacher should choose instructional materials that help promote active learning of targeted skills, add interest to the lesson, are age appropriate, closely match the students’ ability level and that lead directly to skill acquisition. The integration of the school and the community learning resources can contribute richly to the process of learning for all learners including those with mental retardation. Therefore the parents with children in the school can be

requested to contribute their specialized knowledge to the teaching and learning process. In addition students can be taken out to the community through field trips.

Despite the importance that is attached to the instructional resources for learners with mental retardation there has never been a serious attempt by scholars in Kenya to establish their availability adequacy and use. Most educators that have conducted research on instructional resources have concentrated on resources for teaching and learning in regular education settings. As has been mentioned earlier, for instance Digolo (1997) carried out a study on instructional resources for teaching music in secondary schools in Nairobi, Mwangi (2000) had his study based on instruction resources for the teaching of music in teachers training colleges in Kenya. Both scholars established that teaching and leaning of music is hampered by inadequate resources or total lack of them and underutilization of available ones. Kinyanjui (1997), Kimuli (1988) and Heinnich *et al* (1985) expressed similar sentiments in their studies on resources in other subject areas. It therefore become necessary for the researcher to establish whether similar problems exist in schools for learners with mental retardation.

2.3 Adequacy of Resources for Instruction of Learners with Mental Retardation

Adequate and the use of resources for the maximum effect can make a big difference to a school and the learner (Fisher, 1995:150). Teachers of learners with mental retardation should not just settle for good enough but seek to do better by ensuring adequate and effective use of instructional resources. The teacher's first responsibility is to ensure that

his class is adequately resourced (Edgington 1998). The scholar argues that resources should be available as much of the time as possible and they should be sufficient to encourage imaginative use. Availability and adequacy of a wide variety of instructional resources and from many sources can stimulate the interest and active engagement of learners with mental retardation (Herward, 2000).

According to Edgington (1998) making as a wide range of equipment as possible available for children to choose from everyday is the best way of encouraging sharing and turn taking. The scholar argues that in classes where staff limit the activities on offer or the time available to use equipment, there is often an air of desperation about the children who know that if they do not get a turn now, they may not get one at all before the equipment is put away. But if they know that what is available today will still be available tomorrow they are certain to be more relaxed about their involvement. Providing children with various kinds of instructional resources has positive impact on their learning and enable them to perform activities on their own (Solity, 1992). Opportunities for learning are enhanced if the relevant resources are clearly organized and accessible to children (Levis, 1991). The scholar emphasizes that children should have access to a wide range of resources in learning an area so that they do not have to keep using the same resources with which they have already failed to learn. Adequacy of resources enables learners to take active involvement in the learning activities and offers a greater variety of channels for dissemination of ideas and knowledge.

2.4 Acquisition and use of Instructional Resources

The acquisition, selection and use of instructional resources is an important component of the teaching and learning process. It is the selection of a particular media that determines the outcome of the whole process of learning that is either it succeeds or fails to achieve its immediate objective. Ayot (1986:73) observes that a wide selection of instructional resources by teachers can help children to present their work in a variety of ways and in an attractive manner.

Serun and Patton (1989) indicate that the computer can be used for drill and practice in reading and arithmetic tutorials, similarities and problem solving. Paretta (1991) points out that some state of the art hypermedia – an information storage and usage design that enables text graphics, animation and sound to be combined to suit individual needs – can be adapted for use with children with mental retardation. The scholar concurs with Serun and Patton on the use of computer emphasizing that speech and language professionals can use computers as therapeutic tools and that computer programmes are designed for a variety of specific purposes for example phonological evaluation and teaching children sentence structure.

Cartwright (1995) asserts that teaching methods that are effective for students in special education programme include direct instruction with extensive guided practice. Instructional methodologies and accommodations that are often used with pupils who are mentally retarded are the same ones that make learning successful for all students (Friend and Bursuck, 2002). The two scholars believe that general educators are capable of

reasonably accommodating in their classrooms most students with special needs, including pupils with mental retardation through appropriate choice and use of instructional resources.

Students with mental retardation learn best when instruction is explicit and systematic and instructional methods are derived from empirical research (Herward 2003). According to the educator, practices that would make learning successful include assessing each student present levels of performance to help identify and prioritize the most important instructional targets; define and task analyze the new knowledge or skills to be learned; design instructional resources and activities so that the student has frequent opportunities for active student response in the form of guided and independent practice.

2.5 Effective Teaching and Learners with Mental Retardation

Individuals with mental retardation benefit from the same teaching strategies used to teach individuals with learning disabilities, attention deficit/hyperactivity disorders, and autism (Lindsley, 2006). Learners with mental retardation require specialized method of teaching as they lack the necessary skills and knowledge due to their sub-average intellectual functioning. They need as much sensory stimulation as possible for their intellectual growth (Fisher, 2001). A teacher for the mentally retarded learners therefore should be the mediator who transforms, reorders, organizes groups and frames the stimulus in the direction of some specifically intended goal or purpose. Durkins (1983) states that appropriate selection and use of instructional resources is instrumental in assisting the teacher to reach as yet unachieved goals that are educationally significant to

learners with mental retardation. The role of the teacher in facilitating learning is vividly captured by one of the Jesuits fathers, “----‘give me a child until he is seven and he is mine for life.’”

Morris (1992) states that in the system of personal relationships within which children learn the teacher is probably the most important factor. The teacher’s ability to create a well-organized classroom with areas of the classroom well marked and daily schedules consistently followed is critical in the instruction of learners with mental retardation (Durkins, 1983). This view is supported by Clark (1992) who noted that effective teachers plan enough time so that students can achieve content mastery before moving to a new content. It is helpful the scholar argues for teachers handling learners with mental retardation to slow down the pace of activities in the classroom. This can involve both the rate of speaking and moving-how fast the teacher talks or performs a task or activity-as well, as how long the teacher waits for the child to respond or complete a task. Appropriate yet brisk pacing keeps students alert and interested and reduces student error.

Lindsley (2006) posits that for a teacher to accommodate learners with mental retardation in learning activities he/she should demonstrate the ability to break tasks down into small steps and introduce the tasks one step at a time to avoid overwhelming the individual. The scholar reiterates that the next step can only be introduced once the preceding step has been mastered, and this can best be achieved through the use of enriched learning environment where visual aids such as charts, pictures and graphs, etc are used as much as possible. Effective teachers assume an active role in directing the learning of all

students. They orient students to lesson goals and objectives, present key skills and concepts clearly and concisely, use questions to check student understanding, and focus attention on important elements of the lesson (Brophy & Good, 1986; Stallings, 1985).

According to Cartwright (1995) indicators of effective instructions are particularly applicable when teaching academic skills to students with mild disabilities. Stevens and Rosenshine (1981) maintain that for learners with academic deficit, effective instruction takes place in teacher directed groups that are academically focused. The scholars further argue that effective instruction is also individualized for members within each group. The students are given many opportunities to respond correctly to questions posed by their teachers during interactive teaching sessions. Verbal directions and lectures are not the most effective teaching approaches for any group of learners and in particular learners with mental retardation (Useful Methods for Teaching Mentally Retarded Students 2006).

The intent of this section was to highlight issues surrounding effective teaching of learners with mental retardation. While not a comprehensive review, it was intended to give enough of a sense of the characteristics of effective teachers, and the general instructional approaches used to teach learners with mental retardation.

2.6 Summary of Literature Reviewed

The preceding chapter has reviewed literature on the importance and adequacy of instructional resources for learners with mental retardation. It has also established that there is need for acquisition and use of relevant resources for learners with mental retardation. The practical aspect of curriculum for learners with mental retardation requires the use of diversified resources without which the teaching and learning for this category of learners would be completely hampered.

The literature reviewed also revealed that despite the importance that is attached to the use of teaching and learning resources in an instructional process, not much attention has been given by scholars in Kenya to the instructional resources for learners with mental retardation. Schools for learners with mental retardation should therefore be expected to acquire appropriate resources with which to support the instruction of the mentally retarded.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter covers the following: study design, location of the study, description of the target population, sampling procedures and sample size; instruments that were used in data collection, pilot study, validity, reliability, data collection procedures and methods that were used in the analysis and presentation of data.

3.1 Research Design

This study was a descriptive research and a survey design was used for the research. This design enables the researcher to use a variety of data collection techniques to gather information that describes existing phenomena. It can be used when collecting information about people's attitudes, opinions, habits or any of the variety of education or social issues (Orodho and Kombo, 2002). This position is also supported by Gay (1992) who states that a survey study can be used to assess personality variables such as attitudes and opinions about events, individuals or procedures.

3.2 Variables

Variables are attributes or quality of the cases that we measure or record (Kombo and Tromp 2006). The independent variables in this study included the provision of instructional resources and the teachers' awareness of their importance. The dependent variables on the other hand were the instruction of learners with mental retardation, their

access to the resources and the teachers' use of repetition, examples, elaboration, explanation and giving direction.

3.3 Location of the Study

The study was carried out in Nyanza Province in Western part of Kenya and one of the eight Provinces in the country. It lies 350km West of Nairobi. Currently it has fifteen (15) districts with a population of eight (8) million inhabitants (1999 Census). Over 60% of people in the province are peasant farmers and the rest are engaged in fishing activities and local trade. The main reason for carrying out the study was that a study of this nature had never been done in the province. Also put into consideration by the researcher was the financial limitations and time constraints. The study was solely funded by the researcher.

3.4 Target Population

The target population of this study comprised of four (4) special schools for learners with mental retardation, fifty (50) teachers and 300 learners. These schools were Lutheran Special School in Kisumu town, Kisii Special School in Kisii Central district as well as Maranda Special School in Bondo district and Equator Round Table Special School in Siaya district. These schools had the characteristics considered essential by the researcher such as boarding facilities, learners who had mental retardation ranging between mild and moderate and had vocational and functional academic classes. The four schools were spread in most parts of the province.

3.5 Sampling Techniques and Sample Size

3.5.1 Sample of Schools

Due to the small number of schools for learners with the characteristics mentioned earlier purposive sampling was used. This type of sampling technique allows the researcher to use cases that have the required information with respect to the objectives of the study. The four (4) schools chosen had the characteristics required by the study.

3.5.2 Sample Size

Simple random sampling was used to select one teacher each from six classes in the school. A total of 28 teachers including head teachers from the four schools participated in the study. Learners were not sampled. This was because of their mental challenges that would make it difficult to gather useful and reliable information from them. The main purpose of using simple random sampling technique was that random sample yields research data that can be generalized to a larger population within margin of error that can be determined statistically (Orodho, 2002).

3.6 Research Instruments

According to Mugenda and Mugenda (1999) in social science research the most commonly used instruments are questionnaires, interview schedules, observational forms and standardized tests. In this study, therefore data was collected using three instruments: the questionnaire for teachers, observation checklist and interview guide. The three

instruments were used to supplement one another in order to bridge any gap that could be left using one instrument.

3.6.1 Questionnaire for Head teachers and Teachers

The questionnaire was the main tools for collection of data in this study. The questionnaire consisted of items aimed at answering the following objectives: teachers' personal data or demographic information, the available teaching and learning resources, whether they were used and to what extent teachers improvised the instructional resources and the extent to which teachers utilized community resources to teach learners with mental retardation.

3.6.2 Instructional resources checklist/Lesson observation schedule

The researcher prepared a lesson observation checklist containing fifty (50) basic instructional resources, which could be used to teach learners with mental retardation. The instructional resources available in the classroom were considered alongside the researcher's checklist and whether they were used by the teacher established. How the teacher utilized the instructional resources in the classroom was determined through a separate lesson observation guide. There were two columns for Yes and No to obtain information on how teachers used the resources in the instruction of learners with mental retardation.

3.6.3 Teachers Interview Guide/Schedule

An interview schedule is a set of questions that an interviewer asks when interviewing respondents. An interview schedule makes it possible to obtain the data required to meet the specific objectives of the study. Interview schedules are also used to standardize the interview situation so that the interviewers can ask the same questions in the same manner. In most cases, the questions are usually asked exactly as they appear on the guide. Three teachers from each of the schools, selected through simple random sampling were interviewed. The purpose of the interview in this study was to clarify some issues that may not have been clearly established through the questionnaire and observation.

3.7 Pilot Study

The researcher conducted a pilot study in which the study instruments were pre-tested, before the main study was carried out. In the pre-testing of the study, six (6) teachers were selected from one school, that is, St. Catherine's Special School for the Mentally Retarded-Butula. The pilot school did not participate in the main study. The piloting of the study instruments enabled the researcher to validate the instruments by making corrections based on the observation made.

3.7.1 Validity

Validity is the degree to which results obtained from the analysis of the data actually represents the phenomenon under study (Mugenda and Mugenda 1999). Since some of the items in the interview schedule and observation schedule were measuring what the

questionnaire purported to gather their responses were compared to validate them accordingly. Some of the items in the questionnaire of this study were adapted from Digolo (1997). They therefore had been used before and this strengthened their content validity. The opinion of the researchers supervisors were also sought regarding whether or not items in the instruments represented elements of the study and whether they were valid in content and also whether they could provide data required. The pilot study also assisted in ensuring validity.

3.7.2 Reliability

The instruments were subjected to a reliability test during the piloting stage. The instruments were administered to the subjects involved in the pilot study twice but at different times, using test-retest method after which a correlation between the two sets of data was done. Reliability of the instruments is important as other researchers using the same instrument for data collection would find useful and reliable data. Mugenda & Mugenda (1999) describe reliability of research instrument as the measure of the degree to which research instruments yield results after repeated trials. Analysis of the reliability was done on the results obtained during the pilot study. The equal length spearman Brown split half analysis technique was done using the Statistical Package for Social Sciences (SPSS) programme for windows. This generated a correlation coefficient, which at a value of 0.854 was high enough to indicate an acceptable degree of reliability.

3.8 Data Collection Techniques

The researcher first obtained a research permit from the ministry of education to enable him carry out the research. The schools participating in the study were visited by the researcher and he held discussions with the head teachers of each school after which he met with the teachers and explained to them the purpose and objective of the study. He also explained to the teachers how the sample of those taking part in the study was drawn. The selected teachers were given questionnaire and requested to complete them having been given assurance of confidentiality of the information they gave. They were further required to complete the questionnaire independently.

The researcher personally administered the questionnaire in order to improve on the return rate and control for group work. The instructional resources checklist was used to establish whether the instructional resources were available and whether or not they were adequate. How the instructional resources were used by the teacher in the classroom was determined through a separate observation guide. Three teachers from each school selected through simple random sampling were interviewed. The interview guide consisted of unstructured questions. This instrument was used to probe the responses given by the respondents in the questionnaire.

3.9 Data Analysis

The data collected were analyzed both quantitatively and qualitatively. The information was discussed and conclusions and recommendations made. Data was analyzed by use of both descriptive and inferential statistics. Statistical Package for Social Sciences (SPSS)

was used to facilitate analysis of the collected data. Items from the questionnaire, lesson observation and interview schedules were arranged and grouped according to individual research questions. Responses that were received from the questionnaire, lesson observation and interview schedules were organized, tabulated and analyzed using simple frequencies and percentages, where necessary for example to respond to research question on the adequacy and utilization of instructional resources, the responses indicating adequacy were tallied according to frequency of their occurrence. Also responses that highlight the problems encountered in the utilization of instructional resources were interpreted and summarized. The information from the interview schedule was analyzed qualitatively by sorting out data into various items according to the findings. The researcher gave suggestions and recommendations for future action and research.

CHAPTER FOUR

DATA PRESENTATION, INTERPRETATION AND ANALYSIS

4.0 Introduction

The purpose of this study was to analyze the availability, adequacy and utilization of the instructional resources for learners with mental retardation in Special Schools in Nyanza Province. For systematic presentation and analysis of data, this chapter has fundamentally been organized based on the research questions as follows:

- i. Demographic background of the respondents
- ii. Types of instructional resources.
- iii. Teachers opinion on the importance of instructional resources
- iv. Availability of the resources by teachers
- v. Utilization of the instructional resources.

4.1 Demographic Background of Respondents

In this section – a description of the study sample is presented in order to provide a clear background of the subsequent study findings. Information was collected from teachers and head teachers using questionnaires, which were self-administered. The study sample consisted of twenty eight (28) teachers of whom twenty four (24) were classroom teachers and 4 head teachers. Responses were however obtained from twenty six (26) teachers and head teachers of whom twenty two (22) were classroom teachers and four (4) head teachers giving a return rate of (92.9%).

The demographic data of the respondents included gender, experience, age and professional and academic qualifications. This gave the general background of the respondents which perhaps could have had influence on their responses.

Table 4.1 shows distribution of the respondents by gender. About (61.5%) of the respondents were female and (38.5%) were male. Among the head teachers (50%) of them were females while the other (50%) were males.

Table 4.1 Gender of Respondents (n = 26).

Gender	n	%
Male	10	38.5
Female	16	61.5
Total	26	100.00

Table 4.2 shows the age of respondents by gender.

Table 4.2 Age of Respondents by Gender (n = 26)

Age	Male	Female	Male	Female
21-30	0	3	0	18.8
31-40	6	10	60	62.5
41 and above	4	3	40	18.8
Total	10	16	100	100.00

The higher proportion of (62.5%) of the females was within the age bracket of (31-40) while (40%) of the males were 41 years and above. The study sought to find out the Professional and Academic qualifications of the respondents. Table 4.3 shows the Professional and Academic Qualifications of Respondents

Table 4.3 Professional and Academic Qualifications of Respondents (n= 26)

Qualifications	n	%
B. Edu. (Sp.Ed)	3	11.5
Dip (SP.Edu)	15	57.7
ATS (trained in Sp.Ed)	8	30.8
Total	26	100.00

Professional qualifications of the respondents are shown on Table 4.3. The highest percentage of (57.7%) were holders of Diploma in Special Needs Education while (11.5%) possessed Bachelor of Education degree in Special Needs Education, (30.8%) were certificate holders in the same field. It therefore emerges that majority of the teachers were holders of a diploma in Special Needs Education.

Information about teachers experience is presented in the table 4.4.

Table 4.4 Teachers Experience (n = 26)

Teachers Experience	n	%
0-4 years	5	19.2
5 - 9 years	8	30.8
10 - 14 years	6	23.1
15 years and above	7	26.9
Total	26	100.00

In terms of teaching experience, (30.8%) had between 5-9 years experience in the schools; 0 -4 years was (19.2%) and (26.9%) had above fifteen years teaching experience in the schools. The evidence demonstrates that most teachers had more than four years teaching experience.

4.2 Types of Instructional Resources

The first research question of this study focused on the types of instructional resources which were available for learners with mental retardation. An item from the questionnaire sought to find out from teachers the most common instructional resources they used to teach their classes. The information was obtained from 26 teachers out of whom four (4) were head teachers. The response patterns of the items are presented on table 4.5.

Table 4.5 Common Instructional Resources used by Teachers (n = 26)

Resources	n	%
Number cards	9	12.2
Simple Abacus	3	4.1
Pegboards	4	5.4
Charts	7	9.5
Real objects	3	4.1
Plasticine	3	4.1
Shape board	2	2.7
Stacking toys	3	4.1
Alphabet puzzle	1	1.4
Reading tress	2	2.7
Picture books	1	1.4
Flash cards	10	13.5
Jembes (hoes)	3	4.1
Needles	4	5.4
Place value tray	3	4.1
Tape measure	2	2.7
Clock face	5	6.7
Hammer	2	6.7
Puppets	3	2.7
Tooth brush	2	4.1
Jack plane	2	2.7
TOTAL	74	100.00

Note: Respondents indicated more than one resource.

Information in this table reveals that majority (13.5%) of the teachers used flash cards while alphabet puzzle and picture book were least used at (1.4%). Number cards and

charts constituted a relatively high percentage of users at (12.2%) and (9.5%) respectively.

The study was also interested in finding out from the teacher's point of view, the reasons they had for using the instructional resources. This was a multiple response item, a frequency count was made and the response pattern is given in table 4.6.

Table 4.6 Reasons for the use of instructional material listed. (n=26)

Reasons	n	%
Helps to explain and illustrate concepts	08	23.5
Enable more effective teaching	13	38.3
Availability of material	03	8.8
Interest level of the learner	10	29.4
Total	34	100.00

Note: Respondents indicated more than one response.

Majority (38.3%) of the respondents, were of the opinion that effective teaching was the main reason for use of the instructional resource while (23.5%) indicated illustration of concepts as the criteria for using the resources. Interest level of the learners was considered by (29.4%) of the respondents and those who thought they could only use the resources when and if they were available had the least of percentage (8.8%).

The study also sought to find out the problems if any teachers faced when using instructional resources. The results are shown in the table 4.7.

Table 4.7 Problems faced by teachers when using instructional resources
(n = 26)

Problems experienced	n	%
Inadequacy of resources	14	43.7
Are Time consuming	8	25.0
Require close supervision	4	12.5
Limited training	6	18.8
Total	32	100.00

Note: Respondents indicated more than one response.

From the responses, (43.7%) of the respondents indicated inadequacy of resources as a major problem while (12.5%) said that close supervision was a problem. Others mentioned limited training (18.8%) and amount of time required to use the resources as the problem. Inadequacy of resources was a major problem as shown by the data.

The study also sought to establish the community resources teachers used to teach learners with mental retardation. Table 4.8 shows the findings.

Table 4.8 Community Resources utilized in the Instruction of learners (n= 26)

Community resources	n	%
Agricultural Society of Kenya (ASK)	3	10.32
Guest speaker	12	34.5
Shopping mall	7	24.1
Community farms	5	17.2
Public function/cultural events	2	6.9
Total	29	100.00

Note: Respondents indicated more than one response.

According to Table 4.8 the highest number (34.5%) of respondents indicated they used guest speaker as community resource in the instruction of learners. Public functions /cultural events had the lowest percentage (6.9%) of the respondent indicating their use. The other community resources mentioned by the respondents included Shopping mall, community farms and Agricultural Society of Kenya (ASK) shows.

Teachers were also asked to state the problems they experienced in utilizing community resources. The findings are presented in Table 4.9.

Table 4.9: Problems experienced in using Community Resources (n= 26)

Problems Experienced	n	%
Negative attitude by community members	19	55.9
Behavior management problem	8	22.5
Limited time	5	14.7
Inadequate funding	2	5.9
Total	34	100.00

Note: Respondents indicated more than one problem.

The responses were summarized as shown in Table 4.9. Fifty five point nine percent (55.9%) of the respondents regarded negative attitudes as a problem while only (5.9%) indicated inadequate funding. Behaviour management problem and limited time were the other problems indicated by the respondents. From this data it can be observed that the use of community resources is not effective due to members of the community's negative attitude towards the learners.

The study also sought to find out from the teachers the solution they had to address the problems. Table 4.10 below shows the responses.

Table 4.10 Suggested Solutions to the Problems (n = 26).

Suggested Solutions	n	%
Awareness raising campaigns	18	53.0
Relevant/Appropriate training for teachers	5	14.7
Schools should have adequate resources	7	20.6
Parents of learners with SNE to be volunteers	5	14.7
Total	34	100.00

Note: Respondents gave more than one solution.

Table 4.10 indicates the opinion of the respondents on the solutions to the problems associated with the use of community instructional resources. The highest percentage of (53.0%) of the respondents were of the opinion that awareness raising campaign would be the solution while (14.7%) believed that schools on their own should have adequate instructional resources. Relevant and appropriate training for teachers and parents of learners with special education needs to be volunteers were solutions suggested by (20.6%) and (14.7%) of the respondents respectively.

4.3 Teachers opinion on the importance and suitability of resources

The second research question focused on the opinion of teachers on the importance and suitability of resources for the instruction of learners with mental retardation. The respondents were asked to rate the given statements with five possible answers on Likert

Scale e.g. Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D) and Strongly Disagree (SD).

They were expected to tick any of these that closely approximated their opinion regarding the statements.

Statistically, opinions of the respondents were computed by deriving percentages from each statement about their view as regards the instructional resources. Teachers were asked to respond to the statement “use of varieties of instructional resources enrich lessons for learners with mental retardation.” The response patterns of this item is presented in Table 4.11 below.

Table 4.11 Teachers responses on whether or not use of instructional resources enrich lessons (n= 26).

Response	n	%
Strongly Agree	19	73.1
Agree	2	7.7
Undecided	2	7.7
Disagree	2	7.7
Strongly Disagree	1	3.8
Total	26	100.00

The results in Table 4.11 show the opinion of respondents as regards the statement on the use of instructional resources and whether they enrich lessons for learners with mental retardation. Majority (73.1%) strongly agreed with the statement that it is important to use instructional resources and that they should be suitable for the learners. Respondents that agreed were undecided and disagreed with the statement constituted (7.7%) respectively, while (3.8%) strongly disagreed. The high percentage of respondent who strongly agreed with the statement could be because all the teachers who took part in the study were trained in Special Needs Education hence the awareness of importance of use of resources.

Teacher's responses when asked if they frequently supported their lessons with the use of variety of instructional resources. The responses are shown in Table 4.12.

Table 4.12. Teachers' responses regarding whether they supported their lessons with the use of varieties of instructional resources. (n= 26)

Response	n	%
Strongly Agree	9	34.6
Agree	10	38.5
Undecided	3	11.5
Disagree	2	7.7
Strongly Disagree	2	7.7
Total	26	100.00

Table 4.12 summarizes the opinion of the respondents on whether they use variety of instructional resources. The highest percentage (38.5%) of the respondents indicated that they agreed with the statement while (7.7%) disagreed or strongly disagreed with the statement respectively. The proportion that strongly agreed with the statement was comparably large (34.6%). This probably shows that majority of teachers were aware of the importance of supporting their lessons with the use of varieties of instructional resources.

Teachers' views were solicited as regards the statement "I always make use of community resources when teaching topics like Shopping, Purchasing and other topics in which they are necessary." Table 4.13 shows their responses.

**Table 4.13 Responses of teachers regarding whether they use community resources
(n=26)**

Response	n	%
Strongly Agree	9	34.6
Agree	9	34.6
Undecided	-	-
Disagree	4	15.4
Strongly Disagree	4	15.4
Total	26	100.00

Majority (69.2%) of the respondents strongly agreed and agreed with the statement above. A further (30.8%) disagreed and strongly disagreed with the statement while none was undecided. No respondent was uncertain on what to say about the statement. The findings indicate that teachers recognize the importance of community resources in the instruction of learners with mental retardation.

Table 4.14 presents the teacher's responses when their opinion was sought regarding the schools inability to acquire necessary instructional resources because of financial constraints.

Table 4.14: Teachers views on whether inability to acquire instructional resources was due to financial constraints. (n= 26)

Response	n	%
Strongly Agree	9	34.6
Agree	5	19.2
Undecided	-	-
Disagree	9	34.6
Strongly Disagree	3	11.5
Total	26	100.00

Teachers appeared not to agree on the correct position as regards the statement as shown in table 4.14. Those that strongly agreed and those who disagreed with the statement were (34.6%) respectively. A small percentage (11.5%) of the respondents strongly agreed with the statement. However a comparatively high percentage (19.2%) agreed with the statement that many schools are unable to acquire instructional resources due to financial constraints. Data from this study appears to indicate that there was no agreement on whether inability to acquire resource was due to financial constraints.

Respondents were asked if heavy teaching load makes it difficult for them to organize and use varieties of instructional resources. Their responses are reflected in Table 4.15 below.

Table 4.15: Teachers views on whether teaching load makes a difficult to instructional resources (n=26).

Response	n	%
Strongly Agree	5	19.2
Agree	13	50
Undecided	2	7.7
Disagree	6	23.1
Strongly Disagree	-	-
Total	26	100.00

The highest percentage (50%) of the respondents agreed with the statement on heavy teaching load. A low percentage of (7.7%) were undecided while (19.2 %) and (23.1%) strongly agreed and disagreed respectively with the statement. The findings show that heavy teaching load is viewed as contributing to difficulties in the use of instructional resources.

Teachers were asked to respond to the statement “student should be exposed to the types of learning in which they participate actively through manipulation of variety of instructional resources.” Table 4.16 shows their responses.

Table 4.16. Opinion of teachers on whether students should be exposed to variety of instructional resources (n = 26).

Response	n	%
Strongly Agree	21	80.8
Agree	2	7.7
Undecided	-	-
Disagree	3	11.5
Strongly Disagree	-	-
Total	26	100.00

According to Table 4.16, in the category of those who strongly agreed with the statement that students should be exposed to learning in which they participate actively through the use of instructional resources was (80.8%) while (7.7%) agreed with the statement. None of the respondents was undecided or strongly disagreed with the statement. Majority of the respondents by agreeing with the statement could be confirming that it is important to expose learners to a variety of instructional resources.

The study sought to find out teachers opinion on the statement “use of instructional resources makes no difference in learning of persons with mental retardation.” The table below shows their responses.

Table 4.17. The opinion of teachers on whether the use of instructional resources makes no difference in learning for persons with mental retardation. (n = 26).

Response	n	%
Strongly Agree	2	7.7
Agree	5	19.2
Undecided	-	-
Disagree	-	-
Strongly Disagree	19	73.1
Total	26	100.00

The highest percentage of (73.1%) strongly disagreed while (7.7%) Strongly agreed with the above statement. None of the respondents was undecided about the statement or disagreed with it while (19.2%) agreed with the statement. Information in this table reveals that teachers believed use of instructional resources is crucial in the teaching of persons with mental retardation.

In response to the statement “I am not able to completely make use of instructional resources to teach learners with mental retardation because my training did not prepare me well enough for their use.” Table 4.18 below presents teachers view.

Table 4.18. Inability of teachers to completely make use of instructional resources was due to insufficient training (n = 26).

Response	n	%
Strongly Agree	2	7.7
Agree	2	7.7
Undecided	6	23.1
Disagree	-	-
Strongly Disagree	16	61.5
Total	26	100.00

Their responses indicate that majority (61.5%) of them strongly disagreed with the statement that their inability to competently make use of instructional resources was due to insufficient training, (23.1%) were undecided while those who strongly agreed and disagreed with the statement were (7.7%) respectively. This may have been so because all the teachers were trained and therefore thought they were competent.

When asked to respond to the statement “I put more emphasis on the use of chalkboard when teaching learners with mental retardation.” Table 4.19 shows the frequency and percentage distribution of their responses.

Table 4.19: Teachers views on whether they put emphasis on the use of chalkboard

(n = 26)

Response	n	%
Strongly Agree	2	7.7
Agree	3	11.5
Undecided	-	-
Disagree	9	34.6
Strongly Disagree	12	46.2
Total	26	100.00

Majority (46.2%) of the respondents expressed the opinion that they strongly disagreed with the statement on the use of chalkboard while (7.7%) strongly agreed. None of the respondents was undecided about the statement. Teachers appeared to acknowledge

through their responses the practical approach used in teaching learners with mental retardation.

In response to the statement regarding the use of instructional resources and whether without them the learners would be able to grasp concepts, teacher's opinion are summarized in Table 4.20.

Table 4.20 Teachers responses on whether without instructional resources learners will be able to grasp concepts (n=26)

Response	n	%
Strongly Agree	18	69.2
Agree	5	19.2
Undecided	-	-
Disagree	3	11.5
Strongly Disagree	-	-
Total	26	100.00

A high percentage of the respondents (88.4%) indicated that they strongly agreed and agreed with the statement. Only (11.5%) disagreed with the statement. None of the respondents expressed opinion to suggest strong disagreement with or was undecided about the statement. Information in this table reveal that majority of teachers believed it is necessary to use instructional resources to teach learners with mental retardation.

Teachers were asked to give opinion on whether the school administration was supportive towards acquisition of instructional resources. Table 4.21 shows the response.

Table 4.21: School Administration was supportive towards acquisition of Instructional Resources (n=26)

Response	n	%
Strongly Agree	3	11.5
Agree	10	38.5
Undecided	-	-
Disagree	-	-
Strongly Disagree	13	50.0
Total	26	100.00

Majority (50%) strongly disagreed with the statement that school administration was supportive towards acquisition of instructional resources while (11.5%) strongly agreed with the statement. None of the respondents indicated disagreement with the statement or was undecided. The group that expressed no opinion could be signaling lack of agreement on whether or not the school administration was supportive towards acquisition of instructional resources.

The Table 4.22 shows responses of teachers when asked to give opinion on whether or not they feel competent when using instructional resources to teach learners with mental retardation.

Table 4.22: Teacher views on whether they were competent when using instructional resources for learners with mental retardation (n=26)

Response	n	%
Strongly Agree	20	76.9
Agree	4	15.4
Undecided	-	-
Disagree	2	7.7
Strongly Disagree	-	-
Total	26	100.00

Table 4.22 shows opinion of respondents as regards the competent use of instructional resources. Majority (76.9%) of the respondents strongly agreed with the statement while (15.4%) agreed and (7.7%) disagreed with the statement. Strong disagreement or being undecided about the statement was not expressed by any of the respondents. The respondents who disagreed with the statement though a small number could be suggesting that they were not competent enough to effectively use instructional resources to teach learners with mental retardation.

4.4 Adequacy of the Instructional Resources

The third research question focused on the adequacy of instructional resource for learners with mental retardation. A list of instructional resources that are commonly used to teach learners with mental retardation was prepared by the researcher and the adequacy/inadequacy established by carrying out a spot check in the school and through a checklist given to classroom teachers to indicate the resources they considered available, adequate or inadequate and those that were not available.

The study sought to establish the opinion of teachers in regard to adequacy and/ or inadequacy of visual materials. The results are shown in Table 4.23.

Table 4.23: Visual materials and teachers responses regarding their adequacy or Inadequacy and / or unavailability (n= 26)

Visual Materials	Available				Not Available	
	Adequate		Inadequate		n	%
	n	%	n	%	n	%
Shape Board	07	26.8	16	61.6	03	11.5
Flannel Board	04	5.4	08	30.8	14	53.8
Plasticine	11	42.3	09	34.6	06	23.1
Peg Board	02	7.7	17	65.4	07	26.9
Simple Abacus	07	26.9	13	50.0	06	23.1
Communication Board	-	-	07	26.9	19	73.1
Corner Shop	10	38.5	02	7.7	14	53.8
Beam Balance	04	15.4	05	19.2	17	65.4
Clock Face	07	26.8	12	46.2	07	26.9
Coloured Objects	07	26.8	14	53.8	05	19.2
Puppets	02	7.7	05	19.2	19	73.1
Weighing Scale	-	-	07	26.9	19	73.1
Total		234.3		442.3		523.0
Mean		19.5		36.9		43.6

According to Table (4.23) an average of (43.6%) of the respondents indicated that the listed visual resources were not available. A comparatively high percentage of (26.9%) of the respondents indicated weighing scales and communication board were inadequate while the highest percentage of (73.1%) expressed the opinion that they were not available. The findings demonstrate that almost basic instructional resources were either inadequate or not available in Special Schools for the mentally retarded in the province.

Table 4.24 shows the opinion of teachers in regard to adequacy and or inadequacy of graphic materials.

Table 4.24 Opinions of the respondents as regards adequacy and /or inadequacy of Graphic Materials (n = 26).

Graphic Materials	Available				Not Available	
	Adequate		Inadequate		n	%
	n	%	n	%		
Charts	7	26.9	17	65.4	2	7.7
Picture Boards	4	15.4	7	26.9	15	57.7
Picture cut outs	4	15.4	16	61.5	6	23.1
Number cards	6	23.1	14	53.8	6	23.1
Letter cards	5	19.2	8	30.8	7	26.9
Tracing paper	7	26.9	13	50.0	11	42.3
Name cards	5	19.2	12	46.1	8	30.8
Puzzles	4	15.4	14	53.8	10	38.5
Machine card	4	15.4	16	61.5	8	30.8
Cutting from mag	3	11.5	16	61.5	7	26.9
Sub table	-	-	3	11.5	23	88.5
Word Bank	7	26.9	14	53.8	5	19.2
Picture Book	5	19.2	14	53.8	7	26.9
Reading board	3	11.5	14	53.8	9	34.6
Stacking Toys	3	11.5	14	53.8	11	42.3
Cartoon books	5	19.2	14	53.8	7	26.9
Total		276.7		776.4		546.2
Mean		17.3		48.5		34.1

Charts and picture boards were indicated by the majority of teachers (65.4%) as inadequate while substitution table was not available according to (88.5%) of the respondents. On average only a small percentage (17.3%) of the respondents said that the

graphic materials were available and adequate, while (34.1%) were of the view that they were not available.

Table 4.25 shows how teachers responded to the question on adequacy and /or inadequacy of equipment and facilitates for learners with mental retardation. Responses of the teachers are shown in the table below.

Table 4.25 Opinions of the respondents regarding adequacy and /or inadequacy of equipment / facilities.

Equipment /facilities	Available				Not Available	
	Adequate		Inadequate		n	%
	n	%	n	%		
Ironing Surfaces	04	15.4	16	61.5	06	23.1
Cutting out tables	03	11.5	13	50.0	10	38.5
Dress making Pins	04	15.4	14	53.8	08	30.8
Tracing wires	03	11.5	13	50.0	10	38.5
Mixing bowl	-	3.8	12	46.1	13	50.0
Chopping Board	04	15.4	09	34.6	13	50.0
Mincer	-	3.8	06	23.1	18	69.2
Jack plane	03	11.5	16	61.5	07	26.9
Cramp	03	11.5	15	57.7	08	30.8
Hammer	06	23.1	13	50.0	05	19.2
Try Square	03	11.5	16	61.5	07	26.9
Pattas	02	7.7	16	61.5	07	26.9
Pincer	02	7.7	17	65.4	07	26.9
Bench vice	01	3.8	15	57.7	11	42.8
Tape measure	06	23.1	12	46.2	08	30.8
Total		176.7		780.6		530.8
Mean		11.8		52.0		35.4

According to the respondents (52.0%), the highest average indicated that the resources were inadequate while a small percentage (11.8%) were of the opinion that they were available and adequate. The respondents that said the resources were adequate could be indicating conflicting messages about their opinion. However they were few.

An item in the questionnaire sought to find out from teachers their opinion on the adequacy and /or inadequacy of audio-visual resources. The response patterns of this item are presented in table 4.26.

Table 4.26. Opinions of respondents regarding adequacy/inadequacy of Audio-Visual materials (n=26)

Audio -Visual Materials	Available				Not Available	
	Adequate		Inadequate		n	%
	n	%	n	%		
Television (TV)	-	-	9	34.6	17	65.4
Tape recorder	-	-	-	-	26	100.00
Computer	-	-	-	-	26	100.0
Films Projectors	-	-	-	-	26	100.0
Radio	-	-	7	26.9	19	73.1
Slide Projector	-	-	-	-	26	100.0
Overhead Projector	-	-	-	-	26	100.0
Total				61.5		638.5
Mean				8.8		91.2

The highest average of (91.2%) considered the Audio-visual materials as not available while (8.8%) indicated they were available but inadequate. According to the respondents film projectors, slide projectors and overhead projectors and computers were not available at all in the schools.

One respondent during the interview commented, “*The government needs to increase funding for schools serving learners with Special Needs in Education. Most of them learn by doing and therefore should be given opportunity to handle and manipulate objects hence increasing their understanding.*”

4.5 Acquisition of Instructional Resources

The fourth research question sought to establish how teachers acquired instructional resources and whether or not they were able to improvise some of them. Teachers’ responses are summarized in the table 4.27.

Table 4.27. Sources of information about Instructional Resources (n=26)

Sources	n	%
Ministry of Education circulars	09	23.1
K.I.E media catalogue	17	43.6
Sales representatives	03	7.7
Newspaper	06	15.4
Bookshop	03	7.7
Radio	01	2.5
Total	39	100.0

Note: Respondents indicated more than one resource

According to the respondents a high percentage of (43.6%) indicated that they learnt about the resources from the K.I.E media catalogue, while (23.1%) got information from

the Ministry of Education circulars. Sales representatives and bookshops as sources of information accounted for (7.7%) respectively, while (2.5%) of the respondents had radio as their source of information.

As far as the sources from which instructional resources were obtained was concerned the table 4.28 shows the findings.

Table 4.28. Sources from which Instructional resources were obtained (n=26)

Sources	n	%
Ministry of Education supplies through FPE	12	27.3
Donations	10	22.7
Improvisation	10	22.7
School buys	11	25.0
Borrowed	01	2.3
Total	44	100.0

Note. Respondents indicated more than one source

The highest percentage of (27.3%) indicated that Ministry of Education supplies them with instructional resources while only (2.3%) of the respondents showed that they obtained the sources through borrowing. Donations and improvisations accounted for (22.7%) respectively.

The views of teachers on the kind of problems they encounter in acquiring instructional resources are shown in the table below.

Table 4.29. Problems encountered in acquiring instructional resources (n=26)

Problems	n	%
Teachers negative attitude	15	38.5
Financial constraints	14	35.9
Lack of sufficient training	10	25.6
Total	39	100.0

Note: Respondents indicated more than one source.

In the category of teachers negative attitude the highest percentage of (38.5%) of the respondents indicated that the teachers negative attitude was a problem while (35.9%) were of the opinion that financial constraints was the problem. A comparably large percentage of (25.6%) of the respondents had lack of sufficient training as a major challenge. This appears to contradict the earlier assertion of the respondents that they feel competent in the use of instructional resources.

Teachers were asked through an open-ended question to suggest solutions to the problem of resources acquisition. Table 4.30 shows their responses.

Table 4.30. Suggested solutions to acquisition problems (n=26)

Suggested solution	n	%
Increased funding	16	44.5
Appropriate training	12	33.3
Adequate staffing	3	8.3
Equipped workshop	5	13.9
Total	36	100.0

Note. Respondents gave more than one solution

According to the results in table 4.30 increased funding as a solution had the highest percentage of (44.5%) and adequate staffing attracted the lowest percentage (8.3 %). (33.3%) of the respondents were of the opinion that appropriate training of teachers would help solve the problem while (13.9%) expressed the opinion that equipped workshops could be considered as a solution.

The study attempted to establish if teachers improvised instructional resources and the results in Table 4.31 show their responses.

Table 4.31. Improvisation of instructional resources for teaching learners with mental retardation (n=26)

The respondents through an open-ended question in the questionnaire were asked to list the instructional resources they improvised for use in class. The responses were summarized and organized as shown in Table 4.31.

Improvised resources	n	%
Simple Abacus	12	18.8
Flash cards	13	20.3
Matching spared	05	7.8
Lacing board	09	14.1
Buttoning board	09	14.1
Soap dish	03	4.7
Peg board	06	9.4
Alphabet charts	07	10.9
Total	64	100.0

Note. Respondents indicated more than one improvised resource.

The highest percentage (20.3%) of the respondents indicated they improvised flash cards while (18.8%) improvised simple abacus. Lacing board and buttoning board had (14.1%) of the respondents indicating having improvised them. The lowest percentage (4.7%)

showed they improvised soap dish. Alphabet chart and pegboard were improvised by (10.9%) and (9.4%) of the respondents respectively.

The table below shows problems faced in the improvisation of instructional resources for learners with mental retardation.

Table 4.32. Problems faced in the improvisation of instructional resources (n=26)

Table 4.32 Summarizes the opinion of the respondents regarding problems faced in improvising instructional resources for learners with mental retardation.

Problems	n	%
Lack of funds	04	13.8
Lack of time	10	34.5
Learners negative attitude	08	27.6
Limited skills	07	24.1
Total	29	100.0

Note: respondents gave more than one problem.

Majority (34.5%) of the respondents indicated that lack of time was a problem faced in improvisation. This was followed by learners negative attitude which had (27.6%) and (24.1%) of the respondents expressed the opinion that limited skills was the problem. Lack of funds as a problem was suggested by (13.8%) of the respondents.

An item in the questionnaire sought to find out from teachers solutions to problems they experience in improvisation of instructional resources. Responses are presented in the table below.

Table 4.33. Suggestions given to deal with improvisation problems (n=26)

Through an open-ended question in the questionnaire, the respondents were asked to give suggested solutions to problems cited in Table 4.32.

Suggested solution	n	%
Increased school funding	12	35.3
MOE should supply the resources	9	26.5
Material production course for teachers	8	23.5
Availability of equipped workshops	5	14.7
Total	34	100.0

Note. Respondents gave more than one suggestion.

The responses were summarized as shown in table 4.33. Increased school funding had (35.3%) of the respondents expressing opinion it could solve the problem, while (26.5%) indicated that the Ministry of Education should supply schools with the resources. Materials production course for teachers and availability of equipped workshops were opinions expressed by (23.5%) and (14.7%) of the respondents respectively.

4.6 How Teachers Use Instructional Resources

The last research question was to determine how teachers used instructional resources in the teaching of learners with mental retardation. The researcher carried out observation in a classroom situation and the results are summarized in Table 4.34.

Table 4.34 Classroom observations regarding the use of instructional resources
(n= 26)

Activity	Responses			
	Yes		NO	
	n	%	n	%
• Are the instructional procedures for the lesson clearly specified?	16	61.5	10	38.5
• Does the instruction resource provide for a maximum amount of direct teacher instruction on the skills concept presented?	08	30.8	18	69.2
• Does the direct teacher instruction provide for active student involvement and response?	09	34.6	17	65.4
• When using verbal instruction does the instruction proceed in a clear logical manner?	14	53.8	12	46.2
• Does the resource provide teacher modeling and demonstration when appropriate to the skills and concept being taught?	05	19.2	21	80.8
• Is the instructional resource designed to motivate and appeal to students?	12	46.2	14	53.8
• Are teacher instruction when using the resource clear, complete and precise?	11	42.3	15	57.7
• Are instructional grouping strategies provide for appropriate use of the resource?	06	23.1	20	76.9
Total		311.5		488.5
Average		38.9		61.1

An average of (61.1%) of the respondents displayed limited ability in the use of instructional resources while 38.9 showed some ability. In addressing the question “Are instructional procedures for the lesson clearly specified?” (61.5%) of the respondents had

clearly defined lesson procedures, while (38.52%) experienced problems. “Does the resource provide for teacher modeling and demonstration when appropriate to the skills and concept being taught?” (80.8%) of the respondents did not give learners opportunity to handle the resource in a way that would help clarification of the concept being taught. (76.9%) had instructional grouping strategies that did not provide for appropriate use of the resources. Use of simple and clear language when explaining the use of instructional resource was demonstrated by (42.3%) of the respondents, while (57.7%) had recognized difficulties.

In regard to the question “Is instructional resource designed to motivate and appeal to the learners?” (53.8%) of the respondents presented instructional resources that were designed to motivate and appeal to learners while (46.2%) appeared not to have carefully visualized the use of the resources before their actual presentation. According to the question “Does the direct teacher instruction provide for active student involvement and response?” (65.4%) of the respondents did not uphold the principle of guiding the learners to respond actively to the use of resources so that they could derive maximum benefit in learning.

CHAPTER FIVE

DISCUSSION, SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.

5.0 Introduction

This chapter presents discussions of the findings of the study, a summary of the thesis, conclusion and recommendations arrived at based on the findings.

5.1 Discussions of Findings

The discussion of findings of this research is centered on the research questions, which guided the study. The findings are discussed, interpreted and explained with regard to availability, adequacy and utilization of instructional resources.

5.1.1 Description of respondents

The study sample consisted of 28 teachers and out of this complete data instruments were received from 26 respondents giving a return rate of (92.9%). About (61.5%) of the respondents were females and within the age bracket of 30-40. Their numbers were also the highest in both males and females as regards the numbers in the age bracket. Professional and academic qualifications show that (57.7%) and (23.1%) of the teachers had diploma in Special Needs Education and Approved Teachers Status (ATS) trained in Special Needs Education respectively while (19.2%) had Bachelor of Education degree in Special Needs Education. A comparably high percentage of (30.8%) of the respondents had teaching experience in the schools of between 5-9 years, while (19.2%) had experience of less than 5 years.

5.1.2 Types of instructional resources commonly used

Graphic materials were the most commonly used resources by teachers in the instruction of learners. This is consistent with the view of (Herward 2000) that learners with mental retardation require numerous physical and visual prompt to redirect their attention and encourage their participation in familiar activities. However, the dominant use of this type of material implies that teachers only went for what they believed was readily available and not much thought was given to the use of varieties of resources.

Revelations by the study findings that negative attitude was a major problem confronting teachers in their attempt to use community resources need to be addressed. Teachers should select appropriate resources that are from the culture of the learners so as not to cause conflict. Community resources are in most cases readily available and therefore their access should not be hindered in any way.

5.1.3 Teachers opinion on the importance and suitability of instructional resources

The findings of the study in response to opinions of teachers on the importance and suitability of resources agreed with the statement that use of varieties of resources enrich lessons for learners with mental retardation. This conform to previous study by Penny (2003) who emphasized that instruction resources enable children to gain a sense of pride in their own choices and difference. It also supports Herward (2000) who in his study established that various types of instructional resources could be useful and developmentally appropriate for a wide range of abilities for learners with mental

retardation. The purpose of using instructional resources is significant according to these findings in the sense that they increase the learner's perception through effective communication and therefore increase efficiency in teaching.

Many teachers as shown by the study findings confirm the fact that they support their lessons with the use of instructional resources. This further explains the fact that instructional resources are crucial in the teaching of learners with mental retardation. It is also a view shared by Meece (2001) that instructional resources enable learners with mental retardation to be an attentive audience, as well as help them to develop more elaborate socio-dramatic play. Further still it is acknowledged that instructional resources increase the learners perception by appealing to many senses, develop the learners interest and provide a variety of learning experience. The respondents recognized that the resources develop continuity and integration of learning as well as provide a basis for the improvement of classroom environment through displays.

Most teachers (69.2%) were aware of the importance of the use of community resources. This agrees with Bowder and Snell (2000) who assert that students with mental retardation learn more efficiently and retain more if skill instruction occurs in a natural setting. It is recognized that community resources present to the learner a direct learning experience, and enable the learner use of sense as appropriate. The use of human resources in learning for example help both the teachers and the learners to enhance learning by participating and contributing to meet the learning needs of the learner.

Financial constraints as a reason for the school's inability to acquire resources were cited by most of the teachers. Acquisition and use of Audio-visual devices for instance, was most affected by the problem of the high cost. On the other hand the devices are very helpful to a teacher as they help to clarify, establish and correlate accurate concepts. If well used these materials make learning more concrete, interesting meaningful and lively.

The study found out that majority of teachers of learners with mental retardation had heavy teaching load that was one of the reasons that interfered with their organization and use of instructional resources. This suggests that most of the teachers in Special Schools for learners with mental retardation are overworked and may not have sufficient time to organize and use instructional resources. Teachers must do more than just manage their instructional resources and time wisely. They must assume an active role in directing the learning of all students. If many of them are overworked their effectiveness in instruction would be greatly hampered. Proper coverage of what is to be taught learners with mental retardation require giving them exposure to a lot of practical activities which would use teaching and learning resources and teachers involvement.

Majority (80.8%) of teachers acknowledged that learners with mental retardation should be exposed to varieties of instructional resources. Lewis (1991) concurs that opportunities for learning are enhanced if the relevant resources are clearly organized and accessible to learners. Learners with mental retardation often benefit from a variety of instructional

resources as they make learning tasks straight forward and concrete rather than highly abstract. The ability to profit from experience and to generalize is poor for individuals who are retarded. It therefore requires more time and variety of teaching and learning resources for them to form a learning set – a systematic method of solving problems.

In teaching learners with mental retardation one should always be concrete, direct and repetitive. The study findings established that according to majority (73.1%) of teachers use of instructional resources is critical in the learning of persons with mental retardation. This supports Drew (1984) who found out that the more meaningful and concrete the material the more apt the retarded child is to learn. In teaching how to make a bed, for instance, one should give explicit instructions using actual bed and have the learner practice with the kind of bed he or she will be expected to make. The study also found that a good number of teachers believed they were competent in the use of instructional resources. The researcher attributed this to the fact that all teachers involved in the study were trained in Special Needs Education. Majority of the teachers had a diploma level training in Special Needs Education while most of their colleagues in primary schools had certificate only in general education.

Although most of the teachers submitted that their training had prepared them adequately in the use of instructional resources, many of them had difficulties arranging a carefully sequenced set of activities to help the child slowly but surely, master the new skills. If instructional resources are available and competently used there would be few

ambiguities and the learner would be able to understand exactly what is to be learned. The respondents were also aware according to the findings that emphasis should not be placed on the chalkboard alone when teaching learners with mental retardation. This finding seems to confirm that majority of resources required by such learners can be selected from the general classroom resources and not the chalkboard alone.

There was agreement among teachers in supporting the position that without use of instructional resources learners with mental retardation would not be able to grasp concepts. This conforms to findings by Drew (1984) who posited that learners with mental retardation are known to be less able to grasp abstract concept as opposed to concrete concepts when compared with individual of normal intelligence. According to the findings of the study there was an indication that about a half of the teachers believed the school administration could play a greater role in supporting acquisition of instructional resources. This position contradicts Moochi (2002) who established that there was greater involvement of school administration in the acquisition of instructional resources.

5.1.4 Adequacy of resources for instruction of learners with mental retardation

Majority of teachers according to the study indicated that visual materials were either inadequate or not available in the school. This implies that learners with mental retardation did not have sufficient resources to encourage imaginative use and stimulate

their interest. This situation is at variance with Penny (2003) who established that giving children object to handle helps them to listen and attend and enable them to remain alert. Graphic materials are used to engage learner's attention through their sense of sight in reading or looking. According to the findings almost a similar situation observed in visual resources was repeated. This point to the fact that the major problem facing instruction of learners with mental retardation in the province is inadequacy and unavailability of teaching and learning resources. Equipment and facilities as a category of instructional resources was similarly established by the study to be either inadequate or unavailable. This implies that majority of learner's with mental retardation do not have access to a wide range of resources in learning. They therefore could be using the same resources that were inadequate and with which they had already failed to learn.

The study established that audio-visual materials were not available in the schools. Not even the radio that for a very long time in Kenya has been the most available and used form of mass media. The researcher was not able to establish why this is the case and yet majority of Kenyan households own and use radio. It is evident therefore that learners do not have a chance to access resources like the computer that according to Serun and Patton (1989) can be used for drill and practice in reading and arithmetic tutorials, similarities and problem solving. Kemp (1980) cited in Oyugi and Nyaga (2002) emphasizes that audio-visual resources have the power of sounds, pictures and words which support attention and understanding of the presented information easily and deeply. Tape recorders for instance are also known to be valuable communication tools

for individuals with speech problems which is a condition found in most learners with mental retardation. Their inadequacy and or unavailability implies that the instruction of this category of learners is greatly compromised.

5.1.5 Acquisition of instructional resource and whether or not they are improvised by teachers.

The study findings according to the fourth research question, established that KIE media catalogues and Ministry of Education circulars were the main sources of information for teachers about instructional resources for learners with mental retardation. Similar results were identified by Moochi (2002) and Ogechi (1992). The significance of the two sources constituting the highest percentage could be due to the fact that both the Directorate of Quality Assurance and Standards of the Ministry of Education and the KIE release at the beginning of every year a list of instructional resources to be used by the teachers. Most teachers of learners with mental retardation it was revealed to the researcher, personally visit KIE in order to obtain the list of resources.

The findings of the study further confirmed that other sources of information on instructional resources for learners with mental retardation included newspapers, bookshops and sales representatives as well as radio. However, only a small number of respondents indicated that they get information from the mentioned sources. The study attributed this low percentage to the negative attitudes as shown in Table 4.9 and Table 4.29. The study revealed that most of the resources are supplied by the Ministry of

Education. The assertion is however unusual in the sense that since 2003 when the government of Kenya introduced Free Primary Education (FPE), the schools are allocated funds from which they purchased text books and other resources. Donations accounted for the second highest source of instructional resources. This the study attributed to the fact that most of the schools for learners with special needs have always been funded by charitable organizations.

The improvisation of resources by teachers was yet another means through which teachers acquired the instructional resources. It can be said that teachers improvised instructional resources which were either not available in the school or inadequate for learners. However they experienced challenges which most teachers believed could be addressed through increased funding to schools, as well as training teachers on material production. This, it was claimed, could help develop and increase teachers' knowledge and skills in improvisation.

5.1.6 Acquisition and use of instructional resources

The last research question of this study focused on the way teachers used instructional resource. Most teachers displayed limited ability in the use of instructional resources as revealed by the findings of the study. Familiarity with the use of instructional resources that range from pre-school materials to the modern high technology equipments is critical. Many teachers are generally not given training opportunities by training institutions or specialized agencies to train in the use of high technology resources. This

implies that majority of them do not appreciate their importance hence learning becomes inefficient and very boring to the learners.

5.2 Summary

Education of learners with mental retardation is always faced with numerous challenges and particularly due to the fact that the impairment presents itself in varied degrees. The general problems associated with such learners are their limitations to live independently and participate freely in the activities of the mainstream society. The manner of teaching these learners and more specifically the acquisition and use of instructional resources may be one of the major problems facing their education. It must be remembered that when selecting educational resources for learners with mental retardation the developmental level of individual learners is an important consideration. The purpose of this study was to analyze adequacy and utilization of instructional resources for learners with mental retardation in special schools in Nyanza province.

The research findings showed that graphic materials were the most commonly used resources by teachers. The ease with which most graphic materials can be made could have influenced this trend. What was clearly evident however was the fact that a part from their inadequacy most of the instructional resources in this category lacked three qualities of a good graphic resources, that is, being proportional, colourful and clearly labeled.

The second research question was meant to investigate the opinions of teachers on the importance of instructional resources. Whereas majority of teachers were aware of the importance of instructional resources for learners with mental retardation many (61.1%) of them were not able to effectively use the resources when observed in classroom teaching.

On the adequacy of the resources the study findings established that all the four mentioned types of instructional resources namely; visual material, graphic materials, audio-visual materials and equipment and facilities were either inadequate or not available in the schools that participated in the study. Audio-visual materials were particularly indicated by (91.2%) of the respondents, as not available. It therefore implies that learners were not given opportunity to sufficiently explore the resources and subsequently guidance to respond to them actively was limited. Learners with mental retardation for instance get an opportunity to benefit maximally when grouped appropriately according to the task.

The fourth research question sought to establish how teachers acquired instructional resources. Information about the resources was mainly from K.I.E media catalogue. However, the information lacked sufficient details. Devices meant for adaptation for learners with mental retardation should be indicated and explained. Lack of sufficient and appropriate training, negative attitudes and limited funds were noted as some of the factors that hinder acquisition and effective use of instructional resources.

Learners who are retarded need constant monitoring, and some need considerable instruction in developmental areas such as moral, social, cognitive and basic skills of concentration, attention, listening, identification, turn taking, taking instructions and general perceptual skills among others. The researcher viewed lack of appropriate training and negative attitudes as major hindrances to effective use of instructional resources. According to the study findings, majority of the teachers displayed limited capacity in the use of resources. In order to get the above information descriptive survey was used in conducting the study in the province. Target population of the study comprised of four (4) special schools for learners with mental retardation, fifty (50) teachers and 300 learners. The schools were spread throughout the province. Simple random sampling was used to select one teacher each from six classes in the school. A total of 28 teachers including head teachers from the four schools participated in the study. Completed questionnaire were received from 26 teachers and this gave a return rate of 92.9%. Statistical data from open and closed ended questions were analyzed using descriptive statistics such as frequencies, percentages and means. Data gathered through interview guide and open-ended questions in the questionnaire were thematically described.

5.3 Conclusion

- The findings of this study established that there are problems associated with negative attitudes in the acquisition and use of instructional resources. The study further revealed that most teachers (61.1%) find it difficult to make and plan for

use of instructional resources. Though not covered by the study there were noted difficulties in making good displays of educational resources in class. Most of the classes for instance, did not have tables, shelves fixed or placed at the sidewalls nor display cabinets for models. The implications for this on the education of learners with mental retardation are far reaching. Skills that involve mental abilities required in thinking, solving problems and making appropriate judgment would be difficult to acquire.

- Most teachers (73.1%) are aware of the importance of instructional resources for learners with mental retardation according to the findings. However, lack of proper planning, preparation, presentation, appropriate application and essential follow up make their use ineffective.
- There is serious lack of instructional resources especially audio-visual resources according to the results of the study. The findings established that (91.2%) of the respondents indicated they are not available in schools. This trend is partly caused by low-level awareness by the general public of the educational requirement for learners with mental retardation. Lack of finances was noted as a major set back in the acquisition of instructional resources particularly high technology resources such as computers.

5.4 Recommendations

From the findings of this study, the following recommendations are made;

- i) The ministry of education should support seminars, workshops, or in-service courses geared towards updating teacher's competence in skills related to proper utilization of instructional resources. Most teachers generally lack training in the use of especially Audio- visual resources.
- ii) Lack of finances is a major set back in the acquisition of educational resources particularly Audio- visual /high technology resources such as computers, tape recorders, projectors etc. There should be collaborative effort between the government through the Ministry of Education and organizations whose goals are to provide education such as UNICEF, UNESCO, CARE, etc in providing funds for the purchase of high technology resources for schools serving learners with mental retardation.
- iii) Social cultural bias/negative attitudes which impedes free access to community resources by learners with mental retardation should be addressed through awareness raising campaigns using print and electronic media as well as in other social gatherings.
- iv) Teacher education curriculum should emphasize the elements of educational resources as key area to be covered by teacher trainees. Instructional resources should be made part of the lesson content.
- v) Well-equipped resource centers should be established in every district in the country to serve as teacher's resource centers. Teachers for learners with mental

retardation and other categories of special needs could use such centers to update their skills in the appropriate application and use of instructional resources.

vi) Educational resources may be worthless unless they are well displayed. Many classrooms for learners with mental retardation are not adequately furnished with facilities for display, but it is important that they should have at least some displays. It is therefore recommended that attention be paid to this requirement when constructing classrooms for such learners.

Recommendations for further research:

- A similar study should be carried out in other provinces in Kenya to establish whether the study findings apply to other areas to enable generalization of the results of this study.
- A study of this kind should be carried out in other categories of special needs to establish the relationship of the findings of this study with other areas of disabilities.
- A detailed study should be carried out to investigate the attitude of teacher towards the use of instructional resources in teaching and learning of persons with mental retardation.

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APPENDIX A

Questionnaire for Head Teachers

Please answer the following questions to the best of your knowledge. Tick (✓) appropriate answers or fill in your opinion where applicable.

- 1. Name of school: -

- 2. For how long have you been the head of the school?
 - a) Below 1 year []
 - b) 1 – 2 years []
 - c) 2 – 5 years []
 - d) Above 5 years []

- 3. Do you annually have funds for the purchase of instructional resources for learners?
 - a) Yes []
 - b) No []

- 4. What is your assessment of the adequacy of instructional resources in the school?
 - a) More than adequate []
 - b) Adequate []
 - c) Inadequate []
 - d) Any other, specify.....

- 5. How do you accommodate those areas of the curriculum that can best be handled by use of community resources?.....
.....

6. In your opinion, what resources should be used in the instruction of learners with mental retardation?

.....
.....
.....

7. What problems do you encounter in acquiring instructional resources?

.....
.....

8. How in your opinion can these problems be solved?

.....
.....

9. How would you assess the ability of your teachers in the use of instructional resources for learners with mental retardation?

.....
.....

10. What do you think should be done to improve the situation?

.....
.....
.....

APPENDIX B

Teachers Questionnaire

The purpose of this questionnaire is to obtain the information on the extent to which resources are used in the teaching and learning of students with mental retardation. It is in section A and B. Please answer the questions by ticking [] in bracket or write in the space provided.

Section A

School:.....

Class:.....

1. Teachers' background information.

- a) Sex: male [] female []
- b) Age in years
- (i) Under 20 []
- (ii) 21 – 30 []
- (iii) 31 – 40 []
- (iv) Above 40 []
- c) Highest academic and professional qualification
- (i) B.Ed (Sp. Ed) []
- (ii) Dip (Sp Ed) []
- (iii) Dip in Ed []
- (iv) ATS (trained in Sp Ed) []
- (v) ATS (untrained) []
- (vi) P 1 []

(vi) Any other (specify)..... []

(d) How long have you taught this class at the present school?

0-4 years []

5 – 9 years []

10 – 14 years []

15 years and above []

2. Adequacy of instructional resources.

a) Are there recommended textbooks available for use in the instruction of learners in your class?

YES []

NO []

b) If the answer to question. 2 (a) is yes, list below the recommended text books.

.....
.....

c) What is your opinion on the adequacy of the available instructional resources for the class?

(i) Adequate []

(ii) Not adequate []

(iii) Any other (specify).....

3. Acquisition of instructional resources.

a) From what sources do you get information about instructional resources for teaching the class?

- (i) K.I.E media catalogue []
- (ii) Circulars from the ministry of education []
- (iii) Sales representatives []
- (iv) Bookshop []
- (v) Radio []
- (vi) Newspapers []
- (vii) Any other, (specify) []

b) Below are possible sources from which instructional resources can be acquired. Indicate by ticking [] in the appropriate boxes the sources from which you obtain instructional resources

- (i) School buys []
- (ii) Parents buy []
- (iii) Ministry of education supplies []
- (iv) Teacher improvises []
- (v) Donations []
- (vi) Borrowed []

Any other (specify)

c) What are the problems, if any, you encounter in acquiring instructional resources?

.....
.....
.....
.....

d) Suggest solution (s) to the problem(s) mentioned in 3 (c) above.

.....
.....
.....
.....

4. Utilization/types of instructional resources.

(a) How often do you use instructional resources when teaching the class?

(i) Every lesson []

(ii) Once a week []

(iii) Once a month []

(iv) Once a term []

(v) Any other (specify)

(b) List below the most common instructional resources you always use when teaching the class.

.....
.....
.....

(c) Give reasons for your answer in 4 (b) above.

.....
.....
.....
.....

(d) What problems if any do you face when using instructional resources to teach the class?

.....
.....
.....
.....

5. Improvisation of instructional resources.

(a) List below the instructional materials you improvise for teaching the class.

.....
.....
.....
.....

(b) Do you face any problem in preparing your own instructional materials for the class?

Yes []

No []

(c) If the answer to 5 (b) above is yes, list below the problem(s) you experience.

.....
.....
.....

(d) Suggest solutions to the problem(s) mentioned in 5 (c) above.

.....
.....
.....
.....

6. Community learning resources

(a) How often do you take the class out for field trips?

(i) Once a month []

(ii) Once a term []

(iii) Once a year []

(iv) Any other, (specify)

(b) Who finances the field trip(s) if any?

(i) The school []

(ii) The parents []

(iii) The school and parents []

(iv) Any other (specify).....

(c) Which community resources do you utilize in the instruction of the learners

.....

.....

.....

.....

(d) List below the problems you experience in using community-learning resources.

.....

.....

.....

.....

(e) Suggest solutions to the problems stated in 6 (d).

.....

.....

.....

.....

.....

.....

.....

.....

Section B

In this section, you are given a series of statements with five possible answers: Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), and Strongly Disagree (SD). You are expected to tick (✓) any of these, which closely approximate your opinion regarding each statement.

1. Use of varieties of instructional resources enrich lessons for learners with mental retardation

S A []

A []

U []

D []

S D []

2. I frequently support my lessons with the use of varieties of instructional resources.

S A []

A []

U []

D []

S D []

3. I always make use of community resources when teaching topics like shopping, purchasing, and other topics in which they are necessary.

S A []

A []

U []

D []

S D []

4. The school is unable to acquire necessary instructional resources because of financial constraints.

S A []

A []

U []

D []

S D []

5. Heavy teaching load makes it difficult for me to organize and use varieties of instructional resources

S A []

A []

U []

D []

S D []

6. Students should be exposed to the type of learning in which they participate actively through manipulation of varieties of instructional resources.

S A []

A []

U []

D []

S D []

7. Use of instructional resources makes no difference in learning of persons with mental retardation

S A []

A []

U []

D []

S D []

8. I feel competent in using instructional resources to teach learners with mental retardation.

S A []

A []

U []

D []

S D []

9. I am not able to competently make use of instructional resources to teach learners with mental retardation because my training did not prepare me well enough for their use.

S A []

A []

U []

D []

S D []

10. I put more emphasis on the use of chalkboard when teaching learners with mental retardation

S A []

A []

U []

D []

S D []

11. Without the use of instructional resources, learners with mental retardation would not be able to grasp concepts.

S A []

A []

U []

D []

S D []

12. The school administration is not supportive towards the acquisition of instructional resources.

S A []

A []

U []

D []

S D []

APPENDIX C

Basic Instruction Resources for Learners with Mental Retardation

INSTRUCTIONAL RESOURCES CHECKLIST

This instructional resources checklist is meant to obtain information on what types of instructional resources are available in the classroom for the teacher and whether or not they are adequate.

1.Audio-visual/Aural Materials	AVAILABLE		NOT AVAILABLE
	ADEQUATE	INADEQUATE	
	No %	No % 	No %
Television (T.V) Tape Recorder Computer Films projector Radio Slide Projector Overhead Projector			

2. Visual Materials/ Display	AVAILABLE		NOT AVAILABLE
	ADEQUATE	INADEQUATE	
	No %	No %	No %
Shape Board			
Flannel Board			
Plasticine			
Peg Board			
Simple Abacus			
Communi.-Board			
Corner Shop			
Beam Balance			
Clock Face			
Coloured Objects			
Puppets			
Weighing Scales			

3.GRAPHIC MATERIALS	AVAILABLE		NOT AVAILABLE	
	ADEQUATE		INADEQUATE	
	No	%	No	%
Charts				
Picture Board				
Picture cut-outs				
Number Cards				
Letter Cards				
Tracing paper				
Name cards				
Puzzles				
Matching card				
Cutting from magazines				
Sub-Table				
Word Bank				
Picture Book				
Reading Board				
Stacking Toys				
Cartoon Books				

4.Equipments/Materials/Facilities	AVAILABLE		NOT AVAILABLE
	ADEQUATE		INADEQUATE
	No	%	No
			%
Ironing Surfaces			
Cutting out Tables			
Dress making pins			
Tracing Wheel			
Mixing Bowl			
Chopping Board			
Mincer			
Jack plane			
Cramp			
Hammer			
Try Square			
Pattas			
Pincer			
Bench vice			
Tape Measure			

APPENDIX D

Lesson Observation Schedule

Lesson Observation Checklist

The purpose of this observation checklist was to obtain information on how teachers use the resources in the instruction of learners with mental retardation.

School: -----

Class: -----

Response

Activity

YES.	NO.	Instruction
		<ol style="list-style-type: none">1. Are instructional procedures for the lesson clearly specified?2. Does the instructional resource provide for a maximum amount of direct teacher instruction on the skills/concept presented?3. Does the direct teacher instruction provide for active student involvement and response?4. When using verbal instruction, does the instruction proceed in a clear logical manner?5. Does the resource provide for teacher modeling and demonstration when appropriate to the skills and concepts being taught?6. Is the instructional resource designed to motivate and appeal to students?7. Are teacher instructions when using the resource clear, complete and precise?8. Are instructional grouping strategies provide for appropriate use of the resource?

APPENDIX E

Interview Schedule for Teachers

1. In your opinion what type of resources should be used when teaching learners with mental disabilities, and what is your reason for using these resources most often?
2. Why do you think the use of instructional resources is critical in the teaching of learners with mental retardation?
3. In your opinion when should you prepare the instructional materials for your class and why?
4. What in your opinion should be done to address the problem of inadequacy of instructional resources for learners with mental retardation?

Appendix F: Research Permit

PAGE 2

PAGE 3

THIS IS TO CERTIFY THAT:

Prof./Dr./Mr./Mrs./Miss... ORAO REMI
ODERO

of (Address)... KENYATTA UNIVERSITY
P.O. BOX 43844 NAIROBI

has been permitted to conduct research in.....
SPECIAL SCHOOLS.....Location,

.....ALL.....District,

.....NYANZA.....Province,

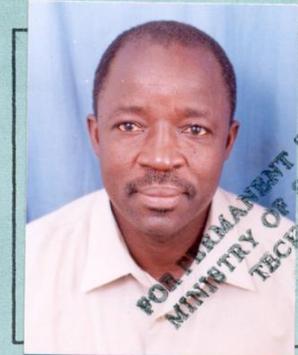
on the topic ANALYSIS OF ADEQUACY AND
UTILIZATION OF INSTRUCTIONAL RESOURCES
FOR LEARNERS WITH MENTAL RETARDATION IN
SPECIAL SCHOOLS IN NYANZA PROVINCE,
KENYA.

for a period ending 30TH AUGUST..., 2009..

Research Permit No. MOHEST 13/001/38C 6

Date of issue 2.10.08

Fee received KSHS. 500



M. O. ONDIEKI

Applicant's FOR Permanent Secretary
Signature FOR PERMANENT SECRETARY Ministry of
MINISTRY OF SCIENCE AND
TECHNOLOGY

Appendix G: Authorization



REPUBLIC OF KENYA

**MINISTRY OF HIGHER EDUCATION SCIENCE
& TECHNOLOGY**

Telegrams: "SCIENCE TEC", Nairobi
Telephone: 02-318581
E-Mail: ps@scienceandtechnology.go.ke

JOGOO HOUSE "B"
HARAMBEE AVENUE,
P.O. Box 9583-00200
NAIROBI

When Replying please quote

Ref. MOHEST 13/001/38C 618/2

Date: 6th October, 2008

Orao Remi Odera
Kenyatta University
P. O. Box 43844
NAIROBI

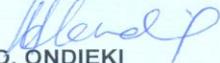
RE: RESEARCH AUTHORIZATION

Following your application for authority to undertake research on, *'Analysis of Adequacy and Utilization of institutional Resources for Learners with Mental Retardation in Special Schools in Nyanza Province, Kenya,*

I am pleased to inform you that you have been authorized to undertake research in Special Schools in Nyanza Province for a period ending 30th August, 2009

You are advised to report to the Director of Education, Nyanza Province before commencing your research.

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


M. O. ONDIEKI
FOR: PERMANENT SECRETARY

Copy to:

The Provincial Director of Education
Nyanza Province
KISUMU