IMPLEMENTATION OF PHYSICAL EDUCATION TO THE MENTALLY RETARDED:
CONSTRAINTS ENCOUNTERED BY TEACHERS IN NAIROBI

BY

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Implementation of physical education

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DECLARATION

This is my original work and it has not been presented for a degree in any other learning institution.

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Department of Physical Education
DEDICATION

This work is dedicated to my mother Salome Atsulu Okoko for the financial and moral support she provided during my pursuit of education, and to the memory of my father, the late Abishai Okoko, who has always been my source of inspiration throughout my education.
ACKNOWLEDGMENTS

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The Library staff of Kenya Institute of Education and Kenya Institute of Special Education deserve special thanks for their valuable assistance. I would also like to thank Pamela Ombech and Gorretteh Njire for their commitment to typing this work.

Lastly, I wish to thank all members of my family (especially my sister Christine) for their prayers, encouragement, support and guidance and friends who gave me valuable assistance.
ABSTRACT

This study investigated constraints teachers encountered while implementing the current Physical Education (P.E) programme to mentally retarded learners in Nairobi. This was done by examining the provision, suitability and adequacy of required resources such as: trained teachers, equipment and facilities, time allocated for a lesson, P.E. syllabus, textbooks and other relevant materials for mentally retarded learners. The respondents were also requested to offer, on basis of their experiences, suggestions on how future planning and implementation of P.E. to the mentally retarded could be improved.

The study was conducted in 20 institutions with mentally retarded learners in Nairobi. The study sample consisted of 44 teachers, 20 headteachers, one school inspector of institutions with mentally retarded learners and one tutor for P.E. at the Kenya Institute of Special Education (K.I.S.E.). Ten out of the twenty surveyed institutions, were used for observation and completion of checklist on the availability, adequacy and appropriateness of P.E. equipment and facilities.

The study was a survey utilizing questionnaires, interview schedule, observation schedule and a checklist. Data obtained from the research instruments was analysed using frequencies and percentages. Findings of the study were as follows:

(i) Majority (66.7%) of the teachers were not specially trained to handle mentally retarded learners.

(ii) Most of the teachers reported that the objectives of the approved P.E. syllabus were difficult to interpret and achieve with regard to mentally retarded learners.
The availability, suitability and maintenance of P.E. equipment and facilities were issues of concern to the teachers.

There was lack of uniformity in the duration used to teach P.E. to mentally retarded learners in various institutions. Most teachers found the standard time 30 - 35 minutes too short for teaching P.E. to mentally retarded.

Results revealed that P.E. to mentally retarded was constrained by: inadequate teaching and learning resources, negative attitude of both administrators and teachers, learners' handicapping condition and occasional bad weather.

The following recommendations were made on the strength of the findings:

a) There is need for Kenya Institute of Education (K.I.E.) to do an in-depth evaluation of the programme and come up with a suitable syllabus geared towards the need of mentally retarded learners.

b) A review should be carried out on the current curriculum for training teachers in special education especially the teachers handling mentally retarded learners.

c) The Ministry of Education and Human Resource Development should ensure that the policy regarding Education Programmes and placement of mentally retarded learners in educational institutions is reviewed and implemented to ensure appropriate placement of learners of different levels of retardation and varying ages.
d) Teachers specially trained to handle mentally retarded learners should be motivated so that their high turnover from the institutions is reduced.
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ABBREVIATIONS

A.A.M.D  American Association For Mental Deficiency.
E.F.A.  Education for All
E.M.R  Educable Mentally Retarded
G.O.K.  Government of Kenya
IQ  Intelligence Quotient
K.I.E  Kenya Institute of Education
K.I.S.E  Kenya Institute of Special Education
M.O.E.HRD  Ministry of Education Human Resource Development
P.E  Physical Education
S.P.S.S.  Statistical Package for Social Sciences
T.M.R  Trainable Mentally Retarded
UNESCO  United Nations Educational, Scientific and Cultural
Organisation
WCEFA  World Conference on Education For All
CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

In 1948 the United Nations declared education a human right. Likewise in the World Conference for Education for All (W.C.E.F.A.) held at Jomtien, the significance of Education For All (E.F.A.) as a fundamental human right and its pivotal role in the development of society were reaffirmed. The most consistent message from the delegates throughout the Jomtien Conference was equity consideration and particularly a reduction of the disparities in educational opportunities among population groups. It was further agreed at the conference that this process should begin by addressing the educational needs of the disadvantaged groups regardless of gender, economic status, geographical location, physical or intellectual differences.

In Kenya, the 1994/96 development plan emphasized that education should aim at improving the lives of all Kenyans by imparting knowledge to them so that they can be self-reliant. To achieve this objective, the plan stressed on improvement of all aspects of education including special education programmes, as one of the ways of achieving Education For All (E.F.A.) The current development plan (1997/2001) emphasises E.F.A. as one of the government's guiding philosophies for education. The development plan also emphasizes the important role of Special Education as facilitating persons with learning needs and abling them to function as productively and independently as possible in their communities. Besides the current development plan, the report of the Presidential Working Party on Education and Manpower Training for the Next Decade and Beyond (Republic of Kenya, 1988) recommended that
Special Education programmes should be an integral part of each cycle of formal education in Kenya. The report stated that the programme should cater for individuals with visual, auditory, mental, physical and multiple handicaps. It also indicates that the education for handicapped persons in Kenya should aim to provide skills and attitudes required for rehabilitation and adjustment to environment. In this regard, the Government of Kenya has established various institutions for the learners with physical, mental, visual and auditory handicapping conditions in the country. By 1990, data on these institutions per province was as shown on table 1.

Table 1. Schools for the Handicapped in Kenya, 1990

<table>
<thead>
<tr>
<th>Province</th>
<th>Visually Handicapped</th>
<th>Hearing Impaired/Deaf</th>
<th>Physically Handicapped</th>
<th>Mentally Handicapped</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coast</td>
<td>1</td>
<td>6</td>
<td>2</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>Eastern</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>North-Eastern</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Central</td>
<td>2</td>
<td>7</td>
<td>4</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>Nairobi</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td>Rift Valley</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Nyanza</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>Western</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>31</td>
<td>13</td>
<td>37</td>
<td>95</td>
</tr>
</tbody>
</table>

Source: Ministry of Education, Special Education Section, 1990.

In 1994, the mentally retarded learners in Kenya has 84 public institutions. These institutions comprised 28 special schools and 56 special units attached to regular primary schools which were distributed in the eight provinces of the country as shown on Table 2 below.
Table 2. Distribution of Schools for the Mentally Retarded Learners

<table>
<thead>
<tr>
<th>Province</th>
<th>Schools</th>
<th>Units</th>
<th>Total</th>
<th>Percentage</th>
<th>Enrolment</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nairobi</td>
<td>6</td>
<td>17</td>
<td>23</td>
<td>27.4</td>
<td>617</td>
<td>29.4</td>
</tr>
<tr>
<td>Central</td>
<td>4</td>
<td>16</td>
<td>20</td>
<td>23.4</td>
<td>184</td>
<td>8.76</td>
</tr>
<tr>
<td>Coast</td>
<td>2</td>
<td>7</td>
<td>9</td>
<td>10.7</td>
<td>283</td>
<td>13.48</td>
</tr>
<tr>
<td>Eastern</td>
<td>4</td>
<td>4</td>
<td>8</td>
<td>10.0</td>
<td>312</td>
<td>14.86</td>
</tr>
<tr>
<td>N. Eastern</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3.6</td>
<td>39</td>
<td>1.8</td>
</tr>
<tr>
<td>R. Valley</td>
<td>5</td>
<td>6</td>
<td>11</td>
<td>13.0</td>
<td>264</td>
<td>12.57</td>
</tr>
<tr>
<td>Nyanza</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4.8</td>
<td>223</td>
<td>10.6</td>
</tr>
<tr>
<td>Western</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>7.2</td>
<td>177</td>
<td>8.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>28</strong></td>
<td><strong>56</strong></td>
<td><strong>84</strong></td>
<td><strong>100.0</strong></td>
<td><strong>2099</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source: Kenya Institute of Special Education 1994

The number of institutions with mentally retarded learners on table 2 differ from that of 1990 (see table 1) because by 1994, nine institutions had been closed.

Mentally retarded learners have a sub-average intellectual functioning which exist concurrently with deficit in adaptive behaviour. According to Holland, et. al., (1994) and Ndurumo (1993) this condition manifests itself during the development period of a child. The diversity in aetiology and severity in mental retardation in these learners make them vary in handicapping conditions. Holland et. al., (1994) and Ndurumo (1993) indicate that these conditions affect the persons physical, mental, and social functioning in different ways. Despite the diversity in complications among mentally retarded learners, they need appropriate and quality education which suits their special needs.

Physical Education is one of the subjects which should be taught in all institutions with mentally retarded learners in Kenya. This is
in accordance with a Presidential Decree which made the subject mandatory in all educational institutions in Kenya (The Sunday Standard of 10th August 1980, P.5 column 1.1). As a follow up, the then Ministry of Education (M.O.E) declared P.E. compulsory in all primary, secondary and special education institutions in Kenya (Republic of Kenya, 1984). The Ministry of Education and Human Resource Development has the responsibility of ensuring that resources for implementing the programme are available in the institutions.

To effectively provide a suitable P.E programme for the mentally retarded learners, there is need for proper planning and implementation of the programme. To do so, research needs to be undertaken so as to gather data on a suitable programme. Since mentally retarded learners are different from their regular counterparts, they need a specialised P.E programme suitable for their handicapping conditions.

In Kenya, the Ministry of Education and Human Resource Development works through the Kenya Institute of Education (K.I.E), Kenya Institute of Special Education (K.I.S.E) and the Inspectorate Department to ensure smooth running of all educational programmes in public institutions with mentally retarded learners. K.I.E carries out research, prepares syllabus and other teaching and learning resources. K.I.S.E on its part offers special training to teachers who handle special learners like the mentally retarded, while the inspectorate ensures that the quality and standards of education programmes are established and maintained (Education Act. 1970 Cap 211. Laws of Kenya).

1.2 Statement of the Problem

Generally, teachers face a number of constraints when dealing with handicapped children. Similarly, teachers of P.E to mentally retarded
learners are constrained by various social, institutional, personal and policy issues which may include unsuitable curriculum, equipment and facilities and handicapping conditions among learners.

It is essential to identify the problems teachers encountered in the implementation of P.E to the mentally retarded because it is a step towards planning, implementation and evaluation of the education programme. It is also essential in the review of policy related to physical education programme for the mentally retarded. Hence the need of this study.

1.3 Purpose of the Study

The purpose of this study was to elicit information on the constraints that teachers encounter during the implementation of the current P.E. programme to mentally retarded learners and solicit suggestions for improving it.

1.4 Research Questions

The study sought to answer the following questions:-

(i) What is the teachers' opinion on suitability of the current P.E. syllabus applied to the mentally retarded learners?
(ii) Are there adequate teaching resources for effective implementation of the P.E. programme to the mentally retarded learners?
(iii) Is the time allocated for teaching P.E. to the mentally retarded learners adequate?
(iv) What is the impact of the teachers' workload and number of learners per class on their effectiveness in teaching P.E to the mentally retarded learners?
(v) What factors constrain teachers' effectiveness in the implementation of the current P.E. programme to the mentally retarded learners?
(vi) What suggestions can teachers, headteachers, tutors and inspectors offer for improvement and future planning of P.E. for mentally retarded learners?

1.5 Theoretical Framework

Introduction

The central thrust of this study was to investigate the constraints which teachers encounter when implementing P.E. to the mentally retarded learners in Nairobi. In order to achieve this, the study took an evaluation perspective, where specific variables were examined to see how they were constraining the implementation of P.E. to the mentally retarded. A valuable guide in evaluation is Franklin and Thrasher's "Introduction to Programme Evaluation". Franklin and Thrasher note that:

"There are no theories of evaluation which exists are established bodies of knowledge on evaluation. It is this knowledge with which the evaluator need to be familiar, with any supporting theoretical constructs, as well as with the programme to be evaluated" (1976:45)

Rossi and Freeman (1982) observe that evaluations are taken for a variety of reasons including: management and advice purposes; planning and policy purposes; to assessing the appropriateness of changes; to improving the delivery of interventions; testing innovative ideas on how to deal with human and community problems; supporting advocacy of one programme as opposed to another; and testing a particular social science hypothesis or a professional practice principle.
One question to ask in the course of evaluation is whether the programme being evaluated partially or fully serves the target group. Best and Kahn (1989) notes that programme evaluation focus primarily on programme effectiveness. In this regard, the current study addressed the issue of the extent to which the objectives of the P.E. programme to the mentally retarded are being achieved.

According to Kaufman and Thomas (1980), focusing on effectiveness revolves around asking and answering basic questions such as:

(i) What are the goals/objectives of the programme? (for the study, the question is: what are the objectives of P.E. to the mentally retarded learners?)

(ii) What results were intended by the programme?

(iii) What are the value and usefulness of the methods and means to achieve the results? (in this case pedagogical/instructional methods in handling mentally retarded learners).

(iv) What if anything about the programme should be changed or improved?

These are the basic questions to address in undertaking a programme evaluation. Jones (1991) says that the next step in evaluation is to establish indicators on which to evaluate the programme. For the study, these were identified as: availability of teachers and their training; the syllabus appropriateness; equipment and facilities; textbooks; time allocation for P.E. lessons and workload.

Finally, Franklin and Thrasher (1976) noted that in evaluation, the sources of data and data gathering techniques include:

(i) existing records and statistics (e.g. on number of teachers, facilitators, number of lessons per day per week, and time allocated etc.)

(ii) Competent programme implementation (in this case teachers).
(ii) the clientele (in this case the learners served by the programme).

(iii) the programme activities (actual physical education activities) and

(iv) knowledgeable individual outside the programme (these included trainers of teachers, administrators and policy makers).

This then is the framework which the study was premised and which also provided guidelines in undertaking the study.

1.6 Assumptions of the Study

The study was based on the assumptions that its findings on the constraints to the implementation of P.E. to mentally retarded, and the suggested solutions can contribute to effective planning and implementation of the programme.

1.7. Significance of the Study

Studies have not been done on teachers' experiences and constraints in the implementation of physical education programmes for mentally retarded learners in Kenya. As a result, there is little information that could be used in the planning and implementation of the physical education programme to mentally retarded learners in Kenya. Physical education is compulsory in all educational institutions in Kenya. It was therefore anticipated that the findings of the study would yield information for use by policy makers and educationists in developing policy, curriculum, teacher preparation (training), and establishment of appropriate facilities that are necessary for implementation of P.E. for mentally retarded learners in Kenya.

The study would certainly benefit the education planners and administrators, because it provides information on constraints teachers
encounter in the implementation of P.E. to the mentally retarded. This information is not only necessary for the development of an appropriate physical education curriculum for these mentally retarded learners, but also provides useful guidelines on policy matters relating to teaching of physical education to these special learners. The findings can serve as a source of reference from which future development of the P.E. programme for mentally retarded learners can be based.

Finally, the study contributes to the development of literature on education programmes for mentally retarded learners in Kenya. It is hoped that the study will sensitize other researchers and readers to the importance of availing optimum education opportunities to all members of our society, as everybody has a role to play in the development of society. It is also anticipated that this pioneer work will draw the necessary attention of the reader to the mentally retarded and possibly create more research interest in this area.

1.8 Limitations of the study

The major limitation was lack of updated data on the number of institutions for the mentally retarded in all the provinces of Kenya. The Ministry of Education and Human Resource Development also lacked up-to-date data on the number of teachers in the institutions with mentally retarded learners in Nairobi province. This was due to poor record keeping and the inconsistency in opening and closing of institutions for mentally retarded learners within the province.

1.9 Definition of terms

Adapt: To modify working activities, programmes and facilities to suit the mentally retarded learners' abilities.
Handicapping conditions: These are conditions which cannot allow an individual to display the reactions and patterns of behaviour of the normal people in the society.

Intermediate: The level of education for mentally retarded learners which comes between primary school and vocational training.

Mainstreaming: Giving the mentally retarded learners the least segregative environment during the learning and teaching process.

Normal learners: These are learners without any identified handicapping condition which can limit their participation in any type of physical or mental activity.

Physical Education: This is a subject of education which is concerned with the adjustment and development of an individual or a group through total body activities. The activities are usually of a game or play type. The adjustment and development occurs from organized instruction or direction during the practice of such total body activities.

Regular school: A school for normal learners.

Regular P.E. programme: P.E programme that is prepared for use by normal learners.

Special unit: Classes for mentally retarded learners within a regular school.
Special P.E. programme: A physical education programme for individuals with handicapping condition which cannot allow them to use the standard curriculum because it is not suitable for their needs.

Adapted P. E. programme: This is a programme which has the same objective as the regular physical education programme, but in which adjustments are made in regular offering to meet the needs and abilities of the handicapped child or learner.
CHAPTER TWO

2.0 REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter is divided into six related sub-sections, namely:

(a) Concept of mental retardation
(b) The effect of mental retardation on individuals
(c) Importance of P.E. to mentally retarded learners
(d) Planning and Implementation of Physical Education Programmes to Mentally retarded
(e) Planning and Implementation of Physical Education for Mentally retarded learners in Kenya
(f) Constraints to effective implementation of Physical Education programmes
(g) Summary and implications of Literature Review

2.2 The Concept of Mental Retardation

The term mental retardation has been defined in many ways by various people. The most commonly accepted definition is the one advocated by the American Association for Mental Deficiency (AAMD) in Ndurumo (1993), Dunn and Fait (1984), Payne, et. al., (1981), Clark and Clark (1974). The A.A.M.D. defines the mentally retarded as individuals with significantly sub-average general intellectual functioning existing concurrently with defects in adaptive behaviour, and is manifested during developmental period. Intellectual functioning is commonly determined by standardized intelligence tests that determine the Intelligence Quotient (IQ) such as the revised Wechsler Intelligence Scale and the Stanford -Binet Scale. According to Ndurumo (1993) and Dunn Fait (1984), individuals who possess
an intelligence quotient of less than 68 points in the Stanford-Binet or less than 69 points in the Wechsler scale are termed as mentally retarded.

Using the IQ tests, mentally retarded learners are classified according to their level of severity as shown in Table 3.

Table 3: Classification of Mentally Retarded Learners

<table>
<thead>
<tr>
<th>Classification</th>
<th>Intelligence Quotients Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>STANFORD-B</td>
<td>WECHSLER</td>
</tr>
<tr>
<td>Mild</td>
<td>52 - 68</td>
</tr>
<tr>
<td>Moderate</td>
<td>36 - 51</td>
</tr>
<tr>
<td>Severe</td>
<td>20 - 35</td>
</tr>
<tr>
<td>Profound</td>
<td>19 and Below</td>
</tr>
</tbody>
</table>

For the purpose of efficient educational provision, mentally retarded individuals are further classified according to their IQ scores into three levels as follows:

- Educable (EMR) 75 - 50 Points
- Trainable (TMR) 49 - 25 Points
- Custodial (CMR) 25 and below Points

Concerning the aetiology Sherrill (1981) indicates that mental retardation is caused by various factors which include: metabolic disorders in body functions, changes in the structure of chromosomes, external and internal effects on pregnant mothers and at delivery, and on babies after birth. Because of the diversity in the causes of mental retardation, its effects, severity and handicapping conditions associated with it are diverse. Therefore, a class of mentally retarded individuals has learners with a diversity in handicapping conditions. Clinical perspective indicates that most mentally retarded individuals have defects in their physical, intellectual, personality and social development. Most of them have problems with their gait, speech and language development. Their
auditory abilities and vision may also be affected. In Ndurumo (1993) and Bleck and Nage (1982) epilepsy, asthma and obesity are also common features in the mentally retarded individuals. However, Blake (1976) states that there are some who cannot be distinguished from the normal population by their physical appearance.

2.3 Effects of Mental Retardation on Individuals

2.3.1 Physical Functioning

Mental retardation may constrain an individual's physical functioning. Kirk, [in Stevens and Heber, (1964)], observed that mentally retarded children have more problems with their vision, hearing and motor co-ordination compared to average normal children. Bunker (1978) states that the moderately and profoundly retarded exhibit motor development problems. Bunker also observes that these children have clumsy movements such as walking flat-footed with arms held to the side rather than coordinating movement. They also lack control over their movement. For example, a child may run rapidly but is unable to stop or change direction. Studies cited in Payne et. al., (1977) have also shown that the mentally retarded accumulate more fat in their bodies than the average normal child. This is an indication that obesity is a common feature among the mentally retarded individuals and is likely to affect the cardio-vascular functions of the individual.

A study by Bruininks (1977) on motor proficiency compared the mild and moderately retarded to the non-retarded children in the area of running, speed, agility, balance, strength and bilateral co-ordination revealed that the performance of the mentally retarded in the mentioned areas was significantly below that of their non retarded counterparts. Ndurumo (1993) indicates that the gross motor development of mentally
2.3.2 Personality and Social Adjustment

Mentally retarded individuals have behaviour and social adjustment problems. Robinson and Robinson (1976) have observed that behavioural inadequacy is one of the criteria that can be used in detecting an individual who is mentally retarded. Behavioural inadequacy to a large extent affects the personality and social adjustment of the mentally retarded. Additionally, studies in Dunn et al., (1984) have shown that mentally retarded individuals have low frustration tolerance and short attention span. These two factors cause the individuals not only educational problems but social adjustment problems which include manifestation of temper as a result of perceiving themselves as being forced to do impossible tasks. This causes their competence to be questioned. Robinson and Robinson (1976) also agree that these individuals find very little pleasure engaging in activities that are non-rewarding. In relation to their non-retarded counterparts, McCormack (1978) states that the mentally retarded are weaker in social responsibilities.

2.3.3 Intellectual and Educational Functioning

According to Robinson and Robinson (1976), the mentally retarded individuals have a low mental age when compared to their non-retarded chronological age mates. They further explain that mildly retarded adults have a mental age of an average non-retarded child of between 8½ and 10 years. The moderate retarded adults have a mental age of an average normal child whose age ranges from 6 to 8½ years. The severely retarded adults have a mental age of between 3 and 5 years of an average normal child. The
Kirk, [in Ndurumo, 1993], states that the educable mentally retarded children are not ready to do basic writing, reading or arithmetic when they enter school at age six. These skills remain undeveloped until age eight or eleven. Therefore, skills in P.E. which do not involve literacy and numeracy could be utilized to achieve educational objectives at the ages below eleven years. Kirk, also states that by the time the educable mentally retarded complete formal schooling, their academic achievement is between the second and sixth grade level of the United States schooling system. Robinson and Robinson (1976) agree with Kirk that the educable mentally retarded can be expected to reach the third grade and some will reach the sixth grade. However, Harring and Schiefelbusch (1976), observed that purely academic achievement is in-appropriate for these children who are mentally retarded. They stressed that their programmes should emphasize social competence, occupational skills and self care. This will enable the educable mentally retarded children to acquire skills for social occupational independence before they leave school.

Considering academic abilities of the educable mentally retarded Sherrill (1981) indicate that the education curricular for non-retarded can be adapted to suit their condition. On the other hand, the trainable mentally retarded are not expected to do the same academic programmes as their non-retarded counterparts. They have IQ of between 49 and 30 points. Klein et. al., (1979) states that their programmes should thus emphasize self-skills since their potential for academic work is limited. The programme should also facilitate adjustment to their environment and their potential contribution to sheltered vocational workshops in the community or in institutions (Ndurumo, 1993). The vocational oriented programme, self management and social adjustment skills are designed to assist the
trainable mentally retarded to be independent or semi-independent. Robinson and Robinson. (1976) observed that the trainable mentally retarded have physical sensory perceptual problems. Ndurumo (1993) concurs with Haring (1976) that the trainable mentally retarded are easily recognizable among learners. A policy paper by the Kenyan Ministry of Education (1981) and Payne et. al. (1981) indicates that due to the retardation in development of trainable mentally retarded, they require education in self-contained classrooms with highly specialized programmes which emphasize self-care and pre-vocational endeavour in sheltered workshops.

Klein et. al. (1979) states that the profound or custodial retarded group has no academic potential and very minimal potential to achieve sufficient basic self-care skills. Therefore, they require nearly custodial or residential care and supervision throughout their lifetime. However, some litigative cases of 1970's in the United State of America and the declaration of education as a right for all has resulted to somewhat different views regarding the educational provision for these children. For instance, some residential institutions are initiating some formal training in the area of verbal communication, behavioural management, motor skills and personal development for the custodially retarded individuals. This is to say that instead of considering the custodially retarded as passive residential cases, efforts are being made to keep them busy, enable them to communicate their needs or take care of themselves.

Optimism concerning the learning potential of mentally retarded persons has increased throughout the twentieth century as stated by Payne et. al. (1981). Ellis [in Kauffman, et. al., 1975]. agree that we should be realistic and objective in judging the intellectual and educational achievements of the mentally retarded learners. They state that we must judge their achievement not in terms of what intellectually normal people
accomplish, but rather in terms of what the particular achievement means to the retarded individual, his or her well-being and happiness.

Tweedie and Shroyer (1982) in their summary of the play patterns of the mentally retarded state the following:

1. The mentally retarded child is not as creative or imaginative in play as his or her normal counterpart. They cannot be turned loose and be expected to use equipment properly or participate in normal activities with their chronological age-mates.

2. The mentally retarded children’s play may be slow-moving, clumsy and sedentary or extremely hyperactive. Frequently, their play patterns are random and unimaginative. Therefore they tend to follow set patterns of activity as prescribed by the play material provided.

3. If mental retardation is as a result of brain damage they exhibit hyperactivity, perseveration, poor motor control, social ineptness, overreaction to minutiae and a variety of speech difficulties. Some of them are subject to excessive and useless movements while others exhibit diminished mobility or muscular asthenian.

According to Moran and Kalkian (1977), failure of these children to keep intellectual pace with their normal peers can contribute to personal maladjustment and development of undesirable behaviour patterns. A lack of emotional stability is frequently exhibited in competitive play and in circumstances in which more is expected of them than they are capable of delivering. Such instability usually manifests itself in expression of fear and aggression. Rebellious acts and other undesirable behaviour can be similarly motivated. Occasionally the mentally retarded may use the handicap as a protective shield or as a means of obtaining sympathy to compensate for lack of social acceptance.
2.4 Importance of Physical Education to Mentally Retarded Learners

The aim of P.E. is to help all people, including the mentally retarded, to live healthy, satisfying and energetic lives. According to the American Association for Health, Physical Education and Recreation Conference report (1965), P.E. has four specific purposes of an individual.

(i) develop and maintain maximum physical efficiency.
(ii) develop useful knowledge and physical skills.
(iii) act in a socially useful way.
(iv) enjoy wholesome physical recreation.

Beside the four main purposes, Dunn and Fait. (1984) indicates that P.E. is important to the mentally retarded learners because it plays a major role in activating the general development of their intellectual, physical, motor, social and moral characteristics which have a problem. Additionally, it helps them establish and maintain general body fitness and acts as a catalyst in providing them with skills and attitudes required for rehabilitation. The skills they acquire help them to improve their lives and to become self reliant. Harbison and Myers (1968) state that education is a process which involves acquisition of skills and development of capacities of people in society. Blaug (1970) also indicates that education is an investment in human capital. Therefore, P.E., like any other education programme, is an investment in human capital. This is essential for the development of any society. Conley (1973) states the variation in human potentials arising from their physiological differences and environmental influence in relation to productivity should be appreciated. Therefore the potentials of mentally retarded learners in relation to their productivity in society should be appreciated. Ayodo (1990) cites Hammerman and Maikowski (1981) as also observing that a society which shuts out any segments of its people from full participation...
and contribution to its development is indeed an impoverished society. With appropriate education, all segments of people in society including the mentally retarded can contribute to development. Brown (1975), after reviewing literature on the effects of exercise on working capacity of the mentally retarded concluded that exercise programmes are very beneficial to them because of the positive effects they have on their working capacity.

Physical education can play a major role as an intervention programme for most handicapping conditions of the mentally retarded. Considering the physical being of most mentally retarded, Dunn and Fait (1984), stated that most of them have inefficient general body movement. They also state that most of the mentally retarded individuals measure low in endurance, strength, balance, speed, reaction time, agility and flexibility when compared to their non-retarded counterparts. The above mentioned parameters are essential for survival and self reliance in human beings. Sherrill (1981) states that physical education has components that can help the mentally retarded individuals establish and maintain general fitness in the mentioned traits. Wekesa (1990), also recommends dance as activity in P.E. to the mentally retarded for physical fitness. He states that dance can help the mentally retarded improve their motor aspects such as coordination, flexibility, speed strength and endurance.

According to Oliver (1972), there are many studies which state that games and sports comprise the most effective media for socialization in all individuals. Gordon and McKinley (1980), have identified difficulties in social interaction and unhappiness in play situation that result from poor motor skills in children with movement problems. They stated that clumsy children avoid participation in social play and game situations because of their poor motor skill. This results into total withdrawal from social
play due to fear of rejection. Physical education as a programme in institutions for the mentally retarded learners helps them acquire and maintain motor skills and therefore enjoy social play and games with their non-retarded counterparts. Cratty (1970), stresses that educators should not ignore the marked influence of sports and games, which are components of physical education, on the success and social acceptance of children.

Apart from social acceptance, P.E. will also help mentally retarded children to have positive self concept and help them develop personality. Brown (1989), states that success in play activities are highly valued within peer groups and is likely to have a marked positive effect on the development of a child's self-concept and personality. Oliver (1972) also states that children who are handicapped transfer the confidence gained from games to other learning experiences.

For emotional aspects, subjects in physical education like dance are recommended to discourage fear, frustration, aggression and positively influence motivation. In the K.I.S.E. Bulletin of August, 1990 dance can also be used to improve the mentally retarded's ability to communicate, adapt, cooperate and be responsible. Dance is also recommended to counteract deteriorating cognition, motor, emotional and social aspects of mentally retarded individuals. It also improves language, visual, auditive and tactile perception of the mentally retarded individuals.

Physical education has the potential of contributing to all the three domains of education objective - cognitive, psychomotor and affective as stated by Dunn et. al. (1984) and Sherrill (1981). Supporting the International Chapter for Physical Education and Sports by UNESCO. Katzenellenogen [in AAHPER-SD (1994)] indicates that all children have a
right to physical education because it is a programme that accepts responsibility for contributing to the education of a whole human being for life.

### 2.5 Planning and Implementation of Physical Education Programmes to Mentally Retarded Learners

According to Brennan (1985), once mental impairment and problems in intellectual functioning or adaptive behaviour has been confirmed in an individual learner by comprehensive inter disciplinary assessment, program planning for the individual should begin. Such planning must guide comprehensive service to ensure the individuals achievement. This service includes an Educational plan, implementation and periodic evaluation. Without curriculum to implement an evaluation is impossible. The curriculum must be varied, broad and flexible enough to provide for efficient learning.

Tweedie and Shroyer (1982) states that a good curriculum for mentally retarded learners should have goals such as unlocking potential abilities in each person and developing maximum independence to function in an open or sheltered society. Whatever the setting comprehensive skills must be developed. Among these may be listed self-care activities, basic skills, communication skills, occupational skills and recreation skills. The goals in these areas should be commensurate with the potential of each person.

Ndurumo (1998) indicates that curriculum development for mentally retarded is very complicated because they are a heterogeneous group. Even with each level of mental retardation, there are intra-group differences. These differences are as a result of difference in handicapping condition, severity of handicap, age of onset of the handicap among other thing. These differences therefore call for different types of curricula. Special
Education has therefore devised four types of curricula. These are adopted, adapted, specialized and specialist curriculum.

1. Adopted curriculum refers to the adoption of the regular school curriculum for use with children with special education needs. In the case slight modifications are made this could be of between 0 to 20%.

2. Adapted curriculum where an examination of their regular curriculum in details is done to ascertain its applicability with children with special needs. It involves between 20% to 40% modification.

3. Specialized curriculum this is where the regular curriculum is exhaustively and significantly modified to suit the target group. The curriculum requires between 40% to 60% modification of the regular curriculum.

4. Specialist curriculum. This is where the curriculum needs not to be dependent on the regular curriculum. It requires between 60% to 100% modification of the regular curriculum.

2.6 Planning and Implementation of Physical Education for Mentally Retarded Learners in Kenya

Despite the diversity in handicapping conditions among mentally retarded learners, they need education so that they can fully participate in the socio-economic development of their societies as human resource. Harbison and Myers. (1968) indicate that mentally retarded learners need physical education in their education because of its importance to them. The 1981 and 1985 policy documents declared Physical Education as a compulsory subject in all educational institutions in Kenya and as such is taught to the mentally retarded just like other learners.

In the 1981, Ministry of Education Policy Paper (Ministry of Basic Education: Policy for Special Education), gives recommendations on how
education programmes for the mentally retarded should be implemented. The policy requires that the mildly mentally retarded learners be placed in regular classrooms. The moderately retarded be placed in units within regular schools for mainstreaming purposes, while severely and profoundly retarded be placed in special schools. The policy emphasizes that social contact both at home and in the community be arranged for both severely and profoundly retarded learners. Depending on their learning disabilities, the Ministry recommends their placement in education institutions as shown on table 4 below.

Table 4. Recommendation on Placement of Mentally Retarded Learners.

<table>
<thead>
<tr>
<th>Place</th>
<th>Age (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home</td>
<td>0-2</td>
</tr>
<tr>
<td>Nursery</td>
<td>3-6</td>
</tr>
<tr>
<td>Pre-primary school</td>
<td>7-9</td>
</tr>
<tr>
<td>Primary School</td>
<td>9-13</td>
</tr>
<tr>
<td>Intermediate school</td>
<td>14-16</td>
</tr>
<tr>
<td>Vocational training</td>
<td>Over 16</td>
</tr>
</tbody>
</table>


The policy paper recommends that nursery to primary school classes should not have more than four learners for the severely retarded, eight for the moderately retarded and ten for mildly retarded learners. On the other hand, primary and intermediate school classes should have a maximum
of six learners in a class of severely retarded, ten of the moderately retarded and fifteen for the mildly retarded.

The policy paper further states that an adapted curriculum should be used to teach mildly retarded learners. This is a programme where working activities and facilities are modified to suit the learners' condition. As for moderately and severely retarded learners, a specialised curriculum should be designed to provide specially designed activities which will help meet the unique needs of the learners. This specialised programme should emphasise pre-vocational training, communication and self care skills. The curriculum should have skills that aim at normalisation of the learners.

2.7 Constraints to Effective Implementation of Physical Education Programmes

Several factors have been reported to constrain the teaching of physical education both in Kenya and other countries. In her study on "Instructional Problems Encountered by Women Physical Education Teachers and their Relation to Teaching Competence" in Minnesota, Korri (1970) using a checklist identified the following problems: inadequate facilities, large numbers, providing for individual differences, motivation and providing for needs, interest and abilities of the students. Since there was some similarity in the data that Korri collected using checklist with the one the study was to elicit, the researcher found it appropriate to adopt checklist as one of the instruments for collecting data in this study.

The problem of limited facilities has also been reported by various researchers. Scriven (1973) observed that the most frequently mentioned problems facing physical education programmes in developing countries were lack of facilities like gymnasias, sports fields, playgrounds and playing fields.
Madeje (1981) conducted an evaluation study on the implementation of P.E. programme in Dar-es-Salaam City primary schools. He used interviews, observation and questionnaire on Ministry of Education administrators, teachers, pupils and parents. From his findings, he concluded that the unavailability of physical education equipment and facilities, lack of training of the physical education teachers, the negative attitude of some teachers, city education administrators and parents contributed a lot towards poor implementation of physical education programmes in Dar-es-Salaam.

Studies by Kiganjo (1987), Muniu (1986), Singer (197586), and Kane (1974) have further documented the problems attributed to time factor which affect the teaching and learning of physical education. Time factor in this case means either the length of the lesson or the number of physical education lessons in a week or a combination of both. Gathua (1990), in his study on the problems constraining the teaching of physical education to the physically handicapped in Kenyan special primary schools identified the following:

1. Unsuitable Syllabus.
2. Degree of handicapping condition.
3. Limited time.
4. Inadequate facilities.
5. Legal liability for accidents.
6. Range of individual abilities within classes.
7. Too many pupils in class.
8. Negative attitude of administrators towards physical education.
9. Negative attitude of pupils towards physical education.

Gathua's study was however limited to teachers of physically handicapped learners and individuals with problems of locomotion and motor...
co-ordination. that is. learners who cannot perform motor activities involving total body movement without using aid(s) due to muscular, skeletal and neurological disorders. The current study, therefore. differs from Gathua's study in that it was carried out among teachers for mentally retarded learners. Handicapping conditions associated with mental retardation vary from physical, mental to social functioning while the physically handicapped have a problem with physical functioning only.

2.8 Summary and Implications of Literature Review

From the literature review above. it is evident that mental retardation has adverse effects on the physical functioning of the individuals. Information on the effects of mental retardation on physical function was essential for this study because it acts as a guide in the consideration of the suitability of the P.E. activities that are currently implemented in institutions with mentally retarded learners. The literature review also reveals that mental retardation has a negative effect on personality development and social adjustment of mentally retarded individuals. Since P.E is known to develop personality and social life. the above information is important for planners and implementors of the physical education programme for the mentally retarded.

Generally. mentally retarded individuals need physical education not only as a right but also because it benefits them. Physical education is important for the health and self-reliance of the mentally retarded learners. Physical education helps them in physical, social, mental, psychological, ethical and aesthetic development. P.E. helps the mentally retarded learners to improve their lives by imparting into them knowledge and skills that make them self-reliant. It also acts as a catalyst in reducing their dependence on others in society. Physical education may
also act as a catalyst in making them fit enough to take part in the socio-economic development of society.

3.1 The literature review show that so far, there is no study done on the implementation of the current P.E. programme in institutions for the mentally retarded learners in Kenya. This study, therefore, aimed at specifically examining the experiences and constraints teachers encounter in the implementation of the current P.E. programme in the institutions for the mentally retarded learners in Nairobi Province.

3.2 The data collection process was conducted through questionnaire, observation and checklist. The questionnaires were administered to teachers and headteachers. Interview schedules were used to collect data from the tutor for P.E at K.I.S.E and the inspector for special schools with mentally retarded learners. Observation schedule and checklist were used to carry out observation and checking for availability and adequacy of equipment.
CHAPTER THREE

3.0 METHODOLOGY

3.1 Introduction

This chapter gives a description of procedures used in carrying out the study. It covers the research design, target population, sampling procedure, research instruments, data collection and data analysis procedures.

3.2 Research Design

This study was a survey exploring the constraints teachers encounter while implementing P. E. to the mentally retarded in Nairobi Province. In order to meet the objectives of the study, data was collected using questionnaires, interviews, observation and checklist. The questionnaires were administered to teachers and headteachers. Interview schedules were used to collect data from the tutor for P.E at K.I.S.E and the inspector for institutions with mentally retarded learners. Observation schedule and checklist were used for lesson observation and checking for availability and adequacy of equipment and facilities.

3.3 Target Population

Since the study was concerned with the constraints teachers encountered in implementing P.E. to the mentally retarded in Nairobi Province, the target population included:

(i) The P.E. teachers in institutions with mentally retarded learners.

(ii) The headteachers of the institutions with mentally retarded learners.
(iii) The school Inspector of institutions with mentally retarded learners in Nairobi.

(iv) The tutor for P.E. at the Kenya Institute of Special Education (K.I.S.E.).

3.3.1 Justification For Selection of the Target Population

Physical education teachers were targeted because they are the implementors of the subject to the learners. Headteachers were also utilised in the study because they have a professional responsibility of ensuring that the implementation of all the programmes (including P.E.) within institutions is carried out effectively. The inspector for institutions with mentally retarded learners was considered because she had the responsibility of ensuring that the high quality and standards of education programmes for mentally retarded is established and maintained. The inspector was expected to have knowledge of teachers' experiences and constraints in the implementation of P.E. to mentally retarded learners because she was actively involved in curriculum implementation. Besides the inspector, the tutor for P.E. at KISE was also involved in the study because she trains the teachers on how to handle P.E. programme with mentally retarded learners. She also assesses Special Education teachers during their teaching practice.

3.4. Procedure for Selection of Population Sample

There were 22 institutions with mentally retarded learners (6 special schools and 16 units) within regular primary schools in Nairobi province. The 22 institutions had a total of 48 teachers at the time the study was carried out. Two institutions with four teachers and two headteachers participated in the pilot-testing of the instruments. This left 20 institutions with 44 teachers and 20 headteachers. Since the
numbers of teachers and headteachers were small and manageable. They were all used in the study. The only tutor for P.E at K.I.S.E and the Inspector for Institutions for mentally retarded learners in Nairobi also participated in the study. Thus the total number of respondents who participated in the study was 66. These included 44 teachers, 20 headteachers, one special education inspector and one tutor for P.E at K.I.S.E.

Eight out of 16 units within regular schools and two out of 6 special schools were randomly selected for observation and checking for availability of P.E equipment and facilities. The two special schools were Nile Road and Jacaranda, while the eight units were City Primary, Martin Luther, Kileleshwa, Mbagathi Road, Githurai, Ronald Ngala, Pumwani and Riruta HGM.

3.5 Research Instruments Utilized

In order to achieve the objectives of the study, data was collected using questionnaires, interviews, observation schedule and checklist. These instruments were selected after making references to previous studies which related to the implementation of P.E such as Gathua (1990), Kiganjo (1987), and Korri (1970). Additionally the researcher reviewed literature on data collection in social sciences such as Coolican (1994), Verma and Beard (1981), Wierma (1980), and Nachmias and Nachmias (1976). Most of the items in the instruments were adapted from the instruments used in the study by Gathua (1990).

The questionnaires were prepared and administered to the teachers and headteachers. The questionnaire had both closed and open ended questions. The closed ended questions were used because they dealt with facts
(objective). The open ended questions allowed the respondents to provide in-depth assessment of the school environment. Some of the items sought respondents' views and suggestions on P.E. for mentally retarded learners.

Interviews were carried out with the inspector and tutor. The interview schedule was semi-structured. This allowed the interviewer to rephrase questions if they were not clear. According to Coolican (1994) semi-structured interview provided for probing of issues and observation of expressions and gestures used by the interviewee. The interviewees were also able to ask questions for clarification.

An observation schedule was prepared to guide the researcher in observing adequacy of resources, maintenance of facilities and time utilisation during physical education lessons. The researcher was also able to observe some of the constraints of teachers encounter during the implementation of P.E to mentally retarded learners.

A checklist was prepared and used to assess the availability and adequacy of physical education facilities and equipment in each of the ten (10) institutions which were randomly selected for observation.

3.5.1 Pilot-testing of Research Instruments

Two institutions, one special school and one special unit in a regular school, were randomly selected for pilot-testing the research instruments. The selected institutions were Fairmille Special School and Kabete Vet. Lab. Special Education Unit. The total number of teachers in the two institutions was four. The four teachers participated in the pilot-test for the teachers' questionnaire while their respective headteachers participated in pilot-test for the headteachers'
questionnaire. The two mentioned institutions were also used in piloting the observation schedule and the checklist. As a result of the piloting, the research instruments were modified for appropriateness of items and for clarity in communication.

### 3.5.2 Validity of the Instruments

Nachmias and Nachmias (1976) state that the validity of items in research instruments can be determined by expert judgment. To ensure that the instruments used during the study elicited the required information, the validity of items in the questionnaires, interview, observation schedule and checklist was determined by expert judgment. The items were thoroughly examined by two senior lecturers in the department of Educational Administration Planning and Curriculum Development and one Senior Lecturer in the department of Physical Education.

### 3.5.3 Reliability of the Instruments

Nachmias and Nachmias (1976) state that the subject of reliability would not occupy a central place in the methodological literature if the instruments used in social sciences are fully valid. This study was in social science and the validity of the instruments was established by experts. Therefore, the reliability of the instruments was not calculated. Additionally, the researcher adapted most of the items in the instruments from a successful study done by Gathua (1990). Consequently, the instruments were considered reliable.

### 3.6 Data Collection Procedure

The researcher obtained a permit for data collection from the relevant government authorities. After obtaining a permit, the researcher visited all the institutions which were to be utilised in the study to
inform the respective heads about the study and seek for their cooperation. During the visits, the researcher made logistic arrangements for administering the research instruments in the respective institutions. Administration of the research instruments was carried out according to the agreed schedule. The questionnaires were administered to 44 teachers, 20 headteachers, thus 64 questionnaires.

Initial visits were made to the offices of the special education inspector and KISE P.E. tutor. During those visits, the purpose of the study was discussed and appointments for interviews made. Each of the two officers was interviewed as scheduled.

At the end of data collection, 59 (89.4%) out of the 64 administered questionnaire were collected. The fully completed questionnaires were collected from 39 teachers and 20 headteachers. Additionally, 10 observation schedules and 10 checklists were fully completed.

3.7 Data Analysis Procedure

According to Nachimias and Nachimias (1976), the commonly used method for reporting survey is to use frequency distribution, calculating the percentages and tabulating them appropriately. This study was a survey and analysis was done using frequencies and percentages. Closed ended items on the questionnaires were coded. The open ended responses were extracted, summarised and then coded. The codes were then made amenable to quantitative analysis. This was done by keying the codes into the computer and processing them using the Statistical Package for Social Sciences (SPSS) programme. SPSS was used to obtain frequencies and percentages.
The analysis generated frequencies and percentages of the respondents' responses mainly from the questionnaires. Data obtained from the interview, observation and checklists was used to back up the data from the questionnaires.

The analyzed data were then summarized and organized into themes which were used to answer the research questions formulated to guide the study.
CHAPTER FOUR

4.0 DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter presents the data analysis, and interpretation. The analysis is presented in the form of tables showing frequencies and percentages followed by an interpretation. The chapter is organised according to seven major themes derived from the questions which guided the study. The themes are as follows:

- Characteristics of respondents
- The syllabus for physical education to mentally retarded learners
- Adequacy and suitability of Resources for teaching P.E. to mentally retarded learners.
- Time utilized for P.E. lessons to mentally retarded learners.
- The impact of teachers' workload on their effectiveness
- Problems teachers encounter.
- Suggested solutions to the problems teachers encounter.

4.2 Characteristics of Respondents

The characteristics of the respondents included their gender, professional qualification, special training acquired in handling mentally retarded learners and experience in teaching physical education to mentally retarded learners.

4.2.1 Gender of the Respondents

Results from this study revealed that 84.5% of the teachers in the institutions for the mentally retarded in Nairobi province were female. Only 15.5% were male (See Table 5).
Table 5. Distribution of Teachers in the Institutions by Gender

<table>
<thead>
<tr>
<th>Institution</th>
<th>Female</th>
<th></th>
<th>Male</th>
<th></th>
<th>Number</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>1. Jacaranda</td>
<td>3</td>
<td>7.7</td>
<td>3</td>
<td>7.7</td>
<td>6</td>
<td>15.4</td>
</tr>
<tr>
<td>2. Mathare</td>
<td>1</td>
<td>2.6</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>2.6</td>
</tr>
<tr>
<td>3. Tree Side</td>
<td>2</td>
<td>5.1</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>5.1</td>
</tr>
<tr>
<td>4. Dagoretti</td>
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<td>2.6</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>2.6</td>
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<tr>
<td>5. Kibera</td>
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<td>2.6</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>2.6</td>
</tr>
<tr>
<td>6. Nile Road</td>
<td>3</td>
<td>7.7</td>
<td>1</td>
<td>2.6</td>
<td>4</td>
<td>10.2</td>
</tr>
<tr>
<td>7. Salama</td>
<td>2</td>
<td>5.1</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>5.1</td>
</tr>
<tr>
<td>8. Toi</td>
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<td>2.6</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>2.6</td>
</tr>
<tr>
<td>9. Martin Luther</td>
<td>2</td>
<td>5.1</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>5.1</td>
</tr>
<tr>
<td>10. City</td>
<td>2</td>
<td>5.1</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>5.1</td>
</tr>
<tr>
<td>11. O.L.M. South B</td>
<td>2</td>
<td>5.1</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>5.6</td>
</tr>
<tr>
<td>12. Kileleshwa</td>
<td>1</td>
<td>2.6</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>2.6</td>
</tr>
<tr>
<td>13. Mbagathi</td>
<td>2</td>
<td>5.1</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>10.2</td>
</tr>
<tr>
<td>14. Githurai</td>
<td>3</td>
<td>7.7</td>
<td>1</td>
<td>2.6</td>
<td>4</td>
<td>10.2</td>
</tr>
<tr>
<td>15. Ronald Ngala</td>
<td>2</td>
<td>5.1</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>2.6</td>
</tr>
<tr>
<td>16. Unity</td>
<td>1</td>
<td>2.6</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>2.6</td>
</tr>
<tr>
<td>17. New Eastleigh</td>
<td>1</td>
<td>2.6</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>2.6</td>
</tr>
<tr>
<td>18. Mwangaza</td>
<td>1</td>
<td>2.6</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>2.6</td>
</tr>
<tr>
<td>19. Pumwani</td>
<td>2</td>
<td>5.1</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>5.1</td>
</tr>
<tr>
<td>20. Riruta</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>2.6</td>
<td>1</td>
<td>2.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>33</td>
<td>84.5</td>
<td>6</td>
<td>15.5</td>
<td>39</td>
<td>100</td>
</tr>
</tbody>
</table>

The results above showed that there is a major gender imbalance among the teachers of physical education to mentally retarded learners in Nairobi. Interview and further discussion with the respondents revealed that this imbalance did not constrain teachers' effectiveness in implementing P.E. The headteachers revealed that the constraint due to gender disparity was only evident when the female teachers went for maternity leaves. This is because the teachers were not substituted by the ones who were qualified to handle mentally retarded learners.

Observations from the study revealed that two female teachers from Mathare Special School and the only teacher for Mwangaza Unit stated were
not available because they had gone on maternity leave. The headteacher of Mwangaza Unit revealed that he was forced to utilize a teacher from a regular class. This teacher from a regular class was not in a position to handle physical education with mentally retarded learners. Therefore, physical education was not taught for the duration that the teacher was on maternity leave.

4.2.2 Professional Qualifications of the Respondents

Eighty two point one percent (82.1%) of the teachers surveyed were professionally trained while 18% did not have any professional training. Among the 82.1% professionally trained teachers, 5.1% were Diploma holders. 48.7% were P1; 5.1% were P2 while 23% classified themselves under other qualifications which included: Montessori Certificate and Approved Teacher Status. On the other hand all the headteachers who took part in the study were professionally trained as teachers. Three (15%) were Diploma holders while 17(85%) P1. Table 6 has details of the findings.

Table 6. Respondents Professional Training

<table>
<thead>
<tr>
<th>Professional Levels</th>
<th>Teachers</th>
<th>Percentage</th>
<th>Headteachers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diploma</td>
<td>2</td>
<td>5.1</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>P1</td>
<td>19</td>
<td>48.7</td>
<td>17</td>
<td>85</td>
</tr>
<tr>
<td>P2</td>
<td>2</td>
<td>5.1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other Certificates</td>
<td>9</td>
<td>23.1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Not professionally</td>
<td>7</td>
<td>18.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Trained</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>39</td>
<td>100.0</td>
<td>20</td>
<td>100.0</td>
</tr>
</tbody>
</table>
4.2.3 Special Training

Besides the general professional training, teachers who handle mentally retarded learners need special training. Special training inculcates in the teachers knowledge and relevant skills in handling the special needs of the mentally retarded learners. This is very essential for teachers' effectiveness. Sherrill (1981) states that special training courses for teachers handling physical education to mentally retarded learners should be compulsory and that they should have a practicum to help them acquire competence and appropriate qualifications for their particular role.

In Kenya, special training in handling handicapped learners is mainly done at the K.I.S.E. An interview with the physical education tutor at the institute disclosed that K.I.S.E offers two year diploma and three months certificate courses in special education. The requirement for joining the institution is that they should be serving P1 teachers with at least three years teaching experience, preferably in a special institution. At K.I.S.E the teachers specialize in their respective areas of interest, for example, Mentally retarded, physically handicapped etc. The teachers who specialize in handling mentally retarded do a course in physical education, sports and recreation activities for mentally retarded learners. Despite the effort by the government through K.I.S.E to give special training to these teachers, the findings of the study show that only one third (table 7) of the teachers were specially trained. Interviews with the physical education tutor at K.I.S.E and the inspector of special education revealed that the higher the level of mental retardation of a learner, the more the need for specially trained teachers and a special curriculum.
Findings from this study show that 66.7% of the teachers lacked special training. Only 33.3% of the teachers in the surveyed institutions were specially trained in handling mentally retarded learners. The utilised teachers were not specially trained in handling P.E for mentally retarded learners. On the other hand, only 20% of the headteachers surveyed were specially trained to handle mentally retarded learners.

4.2.4 Categories of Mentally Retarded Learners Teachers Handles Per Class

As indicated in Chapter two, mentally retarded individuals are classified into four levels, with regard to the severity of their mental retardation, namely: Mild, Moderate, Severe and Profound. The 1981 Policy Paper gives specifications on the placement in schools, that is: the mild should be taught in regular classroom for mainstreaming purposes. The moderate should be taught in special units in regular schools, while the severe and profound should be taught in special schools.

The researcher found it necessary to analyze data on the categories of mentally retarded learners each teacher handled in a class. The results are summarized in Table 8.

Table 7: Respondents' Special Training

<table>
<thead>
<tr>
<th>Special training</th>
<th>Teachers (n)</th>
<th>Percentages (%)</th>
<th>Headteachers (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specially trained</td>
<td>13</td>
<td>33.3</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>Not Specially trained</td>
<td>26</td>
<td>66.7</td>
<td>16</td>
<td>80</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>100.0</td>
<td>20</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 8: Categories of Mentally Retarded Learners Teachers Handle Per Class

<table>
<thead>
<tr>
<th>Category</th>
<th>Number quoted by the Teacher who responded</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>5</td>
<td>12.8</td>
</tr>
<tr>
<td>Moderate</td>
<td>2</td>
<td>5.1</td>
</tr>
<tr>
<td>Mild to moderate</td>
<td>9</td>
<td>23.1</td>
</tr>
<tr>
<td>All Levels</td>
<td>21</td>
<td>53.9</td>
</tr>
<tr>
<td>Do not Know</td>
<td>2</td>
<td>5.1</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Out of the 39 teachers surveyed, 12.8% reported that they handled mildly retarded learners, 5.1% handled moderately retarded learners, 23.1% teach mildly to moderately retarded learners, while 53.9% handled all the four levels of mentally retarded learners in one class. None of the teachers reported that they handled severely retarded learners only. However, 5.1% were not able to classify their learners according to the levels of mental retardation. This was a clear indication that their competence in handling mentally retarded learners was questionnable. It is also from the findings evident that over 65% of the teachers handled more than one level of mental retardation in a class. This contradicts the 1981 Ministry of Education Policy Paper on Special Education which indicates that learners of different levels of mental retardation should be taught from different classes using different curricular.

4.2.5 Teaching Experience

The experience a teacher has in handling mentally retarded learners can determine their effectiveness in implementing an education programme to these learners. To determine their experience in handling mentally
retarded learners, the teachers were asked to indicate the duration they had taught physical education to mentally retarded learners. The findings are summarised on table 9 below.

Table 9: Duration of Handling Mentally Retarded Learners

<table>
<thead>
<tr>
<th>Duration in Years</th>
<th>Number of Teachers who responded</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 1</td>
<td>1</td>
<td>2.6</td>
</tr>
<tr>
<td>1-5</td>
<td>21</td>
<td>53.8</td>
</tr>
<tr>
<td>6-10</td>
<td>7</td>
<td>17.9</td>
</tr>
<tr>
<td>11-15</td>
<td>4</td>
<td>10.3</td>
</tr>
<tr>
<td>Above 15</td>
<td>6</td>
<td>15.4</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 9 shows that over 50% of the teachers had taught mentally retarded learners for a period between one and five years while slightly more than 40% of the teachers had taught for more than six years. Only 2.6% of the 39 teachers surveyed had taught mentally retarded learners for less than one year. A study by Gathua(1990) states that a period of one year is relatively long enough to equip a teacher or headteacher with adequate knowledge on instructional problems constraining the teaching of physical education in special schools. Using Gathua's observation to rate the results, over 95% of the teachers surveyed had taught physical education to mentally retarded learners for more than a year and were therefore experienced in teaching Physical Education Programme to the mentally retarded. The researcher therefore, noted that majority of the teachers were in a position to state the constraints they encountered in implementing the regular P.E. programme to mentally retarded learners.
4.3 The Syllabus For P.E. to Mentally Retarded Learners

For any programme in an educational system to effectively achieve its goals and objectives, there is need for a suitable syllabus. In Kenya, the K.I.E is responsible for the development of syllabi for all education programmes. According to Ayot and Patel (1992), a syllabus should contain the objectives for the subject and give the content of the course to be taught. It should also help the teacher to have a broader view of the subject leaving it up to him/her to decide on how to cover the topics. Physical education syllabi prepared by K.I.E have stated goals and objectives, a list of topics and class activities to be covered by learners for each topic, a sample of schemes of work and lesson plans to be used for teaching physical education.

To obtain information on the teachers' experiences and the constraints they encounter in relation to the syllabus, the teachers were asked to rate the following:

(i) achievement of objectives
(ii) relevance of the activities in the regular P.E. syllabus to mentally retarded learners.
(iii) interpretation of the P.E. syllabus with reference to mentally retarded learners.

The teachers were also asked to give suggestions on how the syllabus can be adjusted to suit mentally retarded learners.

4.3.1 Achievement of P.E Objectives

The regular P.E syllabus (Republic of Kenya, 1992) which is also used to teach mentally retarded learners has the following general objectives.
At the end of the course the learners should be able to:

1. Perform skillful and efficient movements through use of physical and mental coordination and body control.
2. Competently use movement as a medium of expression.
3. Enjoy and appreciate movement for its own sake both with or without apparatus.
4. Use his leisure time to occupy himself and others positively by creating, performing and appreciating sporting and dance activities.
5. Pursue physical activities in order to secure and maintain high standard of bodily health, strength and fitness to contribute to physical development.
6. Understand, participate in and develop both material and international sports and dances for preservation and promotion of his own and other cultures.
7. Co-operate with other and contribute positively as a member of a group through movement experiences.
8. Be self-disciplined through understanding the importance of rules and regulations of sports and serious training for completion.
9. Create movement skills and pattern dances as art forms and minor related games.
10. Improvise and use equipment in a variety of ways relevant for Physical Education.
11. Participate in outdoor pursuits in order to explore and appreciate the environment and hence be aware of the natural resources and inspiration it offers.
12. Understand the relationship between movement as a field of study and other areas of knowledge and appreciate its contribution to such.
The teachers were asked to assess the extent to which the objectives stated in the regular syllabus mentioned above were achieved by mentally retarded learners. This was to elicit information on whether mentally retarded learners are able to achieve objectives stated in the syllabus during P.E lessons. The findings are shown on Table 10 below.

Table 10: Teacher's Assessment of How Well P.E. Objectives were Achieved

<table>
<thead>
<tr>
<th>Rating</th>
<th>Number of teachers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easily achieved</td>
<td>7</td>
<td>17.9</td>
</tr>
<tr>
<td>Not easily achieved</td>
<td>21</td>
<td>53.8</td>
</tr>
<tr>
<td>Not sure</td>
<td>11</td>
<td>28.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>39</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

As indicated in Table 10, 53.8% of the teachers rated objectives as not easy to achieve while about 30% were not sure of how to rate the objectives. A cumulative 81.0% of the teachers were either not sure or confirmed that the objectives were not easily achieved. Only 17.9% of the 39 teachers surveyed rated the objectives as easily achieved. From the results, it is evident that majority of the teachers experienced difficulties in achieving the objectives that are meant for regular learners when applied to mentally retarded learners.

4.3.2 Interpretation of the P.E. Syllabus

Apart from assessing the objective in the syllabus, teachers were asked to rate their ability to interpret the syllabus and to adapt it to mentally retarded learners. From their responses, 71.8% of the teachers surveyed found the syllabus not easy to interpret as they adapt it to the
needs of their learners while only 17.9% found it easy to interpret. Ten point three percent were undecided (Table 11).

Table 11: Teacher's Ability to Interpret and Adapt the Regular P.E. Syllabus

<table>
<thead>
<tr>
<th>Rating</th>
<th>Number of teachers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy to interpret</td>
<td>7</td>
<td>17.9</td>
</tr>
<tr>
<td>Not easy to interpret</td>
<td>28</td>
<td>71.8</td>
</tr>
<tr>
<td>Undecided</td>
<td>4</td>
<td>10.3</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The data in table 11 indicates that majority of the surveyed teachers found the syllabus not easy to interpret when they use it to teach mentally retarded learners. Therefore, the teachers find the interpretation and adaptation of regular syllabus a constraint to their effectiveness. When probed further after lesson observation, the teachers stated that despite the difficulties in interpreting the syllabus they tried to modify the activities in the syllabus to suit their learners in the way they thought was best. Results from lesson observations also revealed that there was no uniformity in P.E activities which the learners were taught in various institutions. The teachers suggested that relevant syllabus and teachers' guides to go with the syllabus should be prepared by K.I.E. This would solve the problems they have with the interpretation of the regular syllabus.
4.3.3 The Relevance of the Regular P.E. Activities

The regular P.E syllabus has a course summary of the following activities:

1. Ball games
2. Body movement
3. Specific skills in body movement
4. Activities with apparatus
   - Bean bag
   - hoops
   - ropes
   - bench
   - small and big balls
5. Athletics
   - running
   - jumping for distance and height
   - throwing
6. Swimming
7. Dance
   - creative dance
   - social dance

Asked to give their opinion on the relevance of the above mentioned activities set in the regular physical education syllabus (Republic of Kenya, 1992) to mentally retarded learners, 46.1% of the teachers found the P.E. activities relevant while 30% found them irrelevant. About 23.1% of the teachers were not able to make a definite judgement (Table 12). It is evident that those who could not make definite judgement of the relevance of the activities were not competent enough to handle the subject. Since
most of the teacher stated that the activities were relevant, the researcher concluded that the activities were relevant.

Table 12: The Relevance of the Regular P.E. Activities to Mentally Retarded Learners

<table>
<thead>
<tr>
<th>Rating</th>
<th>Number of teachers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevant</td>
<td>18</td>
<td>46.1</td>
</tr>
<tr>
<td>Irrelevant</td>
<td>12</td>
<td>30.8</td>
</tr>
<tr>
<td>Not sure</td>
<td>9</td>
<td>23.1</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>100.0</td>
</tr>
</tbody>
</table>

4.3.4 Ability of Mentally Retarded Learners to Perform the Regular P.E. Activities

The teachers were asked if mentally retarded learners performed the activities in the current syllabus. Responses appear in table 13 below. Thirty three point three percent (33.3%) of the 39 teachers reported that the learners could perform the activities. Sixty six point seven percent (66.7%) reported that the learners could not perform all the activities in the regular syllabus.

Table 13: Ability of Mentally Retarded Learners to Perform the Activities in the Current Syllabus

<table>
<thead>
<tr>
<th>Rating</th>
<th>Number of teachers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learners can</td>
<td>6</td>
<td>33.3</td>
</tr>
<tr>
<td>perform</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learners cannot</td>
<td>33</td>
<td>66.7</td>
</tr>
<tr>
<td>perform</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>100.0</td>
</tr>
</tbody>
</table>
The 66.7% (33 teachers) who reported that the learners could not perform the activities were asked to list down the activities learners could not perform.

Table 14: Specific Activities Which Could not be Performed by the Mentally Retarded Learners

<table>
<thead>
<tr>
<th>Activities</th>
<th>Number of teachers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gymnastics</td>
<td>8</td>
<td>24.2%</td>
</tr>
<tr>
<td>Athletics</td>
<td>6</td>
<td>18.2%</td>
</tr>
<tr>
<td>Group activities</td>
<td>3</td>
<td>9.1%</td>
</tr>
<tr>
<td>Concentration</td>
<td>10</td>
<td>30.3%</td>
</tr>
<tr>
<td>Co-ordination</td>
<td>4</td>
<td>12.1%</td>
</tr>
<tr>
<td>Not easy to specify</td>
<td>2</td>
<td>6.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>33</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

Table 14 shows that 24.2% teachers mentioned gymnastic activities, 18.2% mentioned activities which involve co-ordination of different parts of the body and teamwork, 9.1% pointed out group activities, another 9.1% athletic activities, while 12.1% named activities which involve concentration on more than one skill. Two (6.1%) of the teachers reported that it was not easy to specify the activities which the mentally retarded learners could not perform.

Looking at the results on tables 12, 13 and 14, most teachers found the skills and activities in the syllabus relevant to the mentally retarded learner. However majority of the teachers indicated that though skill to be acquired were relevant mentally retarded learners found some activities difficult to perform. It is therefore evident that some teachers were constrained by the inability of the learners to perform most of the activities in the P.E syllabus.
4.3.5 Constraints Teachers Encounter with the Regular Syllabus

The teachers were asked to state the constraints they encountered when implementing the regular syllabus to mentally retarded learners. They were allowed to give more than one response. The information was analysed with reference to the number of times each constraint was mentioned by the teachers. Table 15 has a summary of the results.

Table 15: Constraints of Teachers Encounter with Regular Syllabus

<table>
<thead>
<tr>
<th>Constraints</th>
<th>Number of times mentioned</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coming up with instructional language is hard</td>
<td>20</td>
<td>27.4</td>
</tr>
<tr>
<td>Activities cannot be performed by learners</td>
<td>9</td>
<td>12.4</td>
</tr>
<tr>
<td>Too much work load for time allocated</td>
<td>14</td>
<td>19.2</td>
</tr>
<tr>
<td>The syllabus document is hard to find</td>
<td>15</td>
<td>20.5</td>
</tr>
<tr>
<td>Syllabus does not constrain their effectiveness</td>
<td>15</td>
<td>20.5</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The results in table 15 above show that 27.4% of the constraints mentioned indicated that language used in the syllabus was not easy to interpret when teaching mentally retarded learners. Twelve point four percent of the constraints mentioned pointed out that the activities in the syllabus were too complex for mentally retarded learners to perform. Nineteen point two percent stated that the topics in the syllabus were too many and therefore they were not able to cover them within the stipulated time. Another 20.5% indicated that the syllabus was very difficult to find and, therefore, was not used. It was observed by the researcher that in most cases where the teacher did not have the syllabus document, they
allowed their learners to freely play with the equipment and facilities available. This is not professional because the teacher should be guided by a syllabus. On the other hand, 20.5% mentions indicated that despite the difficulties, the syllabus did not constrain their effectiveness in implementing physical education to mentally retarded learners. All in all results from the questionnaires and observation generally revealed that majority of the teachers were constrained in one way or another by the syllabus.

4.3.6 Teachers' Suggestions on How the Regular Syllabus can be Improved.

The last item on the syllabus required each teacher to give a suggestion on how adjustments could be made on the regular P.E. syllabus to suit the needs of mentally retarded learners. Close to 26% percent of the 39 teachers surveyed suggested that a new syllabus specifically for mentally retarded learners should be prepared. Thirty point eight (30.8%) percent indicated that teachers should be given adequate special training and that this would enable them handle the syllabus efficiently. Twelve point eight (12.8%) percent of the teachers recommended that the activities in the syllabus should be simplified to suit mentally retarded learners. Seventeen point nine percent (17.9%) of the teachers proposed that mentally retarded learners should have longer physical education lessons. About 8% percent stated that more appropriate and adequate teaching resources, which should include teachers guides, equipment and facilities, should be provided while 5.1% suggested that the syllabus should not be used and instead learners allowed to freely play with apparatus. Findings are summarized on table 16.
Table 16: Teachers Suggestions on How the Regular P.E. Syllabus could be Improved

<table>
<thead>
<tr>
<th>Suggestions</th>
<th>Number of teachers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequate special training for teachers</td>
<td>12</td>
<td>30.8</td>
</tr>
<tr>
<td>Provide appropriate syllabus</td>
<td>10</td>
<td>25.7</td>
</tr>
<tr>
<td>More time for P.E. lesson</td>
<td>7</td>
<td>17.9</td>
</tr>
<tr>
<td>Simplify activities in syllabus</td>
<td>5</td>
<td>12.8</td>
</tr>
<tr>
<td>Appropriate and adequate resources</td>
<td>3</td>
<td>7.7</td>
</tr>
<tr>
<td>Allow free play for learners</td>
<td>2</td>
<td>5.1</td>
</tr>
<tr>
<td>Total Responses</td>
<td>39</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Results from observation made by the researcher, questionnaires and interviews indicate that some of the suggestions given by the teachers on the improvement of the current P.E syllabus are worthwhile. There is need for K.I.E to do an indepth evaluation of the current program and come up with an appropriate syllabus for the mentally retarded learners. The Ministry of Education and Human Resource Development should also ensure that the teachers handling the mentally retarded are specifically trained and that adequate equipment and facilities provided.

4.4 Adequacy and Suitability of the Resources for Teaching P.E.

The regular P.E. programme requires all the learners, including the mentally retarded, to acquire skills in athletics, soccer, netball, volleyball, hockey, swimming, rounders and gymnastics. For the learners to effectively acquire the skills, they need adequate and suitable equipment and facilities for each of the mentioned sports. Evidence from studies in Farrell and Heyneman (1989) as well as Psacharopoulos and Woodhall (1985)
indicate that input of a school or an educational institution, which include: quality of physical facilities, teachers' level of training, and availability of textbooks and other print material, determine learners' achievement.

To find out the experiences and constraints teachers encounter regarding the availability and adequacy of equipment and facilities in the implementation of P.E. to mentally retarded, data was collected from teachers, the headteachers, a tutor, an inspector and through the observations schedule. The data collected is analyzed and presented under the following sub-titles:

(i) Availability of P.E. equipment and facilities in the institutions.

(ii) Adaptation of the equipment and facilities to suit mentally retarded learners.

(iii) Maintenance of equipment and facilities available in the institutions.

(iv) Availability of P.E. textbooks and other curriculum support materials.

(v) How inadequate and unsuitable teaching resources constrains effective implementation of P.E. to the mentally retarded.

4.4.1 Adequacy of P.E Equipment and Facilities in the Institution

In regard to the syllabus, the equipment and facilities required should enable the learners to acquire skills in athletics, soccer, netball, volleyball, hockey, gymnastics and rounders.

The teachers and headteachers were requested to rate the adequacy of P.E. equipment and facilities in their institutions, with regard to mentally retarded learners. Out of the 39 teachers surveyed only 20.5%
reported that the equipment and facilities were adequate. Sixty nine point two percent rated P.E. the equipment as inadequate. Ten point three percent were not sure of the status of the equipment in their institutions. All the 20 headteachers stated that equipment and facilities were inadequate in their institutions. Table 17 has details.

Table 17: Adequacy of P.E. Equipment and Facilities

<table>
<thead>
<tr>
<th>Responses</th>
<th>Number of teachers</th>
<th>Number of headteachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Adequate</td>
<td>8</td>
<td>20.5</td>
</tr>
<tr>
<td>Inadequate</td>
<td>27</td>
<td>69.2</td>
</tr>
<tr>
<td>Not Sure</td>
<td>4</td>
<td>10.3</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>100.0</td>
</tr>
</tbody>
</table>

As indicated in table 17, findings from the headteachers concurred with those of the teachers in that most institutions do not have adequate equipment and facilities. Furthermore, results from the checklist and observations carried out in the ten institutions sampled for observation disclosed that only one institution (Jacaranda special school) had pitches for soccer, netball, basketball and an athletics track. Nile Road special school did not have any of the facilities. Instead they borrowed from a regular school adjacent to them. None of the surveyed institutions had a swimming pool. Observation made in 8 special education units revealed that mentally retarded learners, shared the equipment and facilities with regular learners. The facilities available in most of the institutions observed were; an athletics track, soccer and netball pitches.

Regarding equipment, the two special schools visited and observed, had regular balls for soccer and Netball. They also had improvised bean bags to help adapt netball skills to the mentally retarded learners.
Otherwise they did not have any equipment for the other games. The special units which were visited had neither balls nor other equipment for P.E. Further discussion with the teachers revealed that they shared all equipment with the regular learners.

The teachers who reported that equipment and facilities were inadequate were asked to state the impact of the inadequacy on their effectiveness. About 30% of their responses were related to physical education not being taught effectively. Another 29.7% of the responses indicated that the learners were denied a chance to acquire skills. Close to eighteen percent responses were related to the teachers' inability to diversify activities, while 16.2% responses indicated that inadequate equipment and facilities made the implementation of P.E. strainous to the teachers (see table 18 below). The effects mentioned by teachers clearly indicate that lack of equipment and facilities was a constraint on their effectiveness.

Table 18  The Effects of Inadequate Equipment and Facilities on the Implementation of the P.E. Programme

<table>
<thead>
<tr>
<th>Effects Mentioned by Teachers</th>
<th>Number of times mentioned</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.E. is not taught effectively</td>
<td>22</td>
<td>29.7</td>
</tr>
<tr>
<td>Learners are denied a chance to acquire some skills</td>
<td>22</td>
<td>29.7</td>
</tr>
<tr>
<td>Teachers cannot diversify activities</td>
<td>13</td>
<td>17.6</td>
</tr>
<tr>
<td>Teachers strain a lot</td>
<td>12</td>
<td>16.2</td>
</tr>
<tr>
<td>P.E. is not taught at all</td>
<td>5</td>
<td>6.8</td>
</tr>
<tr>
<td>Total Responses</td>
<td>74</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Findings from the study indicate a general inadequacy of equipment and facilities in most institutions. Some of the skills which are in the syllabus, such as Swimming and Hockey are never taught because of lack of equipment and facilities. Therefore, the inadequacy of equipment and facilities was a constraint on teachers' effectiveness in implementing the programme.

4.4.2 Adaptation of Facilities to Suit Mentally Retarded Learners

Good teaching in P.E. implies adapting the programme which includes the equipment and facilities to suit individual learners' needs. Sherrill (1981) states that adaptation minimise failure, enhances ego and strengthens and maximises effective learning. For effective implementation of P.E to mentally retarded learners there was need for adapting the equipment and facilities to suit their needs.

Teachers were asked if the equipment and facilities available for teaching P.E. in their institutions were adapted for use by mentally retarded learners. Adapting P.E. facilities for mentally retarded learners means adjusting them to suit learners' needs. Out of the total 39 teachers surveyed, 44% stated that they adapted equipment and facilities before using them. Fifty six percent of the teachers reported that the facilities available in their institutions could not be adapted to suit mentally retarded learners. Observations revealed that all units with mentally retarded learners shared both equipment and facilities with regular learners, while special schools borrow facilities from neighbouring institutions. Jacaranda special school used some facilities at Kentons College while Nile road special school used facilities at Nile Road Secondary School. An interview with the tutor for P.E. at KISE revealed that teachers needed to do a lot of improvisation and adaptation. This
includes making their facilities and equipment more colourful and attractive to mentally retarded because their attention span is short.

The 56% teachers who indicated that equipment and facilities were not adaptable were asked to state how the unadaptable equipment and facilities constrained their effectiveness in implementing P.E. to the mentally retarded learners. The teachers were allowed to give more than one response. The number of constraints mentioned by the teachers were summarised in Table 19.

Table 19: Constraint Teachers Encountered with Unadaptable P.E. Equipment and Facilities

<table>
<thead>
<tr>
<th>Constraints mentioned by Teachers</th>
<th>Number of times mentioned</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers do inappropriate improvisation</td>
<td>17</td>
<td>34.7</td>
</tr>
<tr>
<td>Skills are not grasped by learners</td>
<td>12</td>
<td>24.5</td>
</tr>
<tr>
<td>Objectives are not achieved</td>
<td>20</td>
<td>40.8</td>
</tr>
<tr>
<td>Total number of mentions</td>
<td>49</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Results from the teachers' questionnaires, observation schedule and checklist revealed that majority of the equipment and facilities were not adaptable to suit the mentally retarded learners. The teachers improvised required equipment and facilities using what was available. Further probing of teachers revealed that P.E. would be more effectively
taught if the equipment and facilities available were permanently adapted to suit the mentally retarded learners.

4.4.3: Maintenance of Equipment and Facilities in the Institutions

Maintenance of physical equipment and facilities used in any educational programme is essential because it minimises wastage. In addition to minimizing wastage, maintenance of equipment and facilities enhances efficiency of any programme. The headteachers and teachers were requested to rate the maintenance of equipment and facilities available in their institutions. Result appear on table 20.

Table 20 The Maintenance of P.E. Equipment and Facilities in the Institutions

<table>
<thead>
<tr>
<th>Responses</th>
<th>Teachers</th>
<th>Percentage</th>
<th>Headteachers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Adequate</td>
<td>12</td>
<td>30.8</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>Inadequate</td>
<td>21</td>
<td>53.8</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Not sure</td>
<td>6</td>
<td>15.4</td>
<td>15</td>
<td>75</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>100.0</td>
<td>20</td>
<td>100.0</td>
</tr>
</tbody>
</table>

As shown in table 20. 53.8% of the teachers who responded reported that the maintenance of equipment and facilities was inadequate. Fifteen point four percent were not sure of whether or not the equipment and facilities were maintained. Out of the 20 headteachers surveyed, only 25% reported that the maintenance of P.E. equipment and facilities was adequate. The other 75% were not sure. Interestingly, none of the headteachers indicated maintenance of equipment was inadequate. This contradicts the P.E. teachers assessment of the situation. The 75% headteachers who were not sure of how to rate the maintenance of facilities in their institutions may not have wanted to commit themselves to being responsible for the maintenance of facilities in their institutions. The
observations schedule showed that maintenance of physical education equipment and facilities was very poor. Most of the pitches available were neither marked nor cleared. Most of the equipment was not functioning. Results from observations revealed that the maintenance of the P.E. equipment and facilities was very poor. This has a very negative repercussion on the safety of the learners during P.E. Uncleared pitches increase the learners' risk for accidents. Unmarked fields reduce the teacher's control over learners. This meant that the games/sports regulations were not taught well and learners did not acquire the skills expected during P.E. lessons. Results from observations also showed that most of the equipment were not functional. The available equipment and facilities were not utilised effectively because of poor maintenance. Discussion with the headteachers revealed that poor maintenance was due to inadequate funds. The headteachers also admitted that due to scarcity of financial resources, they had to set their priorities. P.E. for mentally retarded learners was one of the priorities set by headteacher. This was a clear indication that mentally retarded learners were marginalized when it came to allocation of educational resources and particularly P.E. resource. Poor maintenance of the P.E. equipment and facilities in the institutions was therefore a constraint to teachers effectiveness.

4.4.4 Availability of Teachers' Guides and Other Relevant TextBooks

Another consistent determinant of educational achievement as indicated by Heynemann and Jamison (1980) is the availability of textbooks and other print materials. Psacharopoulos and Woodhall (1985) states that textbooks are essential in the effective implementation of any education programme. Farrell and Heyneman (1989) also states that textbooks are an important and a consistent contributor to improvement of quality in educational programmes.
The teachers were asked if their institutions had P.E. textbooks and guides for use during the implementation of P.E. to mentally retarded learners. Only 12.8% of them reported that they had. The other 87.2% reported that they did not have textbooks. Results from the study show that textbooks and guides were not adequate. Those who reported that they did not have textbooks were then asked to state what effects the lack of textbooks had on their effectiveness. The teachers mentioned more than one response. Table 21 has details.

Table 21: Constraints Due to Lack of Textbooks and other Relevant Materials

<table>
<thead>
<tr>
<th>Constraints</th>
<th>Number of times mentioned</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers do not know the activities to teach</td>
<td>15</td>
<td>36.6</td>
</tr>
<tr>
<td>Teachers tend to repeat activities</td>
<td>7</td>
<td>17.1</td>
</tr>
<tr>
<td>Teachers are forced to adopt the regular syllabus without modifying it</td>
<td>12</td>
<td>29.2</td>
</tr>
<tr>
<td>Has no negative effects</td>
<td>7</td>
<td>17.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>41</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Close to thirty seven percent of the constraints mentioned acknowledged that without textbooks, teachers were not sure of what to teach. The tendency of a teacher repeating himself/herself had 17.1% of the mentioned constraints. Another 17.1% of the constraints mentioned indicated that lack of textbooks did not affect their teaching effectiveness.

To back-up the findings from the teachers, their headteachers were asked if their institutions had any P.E textbooks for mentally retarded learners. Twenty five percent of the 20 headteacher reported that their institutions had books while the remaining majority (75%) reported their
institutions did not have books. The 75%, who reported that they did not have P.E. textbooks in their institutions were asked to show how it constrained the teachers' effectiveness. Each headteacher gave only one response (Table 22).

Table 22: Effect of Lack of Textbooks on the Implementation of P.E. To the Mentally Retarded as indicated by Headteachers

<table>
<thead>
<tr>
<th>Constraint</th>
<th>Number of times mentioned</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>The syllabus cannot be taught</td>
<td>5</td>
<td>33.4</td>
</tr>
<tr>
<td>effectively</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tendency of teachers to repeat</td>
<td>6</td>
<td>40.0</td>
</tr>
<tr>
<td>themselves</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irrelevant activities are taught</td>
<td>2</td>
<td>13.3</td>
</tr>
<tr>
<td>Lack of textbooks does not constrain the teaching of P.E.</td>
<td>2</td>
<td>13.3</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Thirty three point four percent of the headteachers acknowledged that the syllabus cannot be taught effectively to mentally retarded learners unless basic textbooks and teachers' guides are available. Forty percent of the responses indicated the tendency of teachers repeating themselves. Thirteen point three percent of the responses indicated the teaching of irrelevant activities, and lack of textbook had no effect on the teachers' effectiveness.
According to the observations, only Jacaranda special school had a few P.E. textbooks and a copy of the regular syllabus. Nile Road Special School did not have any P.E. textbooks or even a copy of the regular syllabus. All the units with mentally retarded learners in regular schools shared books and syllabus with regular learners. Findings show that textbooks and teachers' guides were not adequate. This consequently constrains the teachers' effectiveness in implementing P.E. to mentally retarded learners in most of the institutions visited.

4.5 Time Utilised for P.E. Lessons to Mentally Retarded Learners.

According to the current curriculum, the standard time for teaching a P.E. lesson is 30 minutes for lower primary school and 35 minutes for upper primary school. Within this time all the components of a P.E. lesson which include: the introductory, compensatory, class, group and final activities should be effectively carried out. The researcher found it necessary to gather information on time spent for teaching P.E. to the mentally retarded learners. Out of the 39 teachers surveyed, 59.0% indicated using 30 minutes, 28.2% indicated 35 minutes while 12.8% indicated more than 35 minutes. Table 23 has the details.

Table 23: The Duration of a P.E. Lessons

<table>
<thead>
<tr>
<th>Duration in Minutes</th>
<th>Number of teachers who responded</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>30</td>
<td>23</td>
<td>59.0</td>
</tr>
<tr>
<td>35</td>
<td>11</td>
<td>28.2</td>
</tr>
<tr>
<td>More than 35</td>
<td>5</td>
<td>12.8</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>100.0</td>
</tr>
</tbody>
</table>
The teachers were asked to comment on the standard time (30 minutes for lower primary and 35 for upper primary). Analysis of the responses revealed a great diversity. See Table 24 below.

Table 24: Teachers' Comments on the Standard Duration of a P.E. Lesson

<table>
<thead>
<tr>
<th>Comments</th>
<th>Number of Teachers who mentioned</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long</td>
<td>2</td>
<td>5.1</td>
</tr>
<tr>
<td>Enough</td>
<td>18</td>
<td>46.2</td>
</tr>
<tr>
<td>Short</td>
<td>19</td>
<td>48.7</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 24 shows that 48.7% of the teachers reported that the standard time was short while 46.2% felt that the time was enough. Only 5.1% of the teachers reported that the time was long. Asked to explain how the recommended time affects their effectiveness in implementing P.E. to the mentally retarded, the teachers' gave responses in Table 25 below. The teachers were allowed to give more than one response.

Table 25: How the Standard Duration of a P.E. Lessons Impacts on Teachers' Effectiveness

<table>
<thead>
<tr>
<th>Effects mentioned</th>
<th>Number of times mentioned</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers and learners do not achieve objective</td>
<td>16</td>
<td>32</td>
</tr>
<tr>
<td>Learners find the lessons too short</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>Learners get bored very fast</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Learners get exhausted very fast</td>
<td>17</td>
<td>34</td>
</tr>
<tr>
<td>Does not affect</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Findings on Table 25 show that 34% of the responses mentioned by the teachers indicated that learners got exhausted very fast. Thirty two percent indicated that the teachers did not achieve lesson objectives while 28% mentions indicated that learners found the lessons too short. Four percent stated that the learners get bored very fast. Only 2% mentioned that the standard time does not have an effect on the teachers effectiveness.

Observation of lessons during the study established that the retarded learners took up to 20 minutes in subsidiary functions like changing into P.E. kit, moving to the venue of the lesson and another 15 minutes to get ready for the next lesson after P.E. Most teachers found it difficult to go through all the components of a P.E. lesson within the standard time with the mentally retarded learners. Therefore the standard time allocated to a regular P.E. lesson was not enough with regard to the mentally retarded learners.

The teachers also had problems with getting the autistic learners to perform any activities with others within the stipulated time. These learners tended to isolate themselves from the rest of the class and it took a lot of time to persuade them to perform any activity. The teachers had also to cater for the learners' individual difference which were complex because of the varying handicapping conditions. This consumed a lot of lesson time.

From the results, it was evident that there was no uniformity in the duration teachers use to teach P.E to mentally retarded learners. It was also evident that teachers who found standard time too short spend part of the lesson time on auxiliary functions which are not part of the P.E. lesson. On the other hand, the teacher who found the time either long or enough, had it so because of the short attention span of the mentally
retarded learners. However a study should be carried out to establish an appropriate duration for a P.E lesson for mentally retarded learners.

4.6 The Impact of Teachers' Workload on Their Effectiveness

The teachers were asked to indicate the number of lessons they taught P.E to mentally retarded learners in a week. Results are on Table 26 below.

<table>
<thead>
<tr>
<th>Lessons</th>
<th>Number of teachers who responded n</th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than five</td>
<td>10</td>
<td>25.6</td>
</tr>
<tr>
<td>Five</td>
<td>22</td>
<td>56.4</td>
</tr>
<tr>
<td>Less than five</td>
<td>7</td>
<td>17.9</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>99.9</td>
</tr>
</tbody>
</table>

Disregarding the number of mentally handicapped in a class, Table 27 shows the number of teachers who responded to comment on their workload.

<table>
<thead>
<tr>
<th>Comments</th>
<th>No. of teachers who responded</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overload</td>
<td>8</td>
<td>20.5</td>
</tr>
<tr>
<td>Adequately loaded</td>
<td>26</td>
<td>66.7</td>
</tr>
<tr>
<td>Under loaded</td>
<td>5</td>
<td>12.8</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Results on table 27 above indicate that 66.7% of the teachers of mentally retarded learners indicated that they were adequately loaded. The 20.5% who stated that they were overloaded were asked about the implications on their effectiveness. They were allowed to give more than one response. Their responses are on Table 28 below.
Table 28: Constraints of Overload on Teacher’s Effectiveness

<table>
<thead>
<tr>
<th>Constraint</th>
<th>Number of times mentioned</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher get fatigued</td>
<td>5</td>
<td>45.5</td>
</tr>
<tr>
<td>Teachers do not cater for individual differences among learners</td>
<td>6</td>
<td>54.5</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>100.0</td>
</tr>
</tbody>
</table>

In Table 28 above 45.5% of the overloaded teachers indicated that teachers getting fatigued. The remaining 54.5% mentioned that teachers were not able to adequately cater for individual differences among learners and therefore, did not teach effectively. The two constraints were also evident during the lesson observations especially in institutions where one teacher had more than fifteen learners in a class. Examples of these institutions are Jacaranda, Nile road and Treeside. The teachers were also asked to indicate the number of pupils they handled in a class. Table 29 has details.

Table 29: The Number of Mentally Retarded Learners a Teacher Handles in a Class

<table>
<thead>
<tr>
<th>Number of Learners</th>
<th>Number of teachers who responded</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 to 10</td>
<td>8</td>
<td>20.5</td>
</tr>
<tr>
<td>11 to 15</td>
<td>14</td>
<td>35.9</td>
</tr>
<tr>
<td>16 to 20</td>
<td>16</td>
<td>41.0</td>
</tr>
<tr>
<td>20 and above</td>
<td>1</td>
<td>2.6</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 29 shows that over 50% of the teachers reported that they handled below 16 learners, while more than 40.0% handled over 16 learners. The observation of P.E. lessons revealed that the special units had lesser learners than the special schools. Most special units had between 6 and 15 learners with 1 or 2 teachers. Githurai however had 4 teachers. Most special schools had learners ranging from 16 to 20 in a class. Most of the teachers who affirmed that they were adequately loaded were from the special units.

4.7 Problems Teachers Encountered while Implementing P.E. to Mentally Retarded Learners

During the study, all the respondents were asked to list the problems they encountered when implementing the P.E. programme for mentally retarded learners and how it could be improved.

4.7.1 The Problems Mentioned by Teachers

The teachers were required to list the problems they encountered when implementing the current P.E. programme to the mentally retarded learners. The teachers mentioned multiple responses. Table 30 has details.
Table 30: The Problems Teachers Encounter

<table>
<thead>
<tr>
<th>Problems</th>
<th>Number of times Mentioned</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>unsuitable syllabus</td>
<td>38</td>
<td>13.9</td>
</tr>
<tr>
<td>inadequate facilities</td>
<td>38</td>
<td>13.9</td>
</tr>
<tr>
<td>Diversity in handicapping condition</td>
<td>35</td>
<td>12.8</td>
</tr>
<tr>
<td>Negative influence of administrator</td>
<td>34</td>
<td>12.5</td>
</tr>
<tr>
<td>Liability to accidents</td>
<td>31</td>
<td>11.4</td>
</tr>
<tr>
<td>Longer P.E. lessons</td>
<td>27</td>
<td>9.9</td>
</tr>
<tr>
<td>Lack of special training</td>
<td>27</td>
<td>9.9</td>
</tr>
<tr>
<td>Learners health problems</td>
<td>19</td>
<td>6.97</td>
</tr>
<tr>
<td>Heavy workload</td>
<td>8</td>
<td>2.9</td>
</tr>
<tr>
<td>Negative attitude of pupil</td>
<td>5</td>
<td>1.8</td>
</tr>
<tr>
<td>Lack of teachers motivation</td>
<td>5</td>
<td>1.8</td>
</tr>
<tr>
<td>Poor perceptual-motor co-ordination</td>
<td>4</td>
<td>1.5</td>
</tr>
<tr>
<td>Bad weather</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>Total mentions</td>
<td>273</td>
<td>100.0</td>
</tr>
</tbody>
</table>

From the results on table 30, unsuitable syllabus and inadequate facilities had the highest frequencies of responses than any other problem mentioned by teachers. Each of the two factors accounted for about 14% of the total frequency of problems mentioned. During observation, it was evident that most of the P.E. equipment and facilities available in the institutions (especially the units with regular schools) were meant for regular learners and not for the mentally retarded. A discussion with some of the headteachers on lack of equipment and facilities for the mentally retarded revealed that they considered the needs of the regular learners before the mentally retarded.

Diversity in handicapping conditions among the learners had the second highest proportion (12.8%) of the total frequency of problems mentioned by teachers. This was also evident during the lesson.
observations. The classes had learners of different types and levels of retardation. They were also of differing ages and health complications. Most classes had the mild and moderately retarded pupils put together with the autistic. At the same time, most of the learners had other health complication which included asthma and epilepsy, poor sight, obesity, hearing and physical disorders. This diversity in handicapping conditions constrains effective teaching of P.E. to the mentally retarded learners.

Table 30 indicated that 12.4% of the total frequency of problems indicated that the administrators had negative attitude toward P.E. programme to mentally retarded learners. Most teachers revealed that the headteachers were reluctant in purchasing and maintaining P.E. facilities for the mentally retarded. This concurs with the results from the headteachers which indicated that P.E. for mentally retarded was not a priority to them. Such influence from administrators greatly constrained teachers' effectiveness during the implementation of P.E. to the mentally retarded learners.

Learners' liability to accidents as a constraint to teachers' effectiveness had 11.4% of the total frequency of problem mentioned by the teachers. This was also evident during lesson observations. Because of their various handicapping conditions and poor condition of the equipment and facilities used during P.E. lesson, most learners were liable to accidents. The learners' handicapping conditions (which include poor health, poor sight, psychomotor abilities and the mental retardation) also made them liable to accidents. Some of them had very poor perceptual motor co-ordination which made them lack control over their movement. This made them vulnerable to accidents during P.E. lessons. Teachers were therefore forced to concentrate on the learners' safety most of the time. Learners' proneness to accidents was therefore a constraint to teachers effectiveness in the implementation of P.E. lessons.
The standard time for a regular P.E. lesson took 9.9% of the total frequency of problems mentioned by teachers. This was also evident during lesson observations. Most teachers used more than the required time. The teachers spent most of the lesson time preparing the learners for the P.E. lesson and cooling them down in preparation for the following lessons.

Lack of special training among teachers was also mentioned as a constrain to the implementation of P.E. to the mentally retarded. As indicated on table 30, this constrain had 9.9% of the total frequency of problems mentioned.

A cross-tabulation of results on special training with other items (like achievement of objectives, ability to interpret and adapt the syllabus) indicated that lack of special training as a constraint to teacher effectiveness was mainly highlighted by teachers who had not received special training. Lesson observation and discussion with teachers indicated that teachers who were not specially trained encountered more constraints than those who were specially trained. This happened probably because the teachers who are not specially trained had not acquired skills on how to handle mentally retarded learners. It became obvious during lesson observations that most of the teachers who were not specially trained lacked control of their class. The teachers who were not specially trained also found it difficult to interpret the syllabus as they taught the mentally retarded learners. They were also unable to adapt equipment and facilities to suit the learners, handle learners with a diversity in handicapping conditions and above all, some of them found the activities in the syllabus irrelevant to the mentally retarded learners.

Table 30 also indicates that heavy workload was a factor that constrained teachers' effectiveness in the implementation of physical education to mentally retarded learners. During observations it was clear that all classes had learners of different levels of mental retardation and
ages. This contradicts the recommendations of the Ministry of Education in the 1981 Policy Paper on special education which states that learners of different age and level of mental retardation should not be placed in one class. This increases the range of diversity in handicapping conditions and therefore constrains the effectiveness of teachers as they implement any educational programme to the learners.

Negative attitude of learners was also mentioned by teachers as a problem. This was mainly observed by the research from the autistic learners. These learners have a form of mental retardation which causes them to withdraw into privacy and not want to communicate with others or respond to their environment. Dunn and Fait (1984) states that mentally retarded learners also have low tolerance and a shorter attention span compared to their non retarded counterparts. Therefore, they have difficulties in performing P.E. activities which require tolerance and attention. Responses from the teachers also indicated that most mentally retarded learners have problems with performing activities which require concentration and co-ordination. This could result into mentally retarded individuals manifesting temper due to perceiving themselves as being forced to do impossible tasks as Dunn and Fait (1984) state. Such an attitude from the learners constrain a teacher's effectiveness. However, lesson observations and discussion with teachers and the inspector revealed that most mentally retarded learners enjoy P.E. activities more than other subjects.

Lack of motivation was mentioned by the teachers as a problem (table 30). The teachers felt that the nature of the learners they handled made them do extra work which was not compensated. One of the teachers said that the work they did was worth more than the 300 Kenya shillings added on to their salary. The teachers felt that inadequate motivation in terms of salary or allowances was a constraint on their effectiveness.
Perceptual-motor dysfunction had 1.5% of the total frequency of problems mentioned. Perceptual-motor dysfunction are typically associated with mentally retarded learners. This exhibits itself in the clumsiness of mentally retarded learners as they perform their activities which involve concentration and co-ordination, particularly for the gymnastic activities. This is mainly due to neurological problems within learners. According to Sherrill (1981), perpetual-motor dysfunction of any learner should concern his or her P.E. teacher. However, special training offered to a teacher should enable him or her to handle learners with perceptual-motor dysfunction. Responses from the study revealed that three out of four teachers who mentioned perceptual-motor dysfunction as a constraint to their effectiveness were not specially trained in handling mentally retarded learners.

Bad weather had the least proportion of the total frequency of problems mentioned. The teachers explained that very cool, rainy or dry and dusty weather has varying negative effects on learners with poor health conditions such as asthma. They also stated that bad weather requires a teacher to take extra care of the learners because of the health problems accompanying mental retardation.

4.7.2 Problems Mentioned by Headteachers

The headteachers were also asked to list the problems they thought teachers encountered while implementing P.E. to mentally retarded learners. This information was used to corroborate the teachers' responses. Out of the 20 headteachers surveyed, learners varying disabilities was mentioned 4 times (13.3%), teachers' lack of special training was mentioned 5 times (16.6%) unsuitable syllabus was mentioned (13.3%), inadequacy of equipment and facilities had 8 mentions (26.6%), constraint due to learners medical
problems was mentioned 3 times (10.0%). inadequacy of finances to purchase and maintain the equipment and facilities was mentioned 6 times (20%).

4.7.3 Problems Mentioned by the Inspector and the Tutor

The interview with the special education inspector and tutor disclosed that there are:

1. inadequate equipment and facilities
2. lack of special training in handling learners with mental retardation
3. heavy workload
4. Lack of appropriate textbooks to guide the teachers.

4.8 Solutions to the Problems Teachers Encounter

The solutions suggested by teachers on how the problems they encounter in the implementation of P.E. to mentally retarded learners could be solved are summarized on table 31 below.
Table 31: Solutions Suggested by Teachers.

<table>
<thead>
<tr>
<th>Suggested solutions</th>
<th>Number of times mentioned</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provision of relevant P.E. Syllabus</td>
<td>38</td>
<td>19.8</td>
</tr>
<tr>
<td>Seeking opinion of teachers when preparing the syllabus</td>
<td>36</td>
<td>18.7</td>
</tr>
<tr>
<td>Improved special teacher training course for mentally retarded</td>
<td>34</td>
<td>17.7</td>
</tr>
<tr>
<td>Provision of adequate and appropriate equipment and facilities</td>
<td>34</td>
<td>17.7</td>
</tr>
<tr>
<td>Provision of relevant textbooks</td>
<td>30</td>
<td>15.6</td>
</tr>
<tr>
<td>Longer P.E. lessons</td>
<td>13</td>
<td>6.8</td>
</tr>
<tr>
<td>Doctors, Psychotherapists should advice teachers</td>
<td>3</td>
<td>1.6</td>
</tr>
<tr>
<td>Regular visits from special education officers</td>
<td>3</td>
<td>1.6</td>
</tr>
<tr>
<td>Competition in sporting activities with other institutions</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Total mentions</td>
<td>192</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 31 shows that the need for a relevant P.E. syllabus had 19.8% of the total frequencies of the responses. This was the highest proportion of mentions for the solution. This was followed by mentions related to the seeking of the opinion of experienced teachers during the preparation of the syllabus which had 18.7% of the total frequency of the responses mentioned. These two suggestions would help solve the constraints related to unsuitable syllabus. The improvement of special teacher training course for mentally retarded had 17.7% of the total frequencies of responses mentioned. Likewise, the provision of adequate and appropriate equipment and facilities had 17.7% mentions. Provision of relevant textbooks had 15.6% of the total mentions. The other solutions included the increase of time allocated to P.E. lesson for mentally retarded learners.
necessity of doctors and psychotherapists to examine and advice teachers on
the health conditions of all learners. regular visits from special
education officers and encouraging competition in sporting activities among
mentally retarded learners. These suggestions could also help minimize
some of the constraints mentioned in table 31.

The headteachers, on the other hand, gave suggestions on how P.E. for
mentally retarded could be improved. Their responses were as summarized on
Table 32 below.

Table 32: Headteachers’ Suggestions on How to Improve P.E. for the
Mentally Retarded.

<table>
<thead>
<tr>
<th>Suggested Solutions</th>
<th>Number of times Mentioned</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provision of equipments and facilities</td>
<td>18</td>
<td>26.1</td>
</tr>
<tr>
<td>Improvement on special teacher training</td>
<td>15</td>
<td>21.7</td>
</tr>
<tr>
<td>Identification of suitable activities for syllabus</td>
<td>15</td>
<td>21.7</td>
</tr>
<tr>
<td>Training of more teachers</td>
<td>12</td>
<td>17.4</td>
</tr>
<tr>
<td>Provision of assistants for teachers</td>
<td>9</td>
<td>13.1</td>
</tr>
<tr>
<td>Total Mentions</td>
<td>69</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Findings on table 32 indicated similarity between the suggestions by the
headteachers and the ones by teachers. However, in the case of
headteachers, the provision of equipment and facilities had the highest
number of mentions, followed by improvement of special training and then
the identification of suitable activities for the syllabus. Provision of
assistants for teachers was also mentioned.

The K.I.S.E P.E. tutor and special education inspector gave their
suggestions on how P.E. programme could be improved. The tutor suggested
the deployment of specialists in the preparation of educational programmes for mentally retarded learners at K.I.E so that they could prepare suitable syllabus and teachers guides, as well as the provision of adequate equipment and facilities in the schools and at K.I.S.E. Likewise, the inspector suggested that experts be deployed to give advice and prepare suitable programme for the mentally retarded and that policy related to education programme for mentally retarded be reviewed.
CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

In this chapter, summary, conclusions and recommendations were made on matters related to policy, implementation and areas for further research with regard to P.E. for mentally retarded learners.

5.2 Summary and Conclusion

5.2.1 Summary

The study was conducted in twenty institutions with mentally retarded learners in Nairobi. The population consisted of 44 teachers, 20 headteachers, 1 Inspector of institutions with mentally retarded learners, 1 tutor for P.E at the K.I.S.E. The instruments utilised for data collection were: questionnaires for teachers and headteachers, interview schedule for the tutor and the inspector. An observation schedule and a checklist, were also used. The questionnaires were administered to all P.E teachers and headteachers in the study sample. Observation was carried out in 10 (ten) institutions (2 special schools and 8 units with mentally retarded learners in regular schools). The study was guided by the following research questions:

(i) What is the opinion of teachers on the suitability of the regular P.E. syllabus to mentally retarded learners?

(ii) Are there adequate teaching resources for effective implementation of P.E. to mentally retarded?

(iii) Is the time allocated to teaching P.E. to the mentally retarded adequate?

(iv) What is the impact of teachers' workload and the number of learners per class on their effectiveness in teaching P.E. to mentally retarded learners?

(v) What other factors constrain teachers' effectiveness in implementing P.E to the mentally retarded learners?
(vi) What suggestions can teachers, headteachers, inspectors, and tutors offer for improvement and future planning of P.E to mentally retarded learners.

Data obtained from the research instruments were analyzed and presented in frequencies and percentages. The major findings of the study are summarized in Table 33.
## Table 33: SUMMARY OF THE FINDINGS OF THE STUDY

<table>
<thead>
<tr>
<th>FINDING</th>
<th>SITUATION</th>
<th>SOLUTIONS SUGGESTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There is no syllabus specially prepared for P.E. to the mentally</td>
<td>- Teachers use the one for regular learners</td>
<td>- A study should be done to come up with an appropriate syllabus.</td>
</tr>
<tr>
<td>retarded learners</td>
<td>- Teachers have problems with:</td>
<td>- Provision of an appropriate syllabus</td>
</tr>
<tr>
<td></td>
<td>(i) interpreting the activities to suit their learners</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(ii) achieving the stated objectives</td>
<td></td>
</tr>
<tr>
<td>2. The suitability, availability and maintenance of equipment,</td>
<td>- Skills are either not taught at all or the teaching is inadequate</td>
<td>Provision of appropriate equipment facilities and guides</td>
</tr>
<tr>
<td>facilities and textbooks is inadequate</td>
<td>- Learners are liable to accidents</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- the teachers strain</td>
<td></td>
</tr>
<tr>
<td>3. Majority (66.7%) of teachers were not specially trained</td>
<td>- teachers have difficulties in controlling learners and handling the</td>
<td>All teachers in the institution should get special training in handling the mentally</td>
</tr>
<tr>
<td></td>
<td>diversity in their handicapping conditions</td>
<td>retarded learners</td>
</tr>
<tr>
<td></td>
<td>- teachers cannot adapt syllabus to suit the learners</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- teachers are unable to improvise equipment</td>
<td></td>
</tr>
<tr>
<td>4. Lack of uniformity in the duration used to teach P.E.</td>
<td>- The time used ranges from 35 minutes to an hour - this is not in line</td>
<td>A study be undertaken with the help of the experienced teachers and other experts to</td>
</tr>
<tr>
<td></td>
<td>with the time allocated in the current syllabus</td>
<td>establish a suitable length for a P.E. lesson to mentally retarded learners</td>
</tr>
<tr>
<td>5. Learners of various ages and levels of mental retardation are taught</td>
<td>- The teachers have heavy workload as they handle:</td>
<td>- Learners of the same mental age should be put in one class</td>
</tr>
<tr>
<td>in the same class</td>
<td>(i) many individuals in a class</td>
<td>- The number of learners in one class should be minimised</td>
</tr>
<tr>
<td></td>
<td>(ii) diversity in handicapping conditions</td>
<td>- Teachers should be given assistants</td>
</tr>
<tr>
<td>6. Gender imbalance among Teachers</td>
<td>- Females (84.6%) and males (15.4%)</td>
<td>There should be a gender balance among the teachers</td>
</tr>
<tr>
<td></td>
<td>- It's a constraint when female teachers get a maternity leave and they</td>
<td></td>
</tr>
<tr>
<td></td>
<td>are not replaced by qualified teachers</td>
<td></td>
</tr>
</tbody>
</table>
5.2.2 Conclusions

Five general conclusions about the constraints teachers encounter while implementing P.E to the mentally retarded may be drawn from the findings of the study.

1. The teachers are constrained by the syllabus they use to teach P.E to the mentally retarded learners. There was evidence from their responses that they could not achieve the objectives with their learners. They also found difficulties in interpreting the activities in the syllabus when they are teaching their learners.

2. Economic and other unfavourable circumstances have caused the availability, suitability and maintenance of the P.E equipment and facilities to be inadequate.

3. Majority of the teachers were not specially trained to handle mentally retarded learners. Findings revealed that only one third of the teachers were specially trained to handle this learners.

4. There was lack of uniformity in the duration used to teach P.E to mentally retarded learners. The standard time (30-35 minutes) was short for a P.E. lesson to the mentally retarded learners. The actual time used ranged from 45 to 60 minutes.

5. Learners of various levels of mental retardation and ages were taught in one classroom. This causes the teachers to have heavy workload and at the same time teachers are constrained by the diversity in handicapping condition among learners.

In summary, the study established that the major factors which constrain effective implementation of the physical education programme to mentally retarded learners in Nairobi were as listed below:
(i) Unsuitable syllabus
(ii) Inadequate equipment and facilities
(iii) Diversity in handicapping conditions among learners
(iv) Administrators' negative attitude
(v) Learners liability to accidents
(vi) Lack of special training for teachers
(vii) Lack of motivation for teachers
(viii) Learners' health problems
(ix) Heavy teachers' workload
(x) Learners' negative attitudes
(xi) Time allocated for P.E. lessons
(xii) Learners' poor perceptual-motor disfunction
(xiii) Bad weather

5.3 Recommendations

Based on the conclusions of the study, the following recommendations were made to policy makers/planners: implementers and researchers in the area of physical education programmes for mentally retarded learners.

5.3.1 Policy and Implementation

(a) K.I.E. should develop a suitable syllabus geared to the capabilities of mentally retarded learners after a review of the current syllabus and an in-depth research with contribution from experienced P.E. teachers and experts.

(b) There is also the need to give special training to teachers who handle mentally retarded learners and yet they have not specially trained. There is need to expand
and improve the special training course in terms of capacity and quality.

(c) The Ministry of Education and Human Resource Development should develop policies which require both public and private sectors of the society that benefit from Education Programmes for mentally retarded learners to contribute finances for the programmes. This will help minimize the constraints related to the provision of equipment and facilities.

(d) The Ministry of Education and Human Resource Development should encourage specialists in the area of P.E. for mentally retarded from within and outside of Kenya, to write, to publish and supply books and guides for the programme.

(e) The Ministry of Education and Human Resource Development should review policies regarding the education programmes and placement of mentally retarded learners in the institutions so as to enhance integration. This will minimize constraints related to diversity in handicapping conditions, teachers' workload and the number of learners per class.

(f) Teachers for mentally retarded learners should be given higher remuneration because they handle more complex learners. This will motivate the teachers and thus enhance their effectiveness in the implementation of education programmes to mentally retarded learners. It will also reduce the turnover of specially trained teachers.
5.3.2 Areas of further Research

There is a need to carry out further research in the following areas:

(i) The situations in Institutions for mentally retarded learners in other provinces. The findings should be compared with outcome of this study and thereby help in designing a wholesome set of policy intervention measures to effectively aid the mentally retarded learners.

(ii) The current and possible pattern of financing special education for the mentally retarded and the implication of such funding mechanisms in the acquisition of requisite facilities for the mentally retarded.

(iii) The physiological and psychological benefits and draw-backs of varied duration for P.E. lessons e.g. 30 minute lesson, 40 minute lesson, 50 minute lesson and 1 hour lesson.

(iv) The learning habits and activities of the mentally retarded learners during P.E. lessons vis-à-vis those of regular learners.
African Association of Health, Physical Education Recreation - Sports and Dance (1994): Regional Association for Physical, Health Educatio
Recreation and Dance Proceeding of the African 1st Annual Conference October, 4th to 7th Gaberone, Botswana.


World Conference on Education For All (1990): World Declaration on Education For All. Jomttein: Inter-Agency Commission

APPENDIX A

Implementation of Physical Education to the Mentally Retarded: Constraints Teachers Encounter in Nairobi

QUESTIONNAIRE FOR TEACHERS

Name of School ____________________________________________

INSTRUCTIONS:

Respond to all questions in sections 1 - 6 by putting a tick in the appropriate box or by filling the information in the space provided.

1.0. Section 1: Biographical Information of teacher

1. Indicate your sex
   1. Male [ ]
   2. Female [ ]

2. Are you a professionally trained teacher?
   1. Yes [ ]
   2. No [ ]

3. What is your highest professional qualification?
   1. P1 [ ]
   2. P2 [ ]
   3. P3 [ ]
   4. Diploma [ ]
   5. Any other (Specify) ______________________

4. Which level of mentally retarded learners do you teach physical education?
   1. Mild to moderate [ ]
   2. Moderate [ ]
   3. Mild [ ]
   4. All levels [ ]
   5. Don't know [ ]
5. Are you specially trained to teach physical education to the mentally retarded?

1. Yes [ ]
2. No [ ]

6. How many years have you taught physical education to mentally retarded learners?

1. Less than 1 year [ ]
2. 1 - 5 years [ ]
3. 6 - 10 years [ ]
4. 11 - 15 years [ ]
5. More than 15 years [ ]

2.0 Section 2: The current P.E. syllabus used to teach mentally retarded learners

7. Assess how well the stated objectives of physical education are being achieved by mentally retarded learners.

1. Easily achieved [ ]
2. Difficult to achieve [ ]
3. Not sure [ ]

8. In your own opinion, how relevant are the set physical education learning activities to the mentally retarded learners?

1. Relevant [ ]
2. Irrelevant [ ]
3. Not sure [ ]

9. How do you rate the interpretation of the regular current physical education syllabus with reference to the mentally retarded learners?

1. Easy to interpret [ ]
2. Difficult to interpret [ ]
3. Undecided [ ]
10. (a) Can all the activities in the syllabus be performed by the mentally retarded learners?

1. Yes [ ]
2. No [ ]

(b) If 'No' specify the activities which cannot be performed by mentally retarded learners.

(c) What constraint do you encounter when implementing the regular syllabus to mentally retarded learners?

(d) What kind of adjustments do you think are necessary in making the activities that are difficult for the mentally retarded suitable for them?

3.0 Section 3: Availability, Adequacy, Suitability and Utilization of Teaching and Learning Resources

11. How would you rate the present physical education facilities in your institution?

1. Adequate [ ]
2. Inadequate [ ]
3. Not sure [ ]

12. How would you rate the maintenance of the physical education facilities and equipment in your institution?

1. Adequate [ ]
2. Inadequate [ ]
3. Not sure [ ]
13. (a) Are the equipment and facilities adapted for use by the mentally retarded learners?

1. Yes [ ]
2. No [ ]

(b) If no, how does this affect teaching P.E to the mentally retarded?

________________________________________________________________________

14. (a) Does the school have physical education textbooks for teachers who handles mentally retarded?

1. Yes [ ]
2. No [ ]

(b) If 'No' how does this affect the teaching of the physical education to the mentally retarded?

________________________________________________________________________

4.0 Section 4: Time Factor and P.E. Programme

15. How long do you take to teach?

1. 30 minutes [ ]
2. 35 minutes [ ]
3. Other (specify) [ ]

________________________________________________________________________

16. Do pupils in your class change into physical education kits for the physical education lesson?

1. Yes [ ]
2. No [ ]

17. If the learners in your class change or remove the aid devices, estimate the time they take (in minutes) before physical education.

________________________________________________________________________
18. Do you use off-site facilities (facilities out of your school compound) for physical education lesson?
   1. Yes [ ]
   2. No [ ]

If 'Yes' estimate the time (in minutes) that pupils spend to reach these facilities

19. What can you say about the length of the physical education lessons for the mentally retarded learners?
   1. Too long [ ]
   2. Long [ ]
   3. Enough [ ]
   4. Short [ ]
   5. Too short [ ]

20. How does the length of time affect the teaching of physical education to the mentally retarded?

5.0 Teachers Workload

21. What is the total number of physical education lessons that you teach to the mentally retarded per week?
   1. Less than 10 [ ]
   2. 11 - 20 [ ]
   3. 21 - 30 [ ]
   4. 31 - 40 [ ]
   5. More than 40 [ ]

22. Indicate the number of lessons that you teach per week in one class
   1. 3 lessons [ ]
   2. 5 lessons [ ]
   3. Others (specify) ________________________________
23. (a) What can you say about the number of physical education lessons for mentally retarded learners allocated to you per week?

1. I am overloaded [ ]
2. I am adequately loaded [ ]
3. I am under loaded [ ]

(b) If you are over-loaded, how does the overloading affect your teaching of physical education to the mentally retarded?

24. Indicate the number of mentally retarded pupils you handle in a class.

6.0. Factors Constraining The Teaching of Physical Education to the Mentally Retarded

25. List down any other constraints that you encountered in the implementation of the current physical education programme to the mentally retarded.

a. __________________________
b. ___________________________
c. ___________________________
d. ___________________________
e. ___________________________
f. ___________________________
g. ___________________________

26. List down any possible solution that can help improve the effectiveness of physical education programme to the mentally retarded.

a. __________________________
b. ___________________________
c. ___________________________
d. ___________________________
e. ___________________________
f. ___________________________
g. ___________________________

27. Suggest ways of improving the teaching of Physical Education to the mentally retarded learners in Kenya.

THANKS FOR YOUR CO-OPERATION
APPENDIX B

Implementation of Physical Education to the Mentally Retarded: Constraints Teachers Encounter in Nairobi

QUESTIONNAIRE FOR HEADTEACHERS

Name of School _____________________________

1. Sex of the headteacher/deputy
   1. Male [ ]
   2. Female [ ]

2. What position do you hold in the school?
   1. Headteacher [ ]
   2. Deputy Headteacher [ ]

3. Have you been trained to teach physical education to the mentally retarded?
   1. Yes [ ]
   2. No [ ]

4. Have you ever taught physical education to the mentally retarded?
   1. Yes [ ]
   2. No [ ]

5. If yes, how long have you taught P.E. to the mentally retarded?

6. With reference to your school, state the Number of Mentally Retarded in each of the following categories.
   1. Mild [ ]
   2. Moderate [ ]
   3. Profound [ ]
   4. Severe [ ]

7. How would you rate the level of maintenance of the permanent playing facilities in your school?
   1. Adequate [ ]
   2. Inadequate [ ]
   3. Very inadequate [ ]
8. Would you say that the facilities available for teaching physical education in your school/institution are adequate?

1. Yes [ ]
2. No [ ]

9. How does the adequacy or inadequacy of the facilities affect the teaching of physical education in your school?

10. (a) Are the available facilities adapted for use by the mentally retarded learners?

1. Yes [ ]
2. No [ ]

(b) If 'No' how does your school ensure that the facilities available are used by the mentally retarded learners?

11. Are the equipment available for use in teaching physical education adequate?

1. Yes [ ]
2. No [ ]

12. Are the equipment used for physical education adapted for use by the mentally retarded?

1. Yes [ ]
2. No [ ]

13. If the equipment are not adapted how does your school ensure that they are used by the mentally retarded learners?

14. (a) Does your school have any Physical Education textbooks for teachers?

1. Yes [ ]
2. No [ ]

(b) If there are no Physical Education textbooks, how does this affect the teaching of physical education in your school?

15. What other problems affect the teaching of physical education to the mentally retarded in your school?

(a)
(b)
(c)
(d)
(e)
16. Suggest any other ways of improving the teaching of physical education to the mentally retarded pupils in special primary schools

(a) 
(b) 
(c) 
(d) 
(e) 
(f) 
(g) 
(h) 
(i) 
(j) 

THANK YOU FOR YOUR CO-OPERATION
APPENDIX C

Implementation of Physical Education to the Mentally Retarded: Constraints Teachers' Encounter in Nairobi

**INTERVIEW SCHEDULE FOR THE INSPECTOR/TUTOR FOR P.E. AT K.I.S.E.**

1. Designation

2. Sex

3. What is your highest professional qualification?

4. How long have you worked in your office?

5. What training have you received for your job?

6. (a) Have you ever taught in an institution/unit for mentally retarded learners?
   (b) If 'Yes' did you teach them physical education?
   (c) If you have taught PE had you received special training in it?

7. Do you assess P.E. lessons in Institutions with mentally retarded learners

8. What can you say about the adequacy of the following in relation to physical education in institutions for the mentally retarded in Nairobi?
   (a) Training of teachers?
   (b) Equipment and facilities?
   (c) Time allocation for P.E lessons?
   (d) The syllabus and textbooks?

9. List the problems that you think teachers encounter when implementing physical education in institutions for the mentally retarded in Nairobi.

10. What general problems do you encounter in your work that relate to the effective implementation of the current physical education programme to the mentally retarded?

11. Suggest ways in which the above mentioned problems could be reduced if not completely solved?

THANK YOU FOR YOUR CO-OPERATION
APPENDIX D

Implementation of Physical Education to the Mentally Retarded: Constraints Teachers Encounter

OBSERVATION SCHEDULE

Name of school ________________________________

SECTION A: The School Physical Education Programme

1. Is physical education on the timetable?
   1. Yes [ ]
   2. No [ ]

2. How many physical education lessons are scheduled per week for the mentally retarded learners?
   (a) Mildly retarded learners ____________________
   (b) Severely retarded learners ____________________
   (c) Profoundly retarded learners ____________________

3. What is the length of a single physical education lesson for the mentally retarded learners?
   (a) Mildly retarded learners ____________________
   (b) Severely retarded learners ____________________
   (c) Profoundly retarded learners ____________________
### Part 1: A Check List for Availability and Condition of Physical Education Facilities

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<th>Availability</th>
<th>Functional</th>
<th>Adapted</th>
<th>Accessible</th>
<th>QTY</th>
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<td>NO</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
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<tr>
<td>Rounders court</td>
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<th>Quantity</th>
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<tr>
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<td>Hockey</td>
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<td>- Hockey Sticks</td>
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<td></td>
</tr>
</tbody>
</table>
Part 3: A Checklist for the Availability of Physical Education Textbooks

1. Are the following resources for physical education available in the school?

A) Textbooks:

   (i) For learners?

   1. Yes [ ]
   2. No [ ]

   (ii) For Teachers

   1. Yes [ ]
   2. No [ ]

B) Syllabi?

   1. Yes [ ]
   2. No [ ]

C) Teachers guide?

   1. Yes [ ]
   2. No [ ]

   Others (Specify)
   a. 
   b. 
   c. 
   d. 
   e. 
   f. 

SECTION C: Lesson Observation Schedule

1. Name of School ________________________________

2. Class __________________

3. Do pupils use on-site facilities

   Yes [ ]
   No [ ]

   If 'Yes' which ones? ________________________________
4. (a) Do pupils use off-site facilities?  
   Yes [ ]  
   No [ ]

   (b) If 'Yes' which ones? ____________________________

   (c) How convenient are these arrangements i.e. provides learners with opportunities to walk across the street under the direction of the teachers (learning self-reliance)?

5. What time is spent traveling to off-site facilities? ____________________________ minutes

6. Do your pupils change for the physical education lessons?  
   1. Yes [ ]  
   2. No [ ]

7. What time is spent changing before the beginning of the lesson? __________ minutes

8. (a) Does the teacher have any assistants?  
   1. Yes [ ]  
   2. No [ ]

   (b) If 'Yes' in which ways do they assist the teacher? ____________________________

9. What is the Pupil - Teacher ratio? ____________________________

10. (a) Are there any equipment for physical education in use?  
    1. Yes [ ]  
    2. No [ ]

   (b) If 'Yes' which ones? ____________________________

   (c) Which basic equipment are not available __________

11. Are the pieces of equipment sufficient in quantity?  
    1. Yes [ ]  
    2. No [ ]
12. Is the equipment adapted to meet the requirements for the mentally retarded?
   1. Yes
   2. No

13. (a) Do all the pupils manage to do the activities demonstrated/explained by the teacher?
   1. Yes
   2. No

   (b) If there are some activities the pupils cannot do, which ones?

   (c) Why are the learners not able to perform these activities (13b) above?

14. (a) Are all the components of a regular physical education lesson covered during the lesson?
   1. Yes
   2. No

   (b) If 'Yes' are they adequately covered?
   1. Yes
   2. No

   (c) If there are some components not covered which ones?

   (d) Why are these components not covered?

THANK YOU FOR YOUR CO-OPERATION
### APPENDIX E

**Special schools for the Mentally Handicapped in Nairobi.**

<table>
<thead>
<tr>
<th>NAMES</th>
<th>NO. OF STUDENTS OF</th>
<th>NO. OF SPECIALISTS</th>
<th>No. OF TEACHERS</th>
<th>No. OF TEACHERS</th>
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<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
<td>TEACHERS NOT</td>
</tr>
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<td></td>
<td></td>
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<td>168</td>
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<td>35</td>
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<td>Tree Side Special School</td>
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<td>4</td>
<td>16</td>
<td>3</td>
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<tr>
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<td>6</td>
<td>14</td>
<td>20</td>
<td>1</td>
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<tr>
<td>Dagoreti Special School</td>
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<td>Kibera Integrated Special School</td>
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<td>4</td>
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<td>6</td>
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</tr>
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<td>Ronald Ngala Special Unit</td>
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<td>4</td>
<td>15</td>
<td>2</td>
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<td>Riruta High Special Unit</td>
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<td><strong>Totals</strong></td>
<td>379</td>
<td>229</td>
<td>625</td>
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Source: Ministry of Education 1995
### RESEARCH BUDGET

#### Transport

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
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<tr>
<td>Kenyatta University to the 23 schools twice (80 x 2 x 23)</td>
<td>Kshs. 3,680.00</td>
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<tr>
<td>2 Schools used for the pilot (160 x 2)</td>
<td>Kshs. 320.00</td>
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#### Subsistence

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<td>Meals while in the field for 37 days at Kshs. 100.00 per day (37 x 100)</td>
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#### Proposal

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<tr>
<td>Photocopying and Binding</td>
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<td>Computer Coding and Analysis</td>
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<tr>
<td>Thesis Typing, Photocopying and Binding</td>
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**GRAND TOTAL** Kshs. 51,860.00
## APPENDIX G

### RESEARCH SCHEDULE

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<td>a) Library Work</td>
<td>November - January 1994</td>
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<tr>
<td>b) Compiling and Discussing with Supervisors</td>
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<td>2. Pilot study</td>
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<tr>
<td>3. Correction of Research Instruments</td>
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<td>5. Data Analysis</td>
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