

# **Inclusion of Learners with Cerebral Palsy in Reading and Writing**

*A case study of teachers in two primary schools practising  
inclusive education in Kenya*

**Nereah Atieno OBIERO**



**Master of Philosophy in Special Needs Education**

**Department of Special Needs Education**

Faculty of Education

UNIVERSITY OF OSLO

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## **Abstract**

The term inclusion has been defined differently in many parts of the globe. In reference to Dakar Framework for Action all learners irrespective of their diverse needs should learn in the same environment. However the implementation has varied depending on the competence of the teachers who are the main implementers.

The study examined the ways the teachers implement inclusive education for learners with cerebral palsy, based on their training in special needs education. A qualitative approach with case study design is used in the study, so as to examine the phenomenon under investigation in details. Two teachers were purposefully selected for the study. The data was collected through interview, observation, informal talks and field notes.

The study was based on the theories that explore the role of social interaction and mediation in the child's learning and development such as Vygotsky social constructivist theory (the proximal zone of a child's development, 1978), Rogoff's (1990) socio-cultural concept of apprenticeship, and Feurstein's theory of Mediated learning (1979) in order to support the findings and make the study clear.

According to the findings the teachers understood the concept of inclusive education and had a positive attitude towards learners with cerebral palsy. The findings also revealed teachers training in specific area of disability had an influence in the teacher's understanding of the educational needs of learners. And that there is need for continued school based in-service training for teachers. The findings also revealed for equal participation there is need for adequate learning materials and encouragement of interaction among learners with and without cerebral palsy.



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## **Dedication**

I dedicate this work to my late parents, Richard Akomo and Mama Rael whom did not live to witness my achievement All these is due to the foundation you laid in me. And to my loving daughter Joan, you are special in my life.





## **LIST OF ABBREVIATION**

CSIE.....Centre for studies on inclusive education

DFEE..... Department of Education and Employment

FPE.....Free Primary Education

KISE.....Kenya Institute of Education

MLE.....Mediated learning experience

NCB.....National Children's Bureau

PDKCE.....Pha Delta Kappa's Centre for Evaluation

UNESCO.....United Nations Educational Scientific and Cultural Organisation



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# 1. Background of the study

## 1.1 Introduction

Inclusion is a goal that all participants in any society should aim at achieving to ensure that all persons regardless of their racial, economic, physical, cultural, political or any difference are not excluded from any of the society's activities. An inclusive society encourages full and equal participation of each individual respecting and valuing differences. Discrimination and bias against those who are different is eliminated through appropriate practices and policies.

Inclusive education is therefore a process of addressing learners' needs in their regular school using available resources to create opportunities for them to learn together in preparing them for life.

With the introduction of Free Primary Education in 2005 in Kenya, many learners accessed school. However, increased enrolment of children with special educational needs was not met with a corresponding increase in services and resources needed to provide them with quality education. The teacher-pupil ratio went up and the learners with disabilities are disadvantaged as the teacher is not able to differentiate work or allow individualized programme of study.

And since the classrooms are overcrowded many children and more so those with disabilities are not given the maximum support they may require. Children with cerebral palsy have a unique demand that should be attended to by its own right to enable them compete with others. In addition the demands for the completion of the curriculum and the large size of the classes in most schools make it difficult if not impossible for the teacher to do adequate supervision to all learners as would be required. Inadequate staffing in most of the schools equally undermines the ability of the teachers to discharge the duties as necessary. Proper attention to reading and writing may not be done properly in such schools.

Reading and writing are very essential for literacy in children. This allows for better understanding of the environment in which they function. Learning of reading and writing does not occur by chance, but are introduced and taught to the child/learner in a systematic and sequential manner. The teacher needs to organize the learning process, to enable each and every learner to acquire the basic reading and writing skills.

## 1.2 Research Problem

Kenya has ratified international documents that lay emphasis on the rights of persons with disabilities besides the national laws and policies. These international documents include; Universal Declaration of Human Rights (1948), UN Convention of the Rights of the Child (1989), Education for All (UNESCO 1991), Standard Rules on the Equalization of Opportunities for Persons with Disabilities (UN 1993), The Salamanca Statement and Framework for Action on Special Needs Education (UNESCO 1994) and the Dakar Framework for Action (UNESCO 2000). However Kenya has not fully met the goals stipulated in these documents.

The move to fully include learners with special educational needs in learning activities, more so in reading and writing in Kenya is still far from being achieved due to lack of adequate skills by the teachers. The teachers who have graduated with diploma in Special Needs Education certificate from Kenya Institute of Special Education have acquired the basic skills but may lack the confidence and practicability of implementing the programme. From verbal reports they possibly may feel their training was not exhaustive in certain areas of special needs education. Under these circumstances, learners with cerebral palsy may be left out in activities of reading and writing due to their motor dysfunction. There is therefore need to investigate how teachers trained in special needs education implement inclusive education for learners with cerebral Palsy during reading and writing.

### 1.3 Research Question

To investigate the research problem and achieve the purpose of the study, the main research question was:

***How are teachers trained in special needs education implementing inclusive education for learners with cerebral palsy during reading and writing?***

This study tried to answer the following sub- questions:

1. What understanding do teachers have about inclusion?
2. What knowledge do teachers have about educational needs of learners with cerebral palsy?
3. What methods do teachers use in teaching of reading and writing to learners with cerebral Palsy?
4. How do teachers organize their classrooms to address the needs of learners with cerebral palsy?
5. What teaching and learning materials do teachers use in the teaching of reading and writing to learners with cerebral palsy?
6. How do teachers facilitate interaction for learners with cerebral palsy in the classroom?

### 1.4 Justification of the study

Currently teachers are being trained in special needs education at Kenya Institute of Special Education (KISE) and three universities through regular and distance education programme, and three Universities. The impact has not however been felt in terms of methodology used for learners with disabilities especially those with cerebral palsy in reading and writing .The study would therefore shed light on some

weaknesses within special needs teacher education and the inclusion of children with cerebral palsy in reading and writing activities especially with the big enrolment now that free primary education has been introduced.

## 1.5 Aspects of the study

### **Inclusion**

In education inclusion is the provision of appropriate, high quality education for pupils with special needs in regular schools. It stands for an educational system that encompasses a wide diversity of pupils and that differentiates education in response to this diversity. (Hegarty S, Meijer C, Pijl S, 1997).

### Inclusive education

Inclusive education means educating learners with special educational needs in regular education setting. It means putting in place a whole suite of provisions, including adapted curriculum, adapted teaching methods, modified assessment techniques and accessibility arrangements, all of which require support for the educator at the classroom level (Mitchell 2008).

### Cerebral palsy

This is motor and posture disorder resulting to deficit or lesion to the brain. It affects the part of the brain that controls movement. This makes cerebral palsy different from other visible motor problems such as polio. Cerebral palsy can occur before birth, during birth or after birth due to an accident or injury. As a result voluntary movements and full control of the muscles is interfered with and so the development of gross and fine motor are delayed (Kirk, Gallagher, Anastasiow & Coleman 2006).

## 1.6 Reading

Reading is a communication process that involves the ability to respond to written language. It serves as both a communication tool and, information –gathering tool. It is a language based activity. Reading performance, good or poor, reflects the knowledge and competencies available to the learner and how these are activated and coordinated during the reading process (Hengari, J. V, 1995).

## 1.7 Writing

Writing on the other hand is a system for conveying or recording messages through constellation of visual symbols. (Adams, 1998).

## 1.8 Organization of the thesis

Chapter one comprises of an introduction, the statement of the problem, justification of the study and ends with the structure of the thesis.

Chapter two is the theoretical framework and related literature.

Chapter three contains the approach, choice of the design, area of study, informants, instruments, procedure for data collection and analysis. Ethical issues as well as issues related to validity and reliability of the study are discussed. The limitations are also presented.

Chapter four involves the presentation, analysis of the findings and cross-case analysis

Chapter Five discusses, concludes and make recommendations that should help improve on training of special needs education teachers on how to include children with cerebral palsy during reading and writing lessons.

## **2. Literature review and theoretical framework**

### **2.1 Introduction**

This study investigated how teachers trained in special needs education implement inclusion for learners with cerebral palsy during reading and writing lessons. This chapter deals with discussions of key concepts, an overview of previous studies related to inclusion, as well as the theoretical framework on which this study is based

### **2.2 Clarification of concepts**

There have been many studies done in relevance to inclusion of learners with special needs in the ordinary classrooms in different parts of the world. The studies referred to here deals with the importance of inclusion of learners with disabilities, and the factors that may influence the process. Some of the studies have used the terms integration or mainstreaming and others inclusion. In studies referred to in this paper they have been used synonymously as the terms refer to providing education to learners with disabilities in a least- restrictive environment.

#### **2.2.1 Mainstreaming**

To clarify on the terms, mainstreaming has been used to refer to the selective placement of learners with special educational needs in one or more "regular" education classes. Those who support mainstreaming generally assume that a student must "earn" his or her opportunity to be placed in regular classes by demonstrating an ability to "keep up" with the work assigned by the regular classroom teacher. It is the learner who must adapt so as to fit in the system (Phi Delta Kappa's Centre for Evaluation (PDKCE) 1993).



### **2.2.2 Integration**

Mittler (2000) states that integration involves the learner adapting to the needs of the school, there is no change in the school to accommodate the greater diversity of learners. Integration is about making the ordinary school special by putting in place very good school practices, teachers and equipment into regular settings. This could be done even if the need is uncalled for.

### **2.2.3 Inclusive education**

All over the world it has been found that the term inclusion has different meaning to different persons. To others it means a place, a classroom in a regular school building, the seat and position a learner occupies in an age-appropriate classroom. To some it means bringing on to board all those concerned to make the process on of inclusion to work. (Pijl, Meijer & Hergarty, 2000)

Inclusion is a term which expresses commitment to educate each child, to the maximum extent appropriate, in the school and classroom he or she would otherwise attend. It involves bringing the support services to the child (rather than moving the child to the services) and requires only that the child will benefit from being in the class (rather than having to keep up with the other students).

Inclusion refers to serving learners with full range of abilities and disabilities in the general education classroom with appropriate in-class support (Crawford, 1994, Roach, 1995; LoVette, 1996 & Salend, 200 in Horne and Timmons 2007). Booth (1999) describes it as a process of increasing participation of learners in and reducing their exclusion from the curricula, cultures and communities of neighbourhood mainstream centres of learning.

Inclusion normally implies attending school that the pupil would have attended in the absence of a significant special need. Learners are given opportunity to so that they take an active part in school life to enable him be valued member of the school community (Farrell 2000).

This in essence means that every child should be an equally valued member of the school culture. Inclusion is therefore seen as a process of increasing participation of children. The Centre for Studies on inclusive education (CSIE) has defined inclusive education as a process where all children and young people with and without disabilities or difficulties learn together in ordinary pre-school, schools, colleges and universities with appropriate network and support. It therefore means enabling all students to participate fully in the life and work of mainstream settings, whatever their needs (CSIE 2002).

The broad issues of pedagogy (or teaching and learning interactions and strategies) and inclusive education (or the recognition of diverse learners in schools and colleges) are of concern to all educators. It is important not to see inclusion as the concern of special educators but of concern to all those involved in the school or college setting. While the earlier 'integration' focus tended to be on physical access and specialist resources, inclusive education implies a shared responsibility and a joint concern (Corbett 2001).

Inclusive education is an evolving and 'alive' area influenced by prevailing educational trends, such as initiatives to reduce exclusions, and by the impact of external assessment measures and competition between schools.

As Thomas and Vaughan (2004) stated, the purpose of inclusive education is to value every child as equal for formal education so that they can participate more meaningfully in society during their adult life.

Mittler (2000) states that inclusion is a radical reform of the school system in terms of curriculum, assessment, pedagogy and grouping of pupils. It is viewed in terms of value system that welcomes and celebrates diversity arising from gender, nationality, and race, language, of origin, social background, and level of educational achievement or disability. Skjørten (2001) is also of the same view that inclusion is an inclusive society where families, kindergartens, schools and working places are welcoming to people with special needs. The concept of inclusion thereby becomes a

part of a broad human agenda that argues that all forms of segregation are morally an unacceptable.

### *Learning environment*

There has been substantial amount of research done on teachers concern about inclusion and the support that teachers feel are necessary in inclusive classroom (Daniel & King, 1997; Lipsky & Gartner, 1998; Lupart, 1998, Hammond 2003 in (Horne & Timmons 2007) showed that there were several variables that affected the inclusive classroom.

Norrell 1997 cited (Horne & Timmons 2007) suggested an inclusive classroom requires prior and on-going training for teachers, additional planning time, limitation of the number of special educational needs students to 3 per class, provision of teacher aids, additional monetary resources, and support from the principals and other staff.

Learners in a supportive environment may have high levels of self-efficacy and self motivation. Rye, (2005) emphasises it is important to create learning environment that are welcoming to the child. It is therefore the responsibility of the teacher to create an active learning environment which influences the lives of the children and the teachers through the learning session. The physical arrangement by the teacher provides the setting for learning and at the same time acts as a participant in the teaching and learning. The environment is also seen as a tool used by the teacher to teach. With adequate provision the learners are more involved and they may develop attention span and independence from the teacher. The environment can also play the role of the teacher. Teachers can easily arrange and position learning materials so that they play an active role in the teaching-learning process, even in the absence of the teacher. Organisation influences the movement and physical behaviour of children in the environment. These create interaction among learners.

Johnsen (2007) outlines other arrangements that can be taken into consideration so as to meet the needs of all learners; organizing into bigger classes may give an opportunity for learners to feel part of the group.

The group encourages children to help and support their peers in the group rather than compete against them. For the learner with cerebral palsy the development of a positive self –image is enhanced as they accomplish the tasks together. There is an opportunity for sharing in each others work and helping in a more natural way

Individual teaching is useful for teaching reading and writing as the learners are guided as per their individual educational needs. The dyadic teaching may create excellent possibilities for a variety of quality teaching.

### *Educational resources*

Teaching resources and materials as well as the school facilities, are part of the contributing factors in supporting inclusive practice. When a school is well equipped with basic teaching and learning resources, it makes teachers' jobs easier and the learning outcomes of the children will improve (Mapsea 2006). For example, being able to access reading books of different levels for all children helps children with reading difficulties to develop reading competencies at their level, Gross in (Mapsea 2006). Sometimes it is as basic as having the letters of alphabet in both concrete and pictorial forms to help children with learning and writing difficulties to practice their spelling. In some cases this does not mean obtaining sophisticated materials and at times creative teachers can use natural materials to support learning. The materials and activities used in developing reading and writing skills are of critical importance. To be maximally effective, they must consistently be selected with sensitivity to the needs and interests of the learners with whom they will be used. The Dakar Framework for Action (UNESCO 2000) put emphasis on the need to produce and distribute learning materials that are affordable and more suitable to local conditions.

## 2.3 Importance of inclusive education

There is emphasis that inclusion involves a response to diversity in the student group. Barton for example in Higgins, (2009), describes inclusion as ‘about listening to unfamiliar voices, being open, empowering all members, and about celebrating “difference” in dignified ways’. He argues that inclusive education should be thought of ‘as a transformation’ that moves away from thought and actions maintaining segregation and towards creating ‘new, non-discriminatory approaches to the tasks of education ... schools which value diversity emphasise the need to include all students in the culturally valued activities and goals of education.

Inclusive education is virtually the practice that provides school experiences to children with special needs in the same school and classrooms they would attend if they did not have special needs. It is the process during which all children, regardless of their abilities and needs, participate into the same school (Thomas 1997 cited in Angelides 2005). The main purpose of this process is educating all children regardless of differences, problems and difficulties having a vision for a school for all. Such a school accepts all children, understands their individuality and responds accordingly to their individual needs. A school for all is virtually a place where every child can develop according to its abilities, skills and talents (Angelides 2005).

Learners with special educational needs should be treated equally as their regular peers in an inclusive classroom. Studies have shown that learners with special needs educated in inclusive classroom do better academically than in a non-inclusive setting, Baker et al in (Peetsma, Vergeer, Roelevald & Karsten 2001). Madden and Slavin (1983) in their study concluded that including learners with minor educational problems in regular class is preferred so long as individualized or good remedial programmes are used for their performance, self-image, behavioural and emotional adjustments. By interacting with the peers and teachers learners with special needs are able to learn from one another and the academic performance is improved (MacCabe 2005 cited in Mapsea 2006).

Inclusive education is also beneficial for the regular learners in that they come to learn about the needs of these learners as they work together on tasks given. They also learn to respect one another. Studies on the other hand have indicated not all learners benefit in the whole process of inclusion West et al, (2004) in their study in Singapore revealed that learners with disabilities found it difficult to cope due to the work load and the level. Even though teacher may have been trained in special needs education, some learners do not make sufficient progress in reading in inclusive classrooms (Zigmund & Baker, 1995; Klinger et al., 1998 in Peetsma et al 2001). In an inclusive classroom the role of the teacher is to establish what the learner is capable of doing so as to avoid frustration.

In Kenya inclusive education is defined as a philosophy that focuses on the process of adjusting the home, school and the larger society to accommodate persons with special needs including disabilities (Ngugi 2000). The definition lays emphasis on equal opportunity to interact, play, learn, work and experience the feel of belongingness irrespective of ones potentials and abilities. This study focused on inclusion of learners with cerebral palsy in reading and writing which here meant making the learners to participate in reading and writing activities within the classroom.

## 2.4 Learners with cerebral Palsy

Cerebral palsy is a “disorder of movement and posture that is due to non-progressive abnormality of the immature brain resulting from permanent non-progressive deficit or lesion in the immature brain”, Kurtz in (Bigge, Heller & Best 2005, Bowler & Gardener 1980). Cerebral palsy has been found to be a complex condition. Children with cerebral palsy have in common difficulty controlling certain muscles.

Although the definition given is focusing on disorders of movement and posture which may be useful from a medical point of view, it leaves out a number of associated dysfunction or deficits that are common and have to be properly addressed

in order to ensure an optimal development and habilitation (Rye 2007). Among the dysfunction frequently described are, visual defects, hearing loss, and other sensory defects such as disorders of comprehension or the expressive language and cognitive dysfunction. Although motor disabilities are important factors with regard to the potential development towards leading a meaningful independent life, one should appreciate the interactions of multiple dysfunctions in each person's mastery and adjustments. For learners with cerebral palsy, to acquire the reading and writing skills the teacher have to be aware of all these inter relations when dealing with such complex group of learners.

The World Health Organization (WHO 2001) developed the International Classification of Functioning (ICF), the aim was to provide a unified and standard language and framework for the description of health and health-related states .It defines components of health and some health-related components of well being (such as education and labour).The domains are described from the perspective of the body, and the individual and the society in three basic lists:

- Body functions and structures,
- Activities and participation,
- Environmental factors.

Whereas the definition of cerebral palsy considers both medical and functional perspectives the later takes precedence in this study given the phenomenon under investigation. The medical aspects are however used to give a background to the onset and development of cerebral palsy among children. The reduction in motor ability mentioned above may therefore hinder full participation of a learner with cerebral palsy in many activities, more so reading and writing which they could do together with their able bodied peers in the classroom and even the school.

In this context the child with cerebral palsy should be seen in terms of what they can do with their bodies and be involved in the school or classroom activities.

### **2.4.1 Teaching reading and writing to learners with cerebral palsy**

The cerebral palsied children are a heterogeneous group. The teacher has therefore to decide on the strategies that would successfully meet the needs of all learners in the class. The teachers of children with cerebral palsy should organize the learning environment to promote learning of set goals and use materials, which closely match student ability level to meet the diverse needs. There is need to also plan for individual and group activities. The teacher should therefore select the method that best suits the teacher and the learner. Westwood (2007) states that all children who find learning to read and write difficult are best served by designing and using high quality instruction, rather than by identifying them with a label.

As mentioned above this is a complex group of learners the teachers must pay attention to the differences and work towards equality for everyone in class, and in what ways and the need for the equality (Sen 1992). Learners with special needs have been found to benefit more in acquiring literacy skills through child-centred constructive approaches such as resource-based learning and activity methods (Goddards, 1995; MacInnis & Hemming, 1995). These approaches tend to emphasise social and emotional development rather than mastery of curriculum content which is important for learner differences. A study by Swanson and Deshler, 2003; Vaughn et al., 2000 cited in Westwood, 2007 suggested that learners with disabilities and learning problems tend to do better in more tightly structured programmes where direct teaching methods and guided practice are employed. Learners with cerebral palsy with speech and motor difficulty during reading and writing lessons benefit through guided practice. For the acquisition and enhancement of reading and writing competence in learners, there has to be some degree of mediation (Vygotsky, 1978, Klein, 2001) or guided participation Rogoff, (1990) in the learning / classroom environment.



## 2.5 Factors that may influence teaching in an inclusive classroom

### 2.5.1 Role of the teacher

Teachers are the implementers of inclusive education; their role is of utmost importance in the process. A good teacher can be defined as a teacher who helps the student to learn. He or she contributes to this in a number of ways. In an inclusive classroom the teacher plays the role of a facilitator, role model, information provider, resource developer planner, an assessor as presented in the figure below. This is an adaptation of Harden and Crosby, 2000 illustration of the role of the teacher.

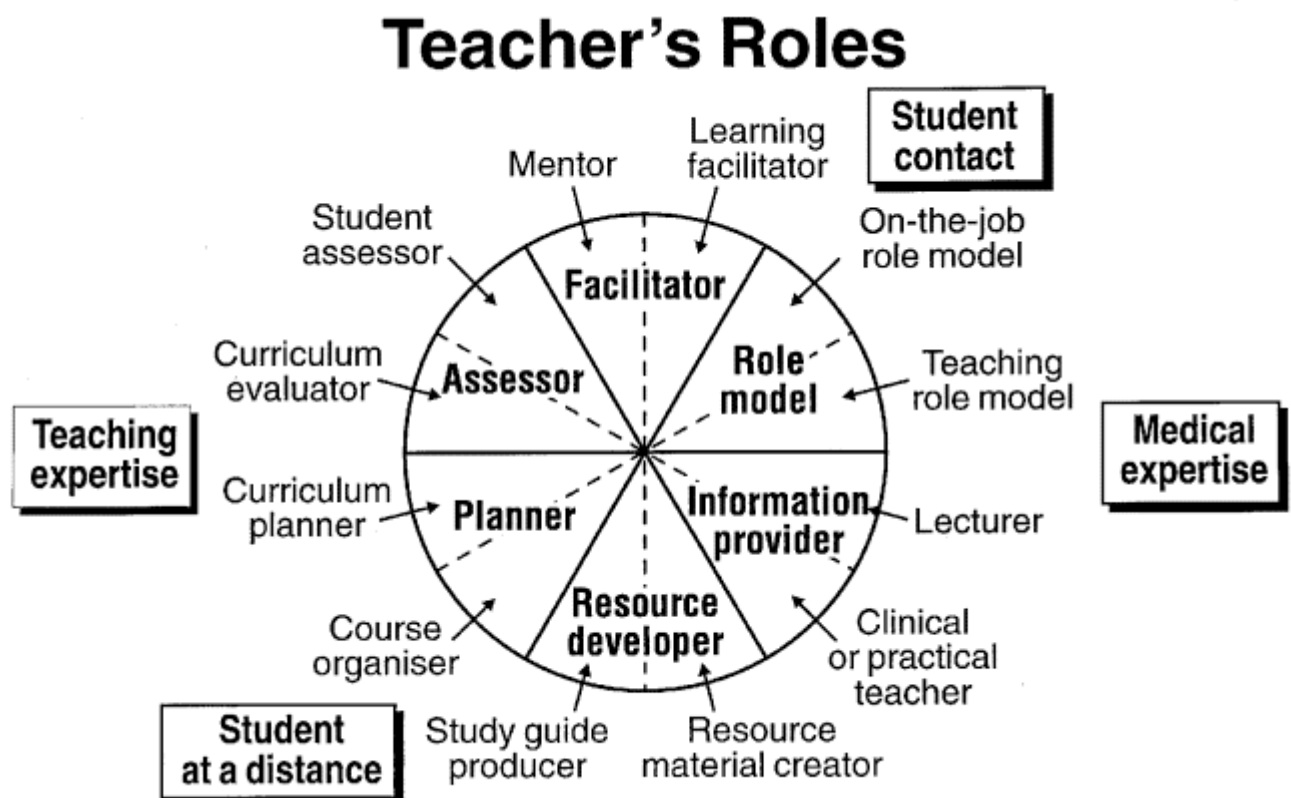


Fig. 1. Adaptation of Harden and Crosby model of teacher's role. Harden & Crosby 2000, The good teacher is more than a lecturer: The twelve roles of the teacher; an

extended summary of AMEE medical educational guide No. 20, pp 334-347

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The teacher is also a learning facilitator. Learning now is more learner-centre; the teacher plays the role of guiding the learning process. The teacher-learner relationship changes from being information provider to a facilitator. During group work the teacher moves from one group to another assisting and also guiding the learners in the activities. For inclusion to take place all learners should be part and parcel of a group. The teacher needs to make the learning environment conducive for the learners.

Teachers are therefore role models whom the learners copy what they do. In an inclusive classroom the teacher may read aloud and the learners read the same way she/he has done. In writing the teacher will write letters, words or sentences and ask the learner experiencing difficulty in shaping of letters or writing in general to copy. The attitude the teacher show towards learners with disability also influences the way their peers treat them. If the teacher shows a negative attitude, the learners will also tend to do the same and vice-versa.

As an information provider, the teacher brings in new ideas from his/her knowledge and relates to the lesson content. The learners in-turn give their reflections and understanding of the new concept taught. For example during reading of new words, teacher may explain the meaning using the learners' background knowledge. Teacher have a great influence on the lives of the learners, the learners look up to them as the most knowledgeable, the way a teacher behaves in front of learners will define the way in which learners also behave towards one another. The teacher also develops the learning materials used in the classroom. This are made as per the need and level of the learners.

The teacher has the responsibility of not only to plan and implement educational programs and to assess the pupils learning, but also to assess the course and curriculum delivered. Being implementers of inclusion, teacher assesses the learner

competence. The teacher has to establish what each learner is able to do and what they are not to do. Learners with cerebral palsy are heterogeneous group. For example, in a classroom one learner can experience motor difficulties, read with ease but have difficulties holding a pen. The other may not read fluently due to speech problems. When the teacher is aware about the strength and need of the learners, teaching and learning are both improved. This enables the teacher to individualize instruction and assessment to meet the needs of each learner.

### **2.5.2 Attitude**

Attitude has been defined in many different ways, according to (Gall, Gall and Borg, 2007) attitude is "...an individual's viewpoint or disposition toward a particular object, (a person, thing, an idea etc)." According to Standard Rules on Equalization of Opportunities for Persons with Disabilities (UN 1994) there has been a growing awareness on capabilities of persons with disabilities. And this has led to the understanding that a handicap was the relation between the disability and the environment. Modification of the environment would remove the barriers to learning and participation that the learners would face in an inclusive classroom, hence influencing the attitude of learners and the teacher.

To implement inclusive education successfully, the teacher should have a positive attitude towards the learners with special needs and also inclusive education. However the attitude of the peers in class, the administrators and the parents is considered as they also play an important role in the implementation of inclusive education. The attitude of teachers towards learners with disabilities whether positive or negative will have an impact on the learning of the child.

The attitudes of classroom teachers have long been recognised as being the key to the successful inclusion of learners with special educational needs into mainstream classrooms. Consistently research has shown that positive attitudes are one of the main predictors of the successful implementation of inclusive practices in the

classroom (Avramidis, Bayliss, and Burden, 2000, Bacon and Schultz, 1991, Norwich 2002, Carrington 1999), cited in Lambe 2007).

Scruggs and Mastropieri (1996) in their study about teachers' attitudes towards on inclusion found that, the teachers' willingness to include learners with impairment depended on type and level of impairment as well as the competency of the teacher. Frost (2002) cited in (Mapsea 2006) states that teachers who have positive attitudes about inclusive education accept children with special needs into their classrooms and involve them in all academic learning and social interaction with other children.

On the other hand there have been studies that have revealed not all teachers hold positive attitude towards inclusion of learners with disabilities in the regular classrooms. Study by Whiting and young, (1995) indicated that teachers were not willing to include learners with disabilities in their classroom as they felt it was difficult and stressful.

### **2.5.3 Cooperative learning**

Cooperative learning is the instructional use of small groups so that students work together to achieve shared goals. Cooperative learning is a set of instructional strategies that involve students working collaboratively in groups with little teacher supervision (Deering 1989 cited in Roger and Johnson 1997). Cooperative learning may be used to teach specific content, to ensure active cognitive processing of information during lectures, and to provide long-term support and assistance for academic progress. Any assignment in any curriculum for any age of student can be structured cooperatively if the teacher has the proper training.

The purpose of cooperative learning is to make each group member a stronger individual in his or her own right. There should be a pattern and flow to classroom learning, learn it together, perform it alone.

Cooperative learning attempts to reduce competition or individualism in classrooms by rewarding student based on the performance of all individuals in their group

(Aronson, Blaney, Stephan, Sikes & Snapp 1978, Johnson & Johnson 1981, Slavin 1983).

Cooperative learning consistently improves achievement and retention, creates more positive relationships among learners, and promotes learners' psychological health and self-esteem.

#### **2.5.4 Peer support**

Successful inclusion and participation in lessons and in life of the school depends to a large extent on other children. In general, help and support are given casually and without the teacher's planning or intervention, although in countries with large classes teachers usually ensure that children of varying abilities are sitting next to each other, so that more able children help neighbours who may be having difficulty to understand what they are supposed to do. Children learn most from one another by doing things together and using their own experiences and language, which is understood by their peers.

Peer tutoring has been found to be effective in the teaching of reading, so long as the tutor is properly prepared and supported and the pupil is willing to accept the help. Children also support one another informally and without teacher planning. Research reviews on inclusion of children with severe learning difficulties report that other children in the schools are generally supportive and accepting (Farrell, 1997, Sebba and Sachdev 1997 cited in Horne & Timmons 2007) although warm friendship is not frequently reported.

## **2.6 Teacher training**

The Salamanca Statement (1994) outlines clearly the importance of teacher training as this leads to creating inclusive schools. This should enhance teachers' positive attitude towards persons with disability and their acceptance of everybody's ability to learn. The statement further put emphasis that knowledge and skills required were

those of good teaching in general. A good teacher is one who is able to assess and establish the needs of the learners adapt the curriculum, use assisting technology and diversify the teaching so as to meet the wide range of abilities and needs.

Villa et al. (1996) found that teacher commitment often emerges at the end of implementation cycle; often teachers have gained mastery of the professional expertise needed to implement inclusive programmes. Similar findings were reported by LeRoy and Simpson (1996), who studied the impact of inclusion in three years period in Michigan, showed that as teachers experience with children with special educational needs increased, their confidence to teach these children increased. In the study carried by Avramidis, Bayliss and Burden (2000) found that teachers who had received training of high quality appeared to feel more competent in their teaching skills and found concept of inclusion easy to deal with. For inclusive practices to be promoted, the level of and depth of teacher training is of major concern.

Wormnas, Opdal and Habayeb (2000) in their study on teacher's opinion about inclusion reported that teachers who had experience with students in mobility and other physical disabilities, were more supportive of the idea of including learners with the same disabilities. They also asked the teachers to rate in terms of preference area for further training. The teachers rated training in parent-teacher cooperation first then followed training in individualization, differentiation in the classroom, adapting materials and organizational differentiation. The teachers had the need to be trained in teaching strategies in special needs education and inclusion. Heller (1998) also posited that those teachers who had direct expertise of integration held exceptionally positive attitude towards it.

On the other hand studies have indicated that teachers who are the core implementers of the policy are often not prepared to meet needs of learners with significant disabilities such as cerebral palsy which may require extra instructional management skills, and are more reluctant than the administrators and policy makers (Centre and Wards 1987).

Since all teachers are responsible for the education of all children, they are entitled in this task to expect and to receive appropriate preparation in initial teacher education and continued professional development throughout their careers (Mittler 2002).

Through teacher training the teacher gets a better understanding of inclusive education and its implication thus making him/her feel secure in their job, and the ability to teach children with different abilities and needs, which influence the teacher's willingness to take on the responsibility of teaching a diversity of learners (Wormnæs 2001).

## 2.7 Teacher-teacher support

In classes with large number of learners, teachers usually face difficulties meeting the diverse needs of all learners. However with the help and support of colleagues, different needs of learners may be met. There is no preferred formula, but it may involve a small group of teachers meeting regularly to discuss a learner, who may be experiencing barrier to learning and participation (Mittler 2000). Teacher-teacher support involves the both teachers participating equally in the teaching process. The arrangement may involve one teaching the class while the other goes round, monitoring and prompting individual learners as needed.

## 2.8 Collaboration of teachers and parents

Devising new ways of bringing teachers and parents into better working relationship is worthwhile for its own case and would benefit all children, parents and teachers. It could also make an impact on children's learning and promote social as well as school inclusion, especially for those parents who are experiencing social exclusion themselves. Children with exceptional needs and their families would automatically benefit without the need for special principles and procedures.

Despite all the fine words about working with parents, there still exists a barrier between home and school. Teachers and parents may be friendly, helpful and polite to one another but there is an unavoidable underlying tension that arises from the imbalance of power between them. Many parents are apprehensive and anxious about going to school because they still carry the history of their known experiences of teachers and schooling. Schools have changed out of all recognition in a single generation but many parents have little direct experience of such changes and obtain much of their information from the media and from casual encounters with neighbours. Parents of children with exceptional needs have a particularly great need for working relationships with teachers based on understanding and trust.

Parents are children's first and most enduring educators. When parents and practitioners work together in early year's settings, the results have a positive impact on the child's development and learning. Therefore, each setting should seek to develop an effective partnership with parents. (Department of Education and Employment (DFEE) 1999)

## 2.9 Interaction

Teacher –learner and learner- learner interaction takes place within the learning environment. Interaction is a reciprocal action or influence. Interaction is mutual influencing between persons in which they are assuming the attitudes towards each other and determine their behaviour reciprocally (Tefferra in Klein 2001). Like in the case of an interaction between the teacher and the learners takes place when the teacher asks a question and the learners answer. The learners' answers will influence the teacher's reaction that is the next answer or action. In the same way when learners interact with one another. Interaction is mutual attention two or more persons have towards a third person or towards an object. The persons concerned focus on the same goal and they interact both verbally and non-verbally, and in the end develop into an attachment and may develop feelings of empathy (Skjorten 2001).



Pupils experiencing difficulties can benefit greatly from small group learning, but teachers have to ensure that all pupils are benefiting, and that the group is not forced to work at the pace of the slowest or the fastest learners. Hunt et al. 1994 in Katz & Mirenda (2002) in their study found that students with severe disabilities in inclusive classrooms initiated social interactions with others more often than did those in special class programme. They initiate and participate in social interactions and activities with peers; discuss their work with their teachers; joke with their peers and teachers, and resist disabling attitudes, structures and experiences that differentiate them from their classmates (Connors and Stalker 2003; Davis and Watson 2001; Higgins 2001; MacArthur et al. 2007 Cited in Higgins, MacArthur & Kelly 2009). Their own observations also suggest that teachers and peers play a key role in either supporting or supplanting disabled children's attempts to be active agents at school

## 2.10 Aspects from Vygotsky's theories

The relationship between learning and development has been seen to be linked to what child learns in school (Vygotsky, 1978). He explains that from the very first day of life for a child, learning and development are inter related. The child within the new environment interacts with the mother and all those around it; through this interaction the child is able to acquire behaviours by observing, hearing, imitation, correction and practice (Rogoff, 2003). The process may be delayed due to some brain damage. Literacy has been seen as the engine of the machinery that produces the cognitive and social consequences of involvement in schooling (Lerner, 1958; Greenfield and Brunner, 1966 cited in Cole 2003).

The social constructivist view of Vygotsky is one of the more prominent theoretical perspectives on how pupils learn from interacting with others. In essence, children learn by assistance and understanding from adults or more capable peers. They mediate cognitive as well as social processes so that the child is able to complete tasks he or she could not do alone.

Human activities and relationships are seen as transactions in which the individual and the social, cultural, natural elements interfuse. This is basic on Vygotsky's concept of Zone of Proximal Development (ZPD), which is quite essential in classroom learning.

It is very important to encourage peer interaction and develop social skills in how they would be capable to give support in learning situations through different socio creative activities. If the interaction with adult or a more capable peer focuses appropriately on the child's zone of proximal development during the process, then achievement can occur (Krauss-Dixon, 1996). Thus, the classroom becomes a community of learners with different learning background in which all pupils are engaged in activities where everyone is working towards a common goal. The contemporary interpretations of Vygotskian theory use concepts of "scaffolding", "apprenticeship" and "guided participation" when referring to how a child learns in the ZPD. According to Rogoff (1990), within socio-cultural theory scaffolding refers to the supportive situations adults create to help children raise current skills and knowledge to a higher level of competence. Using different social tools and being in interactive situations, children achieve a shared understanding with those who serve as their guides and companions through explanation, discussion, joint participation, active observation and arrangement.

## 2.11 Mediated learning experience (M.L.E.)

This is a Theory developed by Feuerstein (1979). According to this theory, the human mediation is a conscious attempt of an adult to adjust his/her behaviour and modify the environment that will ensure that the child can benefit from it, focus on it, perceive, understand and respond (Klein, 2001). Through interaction between the teacher and the learners, the teacher acts as a mediator between the learner and the knowledge in the world, by selecting the relevant teaching content and methods.

There are two basic ways in which an individual is modified through interaction with his environment. The first one is direct exposure to stimuli. The second is the process of learning (MLE) which occurs when another person serves as a mediator between the child as a learner and the environment; preparing and reinterpreting the stimuli from environment so that they become meaningful and relevant for the child (Klein 2001). Hence, mediation is an active process consisting of communication. Parents, teachers and peers may function as mediators and discourse partners in joint teaching and learning processes (Johnson 2000). However, in good development communication and positive climate the children have roles as mediators among each other.

### 3. Methodology

#### 3.1 Research Approach

The aim of the study was to find out how teachers trained in special needs education implement inclusion for learners with cerebral palsy during reading and writing lessons. It was therefore important to use a suitable approach. The study adapted qualitative approach, focuses on few cases and many variables. According to Robson, (2002) qualitative research focuses in depth on relatively small samples, selected purposefully. They are more concerned to understand individuals' perception of certain phenomena. They seek insight rather than statistic. A qualitative approach was chosen to provide deeper understanding and give examples for in this a few teachers and learners are dealt with in their natural settings.

#### 3.2 Research design

The study adopted the case study approach (Gall, Gall, & Borg, 2007), defines case study as: “.....the in-depth study of instances of phenomenon in its natural context and from the perspective of the participants involved in the phenomenon.”

It is also defined by Robson (2002) as

*“a strategy for doing research which involves an empirical investigation of particular contemporary phenomenon within its real life context using multiple sources of evidence.”*

The definitions pointed out four basic characteristics in the case study which are, that you study a particular phenomenon, in its natural context, empirical investigation and using multiple sources of data collection. The focus of this study is on the teachers' inclusion of learners with cerebral palsy in reading and writing activities. The purpose of using the case study is to produce detailed description of the phenomena

(inclusion of learners with cerebral palsy in reading and writing) and to develop a possible explanation and understanding as experienced by the teachers. The case study being an empirical investigation, the main issues about the phenomenon can be explained through investigations. The questions like “what? and...How? - help bring out participants point of view on the phenomena and therefore a deeper understanding of the phenomena. This was obtained through gathering data mainly from their natural contexts by teachers’ interviews and observations. The data is to be used to explain further the phenomena experienced by the teachers as they implement inclusion for learners with cerebral palsy in reading and writing.

The study adopted a multiple methods of data collection which is known as triangulation. Triangulation depends on different methods of data collection such as interviews and observation, field notes and informal talks (Robson 2002 & Gall et. al., 2007) pointed out that the products of triangulation are useful as its primary purpose in validating information. Using different methods of gathering data may increase the confidence in its validity and improve the quality of the data and in consequence the accuracy of the findings. In this case observation, informal talks, field notes were used to get information which could not be presented during the interview such as the response of the teacher towards the learners’ attempts in reading and writing.

### 3.3 Area of study

The study was done in two provinces in Kenya, Nyanza Province and the other in Nairobi Province. The school in Nyanza Province is referred to as school A in the study and the school in Nairobi Province is referred to as school B. The two schools are for learners with physical disabilities and they practice inclusive education.

## 3.4 The informants

The informants consisted of two teachers teaching reading and writing in Class 3. In addition eight learners with cerebral palsy were also considered. Both teachers were female, and they had initially obtained diploma in special needs education from KISE though the teacher in school B had moved ahead and obtained bachelor's degree in special needs education. The teacher in school A had a teaching experience of 7 years but one year teaching learners with special needs in the current school, while the one in school B had a teaching experience of 16 years but 6 years teaching learners with special needs in the current school.

### 3.4.1 Sampling Procedure

Two special schools were purposively sampled. (Gall, Gall & Borg 2007) state that the purpose of selecting the case or cases is to get in-depth information of the phenomenon under study. The sample consisted of two teachers who taught in special schools with learners with cerebral palsy in their classes.

### 3.4.2 Criteria for selection of schools

Two special schools from two regions of the country (Nairobi and Nyanza) were selected. The study is based on how teachers trained in special needs education implement inclusion of learners with cerebral palsy in reading and writing in an inclusive setting. The two schools were chosen principally for practical reasons; the schools were having graduates of Special Needs Education from KISE. The schools also had children with cerebral palsy included in the school and classrooms. The schools were also accessible and therefore provide information about teachers who are trained in special needs education from KISE and learners with cerebral Palsy. For practical reasons the schools are referred to as school A and B in the study.

### 3.4.3 Criteria for selection of teachers

This was done purposefully for this study. The two teachers were selected, one from each school were those who had undergone training in Special Needs Education for at least two years from KISE and therefore had acquired some knowledge during their training and gained experience in the special schools. These teachers were the only ones teaching Grade three class. As mentioned above in purposeful sampling the goal is usually to get cases that are likely to be “information-rich” with respect to the purpose of the study (Gall, et. al, 2007).

The selection of Grade three is accordance to (Chall J. S. & Jacobs, V. A 1990) the main aim of the first three classes is to teach alphabets, to recognise familiar words and to read fluently. Without these skills the reading and writing would be difficult. The class was of learners with and without physical disabilities. The focus was mainly on learners with cerebral palsy and how they are included in reading and writing activities by the teachers and their peers in the class.

## 3.5 Criteria for selection of learners

Children with cerebral palsy are a heterogeneous group and no individual child is similar to the other and so their educational needs may not be the same. The selection focused on the cerebral palsy learners in class irrespective of their ability in reading and writing. This is because the study is on how teachers implement inclusion for learners with cerebral palsy in reading and writing lessons. Eight learners with cerebral palsy in Grade three were selected. In school A they were four learners, three boys one girl and in school B also four learners, three girls and one boy. It was rather a coincident Grade three in both schools had four learners each.

On the other hand the learners with cerebral palsy were also selected, for their involvement add value to the study. Learners with cerebral palsy are the ones inclusive education is being implemented for, it was therefore important to observe the approaches teachers use for them

### 3.6 Research instruments

A semi-structured interview guide and observation guide were developed. Other supporting methods included; field notes and informal talks.

#### *Interview*

The interviews were designed to gain an understanding of how teachers include learners with cerebral palsy in reading and writing. An interview is a conversation with the purpose of obtaining qualitative description of the real world of subjects with the respect to interpretation of their meaning (Kvale 1998). Both semi-structured and unstructured interview guides were used for data collection. Robson (2002) defines semi-structured interview as where the interviewer has prepared a set of questions in advance, but is free to modify their order depending upon the interviewer's perception of what seems appropriate in the context of the conversation.

Semi-structured interview is advantageous in that it's adaptable. It was possible to follow up ideas, probe responses to obtain more specific information than the interviewee is providing. The examples of the probe questions in this study are...can you tell me what you mean by 'kawaida'? Unstructured interview is where the interviewer has a general area of interest and concern, but lets the conversation develop within this area. This was done after observations in the classroom. The aim was find out from the teacher reasons as to why they did some activities and left others, like teacher 'A' wrote words on the chalkboard instead of using flash card for cerebral palsied learner with low vision.

The interview guides focused on; teachers understanding of inclusion, teachers training and experience, educational needs of learners with cerebral palsy, methods teachers use to teach reading and writing to learners with cerebral palsy, organisation of the learning environment, teaching and learning materials, facilitation of interaction in the classroom.

#### *Observation*



Observation is a research method in which the investigator systematically watches, listens to and records the phenomenon of interest. Observation allows the researcher to formulate their own version of what is occurring independent of the participants (Gall.et.al, 2007).

One major advantage of observation as a technique is its directness. It's the technique for getting the actual true information (Robson 2002). Observation of behaviours, actions, activities and interactions is tool for understanding more than only what people say about situations and will contribute to understanding of these complex situations. It is for this reason that t observation technique was used so as to get actual behaviour and characteristics of the learners which would not have been possible to get through other means. The areas observed were; how the classroom is organised for learning, how the teacher show positive feelings to the learners in the classroom, how the teacher asks the learners questions and the way they respond, if the teacher gives learners with cerebral palsy equal opportunity to read, assistance the teacher gives the learners with cerebral palsy opportunity to read, how the teacher interacts with the learners and how the teacher facilitates pupil to pupil interaction during reading and writing activities, the kind of teaching and learning materials used in the classroom, the way the learner express their needs, how the learners initiate interaction with their peers. Observation also has its limitations; the observer may influence the situation under observation, and thus the outcome. Observation is also believed to be time consuming. However these factors were taken into consideration and the normal class period was used. Prior visit to the class was made to familiarise with the learners, the teachers were encouraged to teach normally as this was not an assessment. A non-participatory observation was used and so did not engage in the on-going classroom activities.

### **Informal talks**

This was a supportive method used in data collection. Relevant information to the study was got from the head teachers and other teachers.

## **Field notes**

Important information observed or heard was noted down. This assisted in getting in-depth information during the interview and observation.

## **Procedure for data collection**

### **3.6.1 Gaining access**

To gain entry into schools in Kenya and carry out a study, it is a regulation that one gets authority from the Ministry of Education. An introductory letter from the University of Oslo was presented to Ministry of Education Headquarters in Kenya. There after a letter of authority was issued. This was presented to other respective educational officials before visiting the schools.

The investigator visited the schools and met the head teachers who in turn introduced the investigator to the teachers. This provided an opportunity to explain the purpose of the visit and how they could assist in the study.

### **3.6.2 The pilot study**

#### *Interviews*

The schools were visited prior to actual data collection for introduction purposes and to discuss the intention of the study. A teacher in school 'A', teaching English in grade four volunteered to be interviewed. The investigator used the teacher in piloting the interview and the observation guide. The questions were the same ones that were used in the actual data collection; this was done so as to ensure that they yield reasonably unbiased data (Gall, et.al, 2007). This enabled the investigator to make the necessary changes and improve the reliability of the instrument.

The interviewee was one teacher teaching English language. The changes made on the instrument were done specifically to the improvement of the questions and avoid leading and ambiguous questions.

### ***Observation***

The investigator also observed the class to assess the class organization, teacher-learner interaction, learner-learner interaction and to identify learners with cerebral palsy. The investigator found out that the class had only one learner with cerebral palsy. This enabled in the selection of the actual class that would provide the necessary information during the study. The investigator observed the class twice in order to and was non-participant throughout the sessions.

### **Implications from the pilot study**

The piloting assisted in focusing in asking of the questions, there was reframing of questions not well understood. Some of the items were found not to be information rich and were therefore left out. It was also realised some of the questions were quiet long and would result in ambiguity.

The pilot study was a good opportunity for the investigator to improve interviewing skills, there were acts of pausing in the process of the interview and this made the interviewee to get mixed up. The investigator made attempts to improve on this during actual data collection.

This step also was a good opportunity to test the voice recorder which had been planned for use. It turned out to be very convenient apart from the great deal of work in transcribing the data. The voice recorder was quite an interest to the teacher and spent too much time paying attention to it. The teacher at the end of the interview requested the recorder to be played back and so corrected some of the information he had given earlier.

## 3.7 Main study

### 3.7.1 Data collection through interview

Before embarking on the interview the investigator explained to the teachers that in case of uncomfortably they were free to withdraw from the study at any time. They were also informed about the use of the voice recorder and its importance and strongly emphasised on its confidentiality. Both teachers were not very comfortable with the voice recorder at the beginning but relaxed after the investigator assured them. However still during the interview they could make facial expressions and gestures whenever they did not know answers to questions asked

The data was collected through face to face interview. It was done during the normal class hours and so a room in a section of the school still under construction was used. Writing down the interview session on paper was not easy so the tape recorder was of great help as the investigator was able to listen several times to the content and get the information on the specific areas. The teachers were very cooperative and talked freely. The investigator used verbal prompts to get more information, for example, 'Can you tell me', briefly explain. The questions were reframed in case they were not understood well.

Through interview it was possible also to investigate motives, feelings and opinions. In addition to this tool the investigator had an opportunity to see responses that were made by the interviewee like the tone of the voice, facial expression, language, hesitations. For instance teacher two in school B was grimacing a lot when she was not sure of an answer to how what she had learnt was of help to her in teaching learners with cerebral palsy. This was an information which could not be got using a questionnaire which is usually answered in the absence of the investigator.

The areas in which the teachers were interviewed were; their understanding of inclusion, their training, years of experience, educational needs of learners with cerebral palsy, methods teachers use in teaching reading and writing to learners with

cerebral palsy, the teaching and learning materials, facilitation of interaction in the classroom. These themes were chosen from the research questions and the literature review.

In both cases the interview was conducted well and the investigator managed to record important information which occurred during the interview. Interviewing is time consuming (Robson 2002). In both cases it took approximately one and half hour for the actual interview. At the end of each interview the interviewee was acknowledged.

### **3.7.2 Data collection through observation**

The observation was done in the classroom. The class teacher did an introduction to the learners and the purpose of the visit. The investigator explained to the teacher the observation was typically for the purpose of studying the classroom environment and a phenomena, which is implementation of inclusion for cerebral palsy learners in reading and writing, and not for assessment reasons, this made the teacher to be relaxed during the lesson. The investigator found the teacher had placed a chair at the back of the class and asked if the position was convenient. The investigator decided to sit at the front of the class to give good view of what the learners were doing and for them also to have full view of the investigator so that they do not have to be distracted to see what is going on and also what the teacher was doing with the learners with cerebral palsy.

The investigator did note taking to record the observation; this was supposed to give a valuable and comprehensive description of the way teachers interact with the learners with cerebral palsy and the learner-learner interaction.

The data was collected in six lessons for school A and the same for school B. The days were spread through a period of five weeks. I observed both the teachers and the learners. Through these observations I was able to observe; how the classroom is organised for learning, how the teacher show positive feelings to the learners in the

classroom, how the teacher asks the learners questions and the way they respond, if the teacher gives learners with cerebral palsy equal opportunity to read, assistance the teacher gives the learners with cerebral palsy opportunity to read, how the teacher interacts with the learners and how the teacher facilitates learner-learner interaction during reading and writing activities, the kind of teaching and learning materials used in the classroom, the way the learner express their needs, how the learners initiate interaction with their peers.

### 3.8 Data analysis

The aim of analysing the data is to get answers to the research question which is; how do teachers trained in special needs education implement inclusive education to learners with cerebral palsy in reading and writing lessons. The study used multifaceted approach, therefore the analysis started during the field work. One source of information was used against the other. For example if the information from the teacher's interview were similar then, to some extent they validated each other, but if they was difference then more information was sort from the informants. In order to explain the data, a forward and backwards process between the literature and the data was done. The pre-defined themes were used to form the frame work of the research and give an understanding of what was taking place within the classroom which may influence the teacher's ways of implementing inclusive education for learners with cerebral palsy during reading and writing lessons.

The aim of using themes is to include and summarise the data adequately. The themes were based on Vygotsky's theory of social constructivist theory, Feuerstein's Mediated Learning theory and Rogoff's, Guided- Participation theory as presented in chapter two. Other themes were also developed from the data, this was done by looking at the data that had similarities and could be considered to be of the same theme and given name such as teacher-teacher collaboration and teacher-parent collaboration.

The predetermined themes were the background information, teacher's understanding of inclusion teacher's knowledge about the educational needs of learners with cerebral palsy, methods teachers use to teach reading and writing to learners with cerebral palsy, organisation of the learning environment, the teaching and learning materials, teacher's facilitation of interaction in the classroom.

The transcription of the interview was done by listening to the tapes several times to ensure all the information was written. The information from the observation, document consultation, informal talks were organised and looked at together with the interviews. The data has been analysed case by case focusing on ways in which each teacher implement inclusive education to learners with cerebral palsy in reading and writing, from the interviews and observation. Cross-case analysis has been done look at some of the similarities and differences between the teachers according to the themes.

### 3.9 Validity and Reliability

Validity refers to the ability to produce true knowledge through the application of methodologically controlled investigation (Kvale 1998). This is to establish if the results are relevant and true to the research question. There are different validity criteria, this study considered construct validity and external validity. Construct validity is the extent to which a measure used in a case study correctly operationalises the concepts being studied (Gall et al 2007).

Reliability is the extent to which other researchers would arrive at similar results if they studied the same case using exactly the same procedures as the first researcher.

Distinguishing between validity and reliability in some forms of research is not very easy (Gall et al 1996). Since statistical measures are not used in this study, questions about validity and reliability will be discussed concurrently. This will take into consideration the focus of the study which tries to answer the main research question;

How do teachers trained in special needs education implement inclusive education to learners with cerebral palsy during reading and writing lessons.

There were threats to validity and reliability. The sample included only teachers trained in special needs education. It would have been possible to compare teachers who had had training in special needs education and those without. There was also a bias in sampling in that both teachers were females. It is a common trend in Kenya that lower primary is usually taught by female teachers, however male teachers are also found in these classes.

The interview guide had open-ended questions and these would allow the informants to give irrelevant information. The informants were familiar with the investigator; they would have given responses that were of the investigators interest (reflexivity) Yin (1994). The informants tended to be conscious of the tape recorder and there was fear of the tape recorder failing to work.

In order to enhance validity and reliability certain measures were taken; permission to visit the schools was granted before the start of the field work, teachers selected were those who had at least a background of two years training in special needs education. During the process of preparing the interview and observation guide, they were read and approved by the supervisor. A pilot study was carried to test the instruments. Changes were made to the instruments and this assisted in improving the interview techniques. Similar questions were asked to ensure equal treatment of the teachers, the same phenomenon was observed. Through triangulation validity was strengthened; methods used included, document consultation, field notes and informal talks. The teachers were also assured of their confidentiality of the information they gave. The tape recorder used during the interview made it easier to go over the interviews several times to get accurate information. The learners with cerebral palsy were not aware they were being observed as this would have influenced their behaviour during reading and writing.



The study was also based on three theories; Vygotsky's theory of the zone of proximal development, Rogoff's Guided participation and Feurstein's mediated learning theory.

### 3.10 Ethical consideration

In qualitative research where human subjects are involved ethical issues arise (Creswell, 1998). To ensure this was put in place the following were done: an introductory letter from the University of Oslo indicating I was a student was given, which I presented to Ministry of Education headquarters in Kenya.

Letter of authority to carry out the study was given and there after presented to provincial education officers, district education officers and the head teachers of the school.

Consent was also got from the informants. They were assured of the confidentiality of the information they gave. Pseudo names were used for the schools, teachers and learners. The tape recordings were used only for the research and were later destroyed. Verbal appreciation to the informants was also given.

## **4. DATA PRESENTATION AND ANALYSIS**

The study's aim was carried out to find how teachers trained in Special Needs Education include learners with cerebral Palsy in reading and writing lessons. The cases were two teachers trained in Special Needs Education and were teaching children with cerebral palsy in inclusive schools. Data was collected using two major methods- interview and observation. Pseudo names have been used to keep the confidentiality of the informants, the teacher from school A is referred to as Nemat and the one from school B as Lera.

The presentation is guided by the themes emerging from the research question and data. Themes include, background information of the teacher, teacher's understanding of inclusion, teacher's knowledge about the needs of learners with cerebral palsy, classroom organization, teachers' use of teaching and learning materials, methods used by teachers to teach reading and writing to learners with cerebral palsy, interaction between the teacher and the learners and learner-learner interaction, teacher- parent collaboration. Information about the learners is also presented. Although the cases are teachers, it's important to mention something about the learners that they include in their teaching of reading and writing activities. The findings are presented case by case based on the interviews and the observation.

### **Case one—Nemat**

#### **4.1.1 Background information in Nemat's class**

##### *Shimona*

This is a girl aged 11yrs. She was admitted in the school in Grade one at 7 yrs, she repeated Grade one due to lack preschool background. She has athetoid cerebral palsy, drools and uses a wheel chair. She has speech problems, not able to pronounce

words clearly and takes time to say it. She is not good in reading can write but with a lot of difficulty and very slowly.

### *Winwin*

This a boy aged 15yrs. He was admitted in class one when he was 13yrs of age. This delay could have been due to the fact that the boy is an orphan and the guardians seemed not to value education because even during the school holidays he is never picked to be taken home. Winwin is spastic, is on a wheelchair and has visual problems. He is able to read text at very close range, he holds the pen well and is able to write but very slowly.

### *Koluta*

This a boy aged 12 yrs. He is spastic (diplegia), he moves using crutches. He can read and write legibly. He participates in class activities he supports himself to write on the blackboard.

### *Alum*

This is a boy aged 9yrs; he is also spastic and walks with a scissor gait. In class he is able to read and is very active and he calls to be given a chance to identify or write words on the blackboard and can read well but writes very slowly. He stays within the small home about one and half kilometres away from school.

### *The school*

The school is still a young school, which was established by a church four years ago and is partly government aided. It was started to admit learners with physical disabilities only but due to the advocacy for inclusive education it has now admitted also learners with out disabilities. The school being new it has very good permanent and spacious classrooms and other facilities such as dispensary, dormitories, kitchen, dinning hall and teachers houses are still under construction since the school will become a full time boarding school for learners with physical disabilities after the

completion of the facilities. The topography of the school is quite rough and rugged with stones and rocks. This makes the movement a bit restricted for learners using wheelchairs and crutches. However the verandas in front of the classes are cemented and accessibility into the classrooms is good as there are ramps and the doors are wide enough. The school is single stream from pre-school to class eight with an enrolment of about 140 learners.

### ***The teacher***

Nemat was a female aged 37years. She was a professionally trained teacher. On specialization she had completed a 2 year diploma course in Special Needs Education in the area of physical disabilities. She was currently undertaking her bachelor's degree in Special Needs Education at the university. She had a teaching experience of 10 years. She had only taught learners with special needs for only one year, previously she had taught in a regular school. She had just been posted to this school a year ago and was teaching class three which she shared with a colleague. They had shared the subjects equally.

## **4.1.2 Teacher understanding of inclusion**

### Training

Nemat reported that she had undergone a two year diploma course in special needs education from Kenya Institute of Special Education. She had taught learners with special needs for a period of one year. She indicated that the content she learnt in KISE was adequate and an eye opener to her in the field of special needs education. She further indicated she came to understand that inclusion was putting together children who are disabled with those who are not disabled. She states;

*“.....it is to put these children together such that they learn and socialize together and feel part and parcel of their peers, especially those who are disabled when they learn with these other children they feel accepted and they also feel accepted and are part and parcel of the community.”*

Nemat explained that special needs education entailed teaching learners with special needs in programmes that suit them and make them be together and feel part and parcel of the community and to gain knowledge so as to become independent.

She also reflected on her training when she mentioned that she had learnt how to handle learners with special needs, how to teach and manage them in classrooms. When probed on what she meant by handling them, she explained that in their classes there are learners with different individual levels of performance so each learner is handled according to the level that she/he is able to attain. She further explained that the term special needs education entailed teaching learners with special needs, not neglecting them but putting them in an educational programme that suit them and also make them to be together.

#### **4.1.3 Teacher's knowledge about the needs of learners with cerebral palsy**

Nemat gave her explanation of her perception of learners with cerebral palsy when she mentioned that learners with special needs have different needs apart from the ones that all learners usually encounter; these are learners who need assistance at least when they are within the school setting. She stated that from her training she had learnt that learners with cerebral palsy have some brain disorder and therefore had slurred speech, difficulties expressing themselves and difficulty in moving. She mentioned further that at first she was grouping the children as physically disabled but due to the skills she got she was able to differentiate the conditions and categorise them accordingly and therefore find a solution to enable the child gain from what is being taught.

*“...I would still be putting them, generalizing in the broad term that they are just physically disabled.”*

According to Nemat the important thing that these children need is our love, there is need to show them that we care about them, because these are children who some have been neglected, they come to school with some hope that the person am being

taken to is going to care for me so the first impression you are going to give this child is that you accept him, you should also be patient with the children in all that they do. As a teacher you also need to identify them by their names, as this makes them feel accepted.

*“... you know when you describe them that child, you boy who is sitting at the corner, that they feel that you don't know that you want them to do something, you call them by their names they feel accepted and the teacher is really for me.”*

She added that a teacher should not pity them since learners with cerebral palsy are also human beings and children as any other child. And everyone needs to be loved so as to be happy in the process of doing our daily activities. Socialization she said is important because it boosts ones self-esteem, and when one is happy acquisition of skills is enhanced.

As per her understanding some learners with cerebral palsy have difficulty in learning so for this child to achieve in class a teacher should establish the performance level of the child. In the area of reading and writing she said some of these learners are able to read while some have difficulty;

#### **4.1.4 The classroom environment**

Nemat had a total of seventeen learners in her class, eleven regular, four with cerebral palsy, one with scoliosis and the other with poliomyelitis. These learners she explained used tables and desks;

*“...in my class the able ones are sitting on desks or they are sitting on tables but there are some with cerebral palsy who are on wheelchair.”*

She reported that regular learners also shared the furniture with learners with cerebral palsy but according to her they were not very good for learners both regular and with cerebral palsy;

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*“They are not suitable because the children should have a good posture when they are sitting but when they bend, this bending is going to cost them a lot of problems, because it extends the backbone, as they lean on the table,”*

It was observed that the learners used tables and desks which were arranged in three rows, and there was adequate space to allow movement of learners on wheelchair and those using crutches. Lensy used a wheel chair and was in front next to the teacher’s table in the middle row, behind her Winwin, Koluta and Alum shared two tables with other two regular learners. Winwin used a wheel chair and sat facing the blackboard in front of the class while Koluta and Alum sat on chairs facing the regular learner on the opposite side. The other regular learners and the ones with polio and scoliosis used different desks which they shared with three other regular learners. The surfaces of both the table and the desks were not spacious enough to allow maximum use, as this was observed during reading and writing lessons some learners placed the books on their laps. Winwin had a tendency of leaning on the table as he wrote the task given by the teacher. The learner next to him seemed uncomfortable as he kept moving his book to allow for more space. For Koluta placing of the book for reading also was a problem as he could not sit straight his legs were squeezed under the table, a distance was created between him and the other learner.

Nemat explained that in her class, one table was shared by four learners and the space on the surface was not quiet enough for the learners with cerebral palsy to perform learning activities in a good way, and they had no other way, and they cannot sit on the desk and the other tables are not low so they have to use the one that can accommodate them. And these she said could be adapted since teachers had earlier on came up with designs for tables and chairs which they felt could be suitable for these learners;

*“We gave a design of the table and chair that would be at the level of the child’s height such that he/she does not have to bend or lean on the table as they write”*

These designs she reported would be comfortable to the learners as they would not have to lean as they write.

#### **4.1.5 Teaching and learning materials**

Nemat stated that the school did not have adequate teaching and learning resources and those that they had, not all were accessible to learners with cerebral palsy who could not read the writing of the course book. This was observed when Winwin was told to read from the text book and he strained his eyes as he tried to see the word so as to read. To overcome this she was not of the opinion of depending so much on the government, but since the government provided for learners in regular schools it was important that it provides also for those with special needs in special schools.

Teachers she felt should play some role;

*“...teachers should also come up with designs which can be of help in making of things using the local materials to make teaching aids which can be used for teaching these children...”*

The reading materials she said the school had made an effort to purchase and at the moment there were books which the learners could use. Availability of the books was in all the reading and writing lessons observed. The learners used the English course books in the curriculum and these were shared among two or three learners. It was difficult for learners who sat at the edge of the desk to view the book well, especially for those who sat three on a desk. When one of them was reading the book was not placed in the middle of the desk the one reading had to move the book to his/her side. Lensy had a book for her own use since she used the wheel chair.

Nemat was conversant with kinds of teaching and learning materials that can aid learners with cerebral palsy in reading and writing, she also mentioned assistive devices which she felt could be of use to those learners with cerebral palsy who had difficulty in writing. These included pen holders, head pointers or mouth pointers.

She expressed;



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*“... something like a pointer, something that the child can use to write...”*

She stated that she had come across learner who had difficulty using the upper limbs. This she said could be trained to use other parts of the body when she reported;

*“We have a boy in special class who can use the lower limbs to write so if this child something could be made to help him write with the lower limbs, it would be of great help.”*

The resources mentioned above were not used in the lessons observed, all the learners with cerebral palsy in her class could hold the pen, but only for Lensy who had weak grasp and could not support the book with her left hand when writing. She admitted that the flash cards she used in the second and third lesson were the only resources she had made on her own and they were of benefit to all learners in the classroom;

*“You know even these other learners there are some with different special needs even though they are not cerebral palsied, so when they see it they also get to know how to read though I usually make them for these learners with special needs who are in my class”.*

On using the flash cards she reported they have been of great help teaching reading and writing to all learners in her class. When words are written on the blackboard and some children who cannot read them find it easy to read them on the flash cards at close range, just like they would use the textbooks. The learners also use them after the lesson as they are usually left in the class till the end of the day when they are removed and kept in the office, so the learners have them the whole day, those who cannot read and write what is on the blackboard now have them closer. However during the lesson observed, Nemat carried the flash cards she had used in the lesson, they were not left in the class. And looking at the classroom there was a large blackboard for teacher to write on. This was the teacher used for writing the new words and sentences she taught. The other three walls of the class were completely bare with not a single teaching and learning material. When asked the reasons to this she indicated that the sponsor of the school had cautioned the teachers against pasting

or hanging things on the wall as this would damage them. Even though this was the case still there was no evidence of other learning centres such as the shop, nature corner or science corner.

#### **4.1.6 Methods of teaching reading and writing to cerebral palsy learners**

Nemat reported that mostly she taught by asking the learners to read new words and reading of passages as they are written. This was observed in the three reading lessons, in the first and third lesson the teacher wrote the words on the blackboard and also showed the word written on a flash card and asked the learners to look at the words and read. In the first lesson the teacher taught comprehension, she read the first paragraph then told the learners I want you to read like that, who will read for us? She pointed to Patrick who read first three lines, then told to stop and she asked for the next reader, she pointed Koluta who also read three lines. Nemat explained that in reading she encouraged learner to even just identify a letter sound in a word then she build up to the reading of the whole word;

*“we usually try in that even if a child is able to identify a letter within a word then you reward that child for the effort that the child has made...”*

She pointed out ways in which cerebral palsied learners with other associated problems were included in the reading activities. Nemat pointed out that she had only one learner in her class who had speech problem whom she gave the same words on the blackboard to read but allowed her more time and if whatever she was saying was not audible she would point to the words and ask her the one she meant then the learner would respond using body language.

*“...as a teacher you may not be able to know what the child is saying so you give the child alternatives, are you talking about this, lets say they were three words, may be I had three words and with her speech I can't get what the child is saying, so you point to the word and ask the child are you talking*

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*about this word so the child is able to communicate may be nodding the head or may be using the fingers to tell you NO...*”

Lensy had problem in vocalization in 1st reading lesson Nemat asked, asked learners to read the words written on the blackboard, Nemat is pointing to the word ‘keyhole’ she asks Lensy to read the word she is pointing. Lensy struggles to read and she says, ‘keybod’, she was able to say the word though not clearly. When Nemat was asked how she included learners with cerebral palsy in writing activities, she explained that this are learners whom you cannot limit that you have to write on this line from here up to the end they have to be given time and you have to be patient with them so as to instruct them .The child has to write even if the child writes going downwards but has written the correct thing you have to award the child. She had this to add;

*“ you see they take time to write so you give them things that they can write for that period you don’t have to give them a whole page, you just give them the work that they can do at that very moment you don’t have to give them what the whole class is doing, you just give them their own”*

It was observed Lensy had problems grasping the pen and writing eligibly to ensure that she also did what the rest of the learners were doing in the writing lesson, Nemat went to her and demonstrated to her how she wanted her to write. She noted that a teacher cannot just go to class and write things on the blackboard and tell children to copy them without giving clear instruction of what they are supposed to do, so you have to go to the child and show them how to write. This you do repeatedly so that the child can master. She emphasised this by saying;

*“I usually write for them and tell them to copy, if it is something that has to be copied from the blackboard or from the books you write for this child in his/her exercise book then you tell him I want you to write like this in your book, so this first line should be written in this line and this second line here so I compare what the child has written and what I have written”*

She explained there are learners with cerebral palsy experiencing movement difficulties whom you have to hold the hand to help him/her grasp the pen to write out the task given in class. Nemat was observed trying to guide Lensy on how she was to write in her book, Winwin due to his vision he could not copy words written on the blackboard, he was given flash cards with the words the teacher had written on the blackboard to enable him see them at close range copy in his book.

#### Individual teaching

Nemat reported that giving individual attention to learners was very important. Learners with cerebral palsy have varied needs she had to attend to them as per the need she explained this by saying that; as she attends to one child at a time, learner those who are able to write or read will continue on their own. She however mentioned that giving individual attention could lead to indiscipline in that the other learners could be jealous. She stated that,

*“...these others also need your attention because they have different problems, so as you help this one they also need your attention and want to be assisted in doing what they were doing may be writing or asking you questions you...”*

To ease the friction and make everyone feel part and parcel of the classroom activities Nemat stated that in her class they discuss about the individual differences of the learners and so everyone knows what one can do and what one cannot do so even if she gives attention to a particular learner the rest are contented the teacher has already attended to us.

#### Group teaching/ whole class

This was observed especially in the reading lessons, Nemat had words which she wrote on the flash card and on the blackboard, she could point to one learner to read then ask the whole class to read as a group, in the 1st reading lesson Koluta read the word ‘SPOIL’ then the whole class was asked to repeat after him in a chorus twice. In the 2nd reading lesson the teacher asked the learners who did not have a textbook to

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sit where there was one, Alum, Koluta and another learner shared one book. Winwin shared with only learner. As one learner read the rest followed in their books. In the writing lesson when the learners were asked to copy from their textbook the learners again shared one textbook among three.

When Nemat was probed further on the method that she preferred, she had this to say;

*“I use both because there a times that I need them to work in groups, may be I want them to write something then I would say this group is going to write on this and this other group is going to write on this but I mostly use individual work, each child has to do his/her own individual work. The group work is usually done once in a week it is not done all the time”*

She indicated that individual work was better as it was easy to assess what the child is able to do, but when it comes to group work you cannot know who contributed and who never contributed so you are not able to gauge the child individually because some just keep quite in the group and let others do the work for them. And because in class there can be competition learners so who grasp the knowledge fast will take the work and do it for the group and the rest will just accept that and for this reason she used it once a week. However this kind of competition was not observed in any of the lessons.

### **Adaptation of methods used to teach reading and writing learners with cerebral palsy**

Nemat explained that methods do vary and they didn't have to limit herself to English alone even if it involved using the local language or Kiswahili (second national language) for the child to understand what is being taught. She felt it was necessary to mix the languages. It was not logical to say something in English and yet they cannot understand. So the method should be flexible such that the child is able to know what the teacher is talking about;

*“... we are here to learn and we are here to make the child gain some knowledge and it will not matter how the child is going to know, what you want is the child to learn, so it is important to use the language that the child can understand”*

She said that she had to spell words that she wanted the learner with low vision to read since he could not see them well on the blackboard however big she wrote them, but could read easily from flash card. She further mentioned that,

*“...he has to at least get something which has bold prints which we don't have so if this child could get a book with big writings then this one would help this child to read”*

In all the three lessons observed Nemat had flash cards which she gave to Winwin and Lensy to read or copy the words in their books. She was observed going to Winwin's table showing the word on the card and asking him to read and also to spell the word.

As has been mentioned she indicated that learners with cerebral palsy have diverse needs there are those who can read very fast and those who due speech problem are not able so as a teacher you should be patient with them so that they can read. And when it comes to writing they should not be given the same amount of work as the other rest of the class, you limit it and give ample time for them to complete the work. As was observed in 2nd reading lesson this was not the case, the teacher called on Winwin to read from the textbook, but as he struggles to get the word the Nemat pointed to the next child to read. And in the writing lesson both Lensy and Winwin did not finish writing the words by the time the teacher left the class learners were just instructed to take their books to the teacher once the completed the work.

#### **4.1.7 Classroom interaction**

Nemat explained that in writing the learners did individual work but reading they read as a class and each and everyone tries to participate and they have a class rule

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which states everyone's answer should be respected, all of them try to answer questions as nobody laughs when one gives incorrect responses. This she said creates a good atmosphere for interaction in the class. She however reported that she usually instructs the learners to do their own work and read quietly as reading aloud would aid the person sitting next to them and they end up getting losing their marks. If one was to read aloud then she appointed a child at a time who will read loudly for the whole class, she stated;

*“If you want them to read at their own leisure then I’ll just tell them to read audibly but not noisily you see they can read quietly. So you simply have to come in if you see the child is disturbing the others or interfering with the others then you come in and instruct the child on what to do...”*

Nemat reported that the other regular learners came to her aid when communicating with learners with speech problems when what they are saying is not understandable

*“... they usually learn the languages that these children have especially those without speech. They know how to communicate with them and they easily detect that, this one has this problem, so they usually help each other may be in moving them out, they usually also help me I would say to understand what the child needs because at times I cannot understand what they are saying.”*

When asked how the learners interacted when reading from the textbooks placed on the table, she responded that one good thing with their classes was that at least there was a book to share. So as one read the other one gives time and the book is given to the one reading. And if they are reading from the flash cards, the flash card is passed from one child to the other and the child reads what they are supposed to read. In the three reading lessons observed the flash cards were given to Winwin and Lensy to read for the other learners Nemat held the flash card as she stood next to her table and asked them to read the words on them

When asked how she facilitated interaction among learners during reading and writing lessons, she indicated that she ensured the learners pointed to read, read

loudly so that the whole class could hear. This she said enabled her to know the areas the learner has a problem and can be corrected and another person can put up the hands to be given a chance to read and not talking or shouting at the child who has been reading.

*“...if that child is stuck then may be I would tell the child that whom do you want to help you, then he would choose a friend to help him read a word that he is not able to read well.”*

The learners were also observed to be very eager to answer the questions the teacher asked, they were highly motivated as they shouted “teacher” “teacher” to get the attention of the teacher.

### ***Learner-learner interaction***

Nemat stated that learners with cerebral palsy interacted well, those on wheelchair usually call their peers to push them out of the class when they want to go to the toilet or to play. The interaction was mainly between two learners who sat next to one another. She also mentioned that during reading lessons when one finishes reading a section she/he usually passes the book to the next learner to continue reading. It was also observed that learners without disability assisted those learners on wheelchair by pushing them out while during reading it is the teacher who called the next reader. The learners when put up their hands in order to be given opportunity to read.

Nemat was also asked what she usually observed in class as the learners did writing activities; she had this to say,

*“... they usually want to make sure that these children who do not know how to read and write well have all that they need the pencils, the rubbers, the books and then at times you find that they try imitate what I do...”*

In the writing lessons the learners were observed murmuring amongst themselves. In the 3rd writing lesson Alum did not have a pen so he called on the teacher who borrowed one for him.



#### **4.1.8 Teacher- parent collaboration**

Nemat stated that from the time she started teaching this class she had never met any of the parents. When she was asked her general opinion she said that teachers are also parents and the parents of these cerebral palsy learners should be close to the teachers and not leave the burden to the teachers. They should stop the habit of bringing the children to school then disappear only to appear to pick them when the schools close. Since this school was soon to introduce full time boarding for learners with cerebral palsy, Nemat felt that this would create an opportunity to meet the parents and they would be given books to carry home for their children to read during the school holidays. This would mean that when the schools open there would be continuity as the child had done something at home. She further explained it had been difficult to meet the parents of learners with cerebral palsy because the children reside in a home in a rehabilitation centre which is not close to the school. The teachers had already suggested to the head teacher to set a day when parents would come to school at least once a term and meet the teachers and discuss the progress of their child and they also tell the teacher how the child is at home such that there is co-existence.

## 4.2 Case 2- Lera

### 4.2.1 Background information

#### *School*

The school is well established with very good infrastructure, the classes are well built with wide doors with ramps and windows. All the pavements are cemented and this makes the movement of learners within the school to be with minimal difficulties. Some learners with disabilities are housed within the small home next to the school and it is run by a non- governmental organisation, while some come from their homes every morning. The school caters for learners with physical disabilities, hearing impairment, and mentally handicapped. The school has a population of 300 learners and it is single streamed.

#### *The teacher*

Lera was a female teacher aged 44years. She was a professionally trained teacher and had also undergone a four year undergraduate course in Special needs education, specializing in the area of learners with hearing impairment. This was after graduating with a diploma from KISE. She had a teaching experience of 17 years. She had taught in the school for learners with hearing impairment before joining this school which is practising inclusion. The school caters for learners with physical disabilities, hearing impairment and mental handicap. She had taught in this school for only 5years and had been teaching the class for learners with hearing impairment all along, due to teachers' rotation in the school she was now teaching class three an inclusive class for regular learners and learners with physical disability. She taught the class with another teacher who was trained in teaching learners with physical disabilities.

## Learners

### *Jana*

This is a girl about 15yrs of age. She is spastic. She is on a wheel chair and has a board across it which she places her books to write or read. She has difficulty in reading and though she is able to write she rarely does it and she usually copies only what the teacher has written on the board reluctantly. She stays within the school and from the information got from the teacher her age she is beyond class three and because the home and the school feel she is not benefiting in the school programme she is in the process of being phased out. She has stayed in the school for six years at times when the school closes the parents do not come for her. She talks in class rarely and does this when asking for something, for example a rubber.

### *Kanjo*

This is a boy aged 12yrs. He is spastic. He is very active in class and has got slurred speech but is able to read, writing is a bit of a problem as he writes slowly and cannot write on a straight line his writings go diagonally. His left hand has contracture and holds the pen in his right hand between the palms and stretches the arm after writing a word. He uses his own desk next a regular learner. He always tries to get the attention of the teacher for an explanation or to ask a question. He is the first born in their family he has one sibling. On all the days I have been in his class he has always worn very neat clothes. Kanjo is a day scholar he stays a few metres from the school.

### *Lina*

This is a girl aged 13yrs. She is spastic. She has speech problems and is not able to read or write well. She holds the pen between the thumb and the index finger; she writes very big letters which cover three lines. She shares a desk with other three learners and it is placed at the back of the classroom. She is a day scholar.

### *Kuci*

This is a girl aged 9yrs. She is athetoid; she is not able to hold a pen to write but will come with written work whenever they are given homework, at times she is able to turn pages but some other times she is assisted by her desk mate. Kuci can talk audibly but she rarely does this when the teacher is in class. She can also read but she never asks to be given an opportunity to read. Her mother is a single parent and they stay within the village next to the school

#### **4.2.2 Teacher understanding of inclusion.**

According to Lera inclusion referred to children of diverse needs learning together but each given individual attention. She said that these children have got various conditions, you have got students who have got hearing problems, physically handicapped, children who are mentally handicapped and those who have got vision problems, and all these students have got different needs. We tackled all these in the course of learning especially special needs education and how to handle these students.

*“Different students have got different needs so in a class the student can learn together with individual attention”*

#### **4.2.3 Teacher’s knowledge of the needs of learners with cerebral Palsy**

The teacher indicated that learners with cerebral palsy have no problem with their mental capacity, but had problems when it came to the use of their limbs and also speech. What was important was getting to know ways, in which they could be assisted,

*“...you understand the nature of this child for you to be able to tackle the issues that are required by the child...”*

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When asked if she had learnt anything in college concerning cerebral palsy she said that the information was too general as she specialized in the area of hearing impairment so had very limited knowledge.

Lera pointed out that they need to be assisted with devices that can help in writing, like we have a student who cannot write at all and we have tried various ways but up to this point she can't write. So if there are any gadgets that can be of use to them I think it would be a good thing so that they can be able to express themselves well may be in writing. The observation confirmed this sentiment Kuci never did any written work.

#### **4.2.4 Classroom environment**

Lera's class was congested, she reported that there were thirty learners in her class, three learners with cerebral palsy but after going to the class and observing the learners, the investigator identified the fourth learner (Jana) who had cerebral palsy bringing them to four, two polio, one had brittle bone and the rest were regular learners. The desks were arranged along the wall forming a semi-circle each desk was shared by three learners, in the centre of the class were three learners using wheel chairs, two on detached single desks which were placed in front of the teacher's table. The class had one blackboard which the teacher used to write on, charts of information on English (vocabularies learnt, sentence structures) and other subjects were hanged, and they looked rather old. An old cupboard stool at one corner in front of the class and it had old used charts and other items which seemed it was to be used as the shop corner. And there was no other learning centre such as nature corner or science corner. The classroom had good lighting as the windows were large enough.

Lera mentioned that three learners used one desk and explained that both regular learners and learners with cerebral palsy used the same desk. She stated;

“They use normal furniture, the kawaida (normal) ones (the teacher is laughing) the ones that the rest use and seat too.”

In the class it was observed, Lina and Kuci shared the desk with three regular learners.

On suitability Lera had this to say;

*“I feel at times they are not very suitable because you find that at times when they are sharing and due to their shaky movement they kind of feel disturbed or disturb the person they are seated with and even the surface of the desks.”*

This sentiment was quite evident during the 2nd writing lesson; Lina was brushing on the learner seated next to her as she tried to position herself well for writing. And even for the regular learners some were observed placing their books on their bags to write. Lera added that the furniture were not suitable for learners with cerebral palsy for at times when placing their books on the desk and due to their movement they push the books, or like when they are answering the question and somebody wants to stand up to answer or raising the hand it may go towards your partner they may feel disturbed.

#### **4.2.5 Teaching and learning materials**

Lera reported that she had enough teaching and learning materials, she stated that;

*“I have relatively enough and we also have books, when you have to use teaching aids I think we relatively have enough things to use in our class.”*

She explained that she used the course books recommended in the curriculum and also story books. The course books she stated were shared one copy per two learners while the story books the learners could have each a copy and exchange with one another after reading. In the three reading lessons observed the vocabularies and passage read were from the course book and two learners shared one copy as had been indicated during the interview, and so there was no time set to read story books during these sessions

Lera expounded that the teaching and learning materials she used to teaching reading and writing to learners with cerebral palsy depended on what one was teaching. She indicated that one could use charts flash cards or real object and that other aids could also be provided to assist in writing she explains;

*“...like we have students who cannot read and write because they have jerky movements, I think writing devices would be very handy for them, like the head pointer, the one that is put in the mouth and also that which helps the hand to steady...”*

Lera expressed knowledge of the materials that could be used to assist in teaching writing to learners with cerebral palsy but from observation Kuci was not provided with any device she sat and watched the others as they did the written work and Lera seemed not to bother about her as she paid attention to those learners who were writing.

#### **4.2.6 Methods of teaching reading to learners with cerebral palsy**

Lera stated that in reading she taught the pronunciations of words the learners were likely to come across in a story or passage that would be read in the next lesson. This she did by asking individual learners to read and if there is a mistake made she corrects and would then read the word or story herself loudly and have a discussion in class and ask questions about it. This was seen in 2nd reading lesson.

She indicated that at times she taught using sign language when teaching learners with cerebral palsy how to read because when it came to pronunciation they are not able to pronounce some of the words, or they have some difficulty in putting out some sounds,

*“... with that I put in the sign language as we read. I give a sign for a certain word we are reading if am teaching word I teach the pronunciation verbally and I teach it in sign language...”*

Lera however stated that even though she complimented her teaching using sign language she did not have a cerebral palsy learner who had associated problem of hearing. She gave her reasons as;

*“I teach in sign language because if the child cannot really, pronounce the words, they are not able to say out exactly what was being read, so sign language comes handy to help them express themselves fully, they say and sign the word at the same time”*

Lera explained how she ensured that learners with cerebral palsy were included in the reading and writing activities by stating that;

*“...they participate in that, I don't give them so much work to do, and it's communal. I give them a sentence or two to write, in writing everybody writes, so I make them participate fully like anybody else. But in reading, if they are reading on their own that is individual reading...”*

She that she used both group and individual teaching;

She stated that when they are reading as a group she chose amongst the children who wanted to read for the whole class as the others listened and followed in their books. They all have to be on the same paragraph because as one reads the rest of the learners listen and they have to go at the pace of the reader

Lera indicated that individual reading has no uniformity because each child goes at his/her own speed, and that the students read silently individually before they answer the questions that may follow, if it is a comprehension.

In writing she reported that there are learners who could not write well and she was trying to help them in shaping of the letters as they write so as to have good hand writing, it was so difficult guiding them to write letters of average level. From all the three writing lessons observed Kanjo wrote diagonally while Lina the letters she wrote were too large covering three lines. When probed further to find out what she did to assist Lina to write sizeable letter she had this to say;



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*“I sometimes write the word and ask the child to copy, at times am forced to hold the hand to have the child control her hands, the child writes a H a very big H, and I then I help by holding the hand to control the movement...”*

Lera went on to explain that this individual guidance she gave during the time she is teaching after she has explained what is to be written and everybody is working on his/her work then she goes round checking what they are doing, or sometimes after the lesson. In the 3rd writing lesson Lera went to Lina’s desk took her pen and demonstrated to her how she wanted her to write, saying, *“I want you to write like this”* she did not hold her hand in the process, and it was a very short period. She then moved to check the work of other learners.

According to her she felt that both individual and group teaching were important in teaching reading to learners with cerebral palsy. Her reasons were;

*“...when the children listen to one of them, one of them reading they get the real pronunciation, different pronunciation from different learners and also correct themselves”*

This was demonstrated in the 2nd reading lesson when the teacher asked Kanjo to read the word ‘Thunder’ which she had written on the blackboard, even though due to speech problems he read the word correctly but not audibly, the class was asked to repeat after him, which they did in a chorus.

Adaptation of methods of teaching reading and writing to learners with cerebral palsy

According to Lera adaptation that could be made was providing learners with assistive devices and minimal work she says,

*“...devices that can help the students in writing, in holding books...because of their slow nature, if the content is reduced, it is not too wide I think it would be good for our students...”*

She also said that for a learner with cerebral palsy who cannot write should have a reporter she states this when she says;

*“...she needs to tell somebody the answer that she requires written”.*

It was observed Kuci sat and watched the others as they did written work in all the three lessons observed no attention was given to her during this lesson. Lera mentioned that her colleague sometimes assisted her during English lessons and had tried putting heavy gadgets on her hand but with no success. During the informal talk Lera reported that it was her wish if the girl could be assisted but she did not know how.

#### **4.2.7 Classroom interaction**

##### ***Teacher- learner interaction***

Lera said that both learners with cerebral palsy and regular learners interacted well by participating in class in discussion, answering questions both orally and in written form. And during reading if learners are not able to get what one has said she asks the student to write what he/she is saying. She stated that the class did everything well even those with cerebral palsy,

*“I ask them to write to get what one is saying, if the rest is not able to get what they are saying I ask them to write.”*

Lera mentioned that she involved all the learners in reading and writing activities, she explains this by saying;

*“When am asking a question from the story I always give them a chance to answer, these children with cerebral palsy, they raise up their hands to answer so the rest can listen to them and give them encouragement to talk.”*

In facilitation of interaction among the learners during reading and writing lessons, she replied that if there was a passage to be read followed by a discussion she

encouraged everyone's participation so that if there was a question to be answered the learners should not ignore the one who has got cerebral palsy. She however added that the regular learners assisted her to understand what learners with cerebral palsy with speech problems said;

*“...sometimes I ask them to assist me, to tell me what they have heard I ask the students also with cerebral palsy if that is what he/she said. And if he says yes then we carry on with our discussion.*

She admitted there was positive dialogue with the learners and expression of ideas. In the second writing lesson the learners reported to Lera what one learner had done during the break.

### ***Learner-learner interaction***

Lera said that learners on wheel chairs interacted well with their peers as when they wanted to be moved from one point to the other; they also assisted in pushing of desks out of the way. From observation learners called on one another to be helped with a pen, ruler or a rubber. This was further confirmed when Kanjo gave the boy next to him his rubber which the boy used till the end of the lesson. Lina also pushed herself to the desk next to her during the 3rd reading lesson so as read with the others. In the 2nd reading lesson she had her own book. The regular learner on that desk placed the book in such a way that Lina could see the part being read.

Lera explained that during reading and writing the learners did individual work unless for Kuci who has to ask help for others to write for her, or when answering questions that's when the learners could give the answer which has been said by another learner or writing it down. And by other learners listening to an answer a learner with cerebral palsy has given was a way of encouragement to them. She further explained that in reading and writing activities there is no exclusion as the learners interacted with one another as any other child. She states;

*“There is no discrimination, I think there is no level that forces this to happen, they work together well, and they behave like any other child...t you find that the one who is cerebral palsied is the one who is making noise and making fun....”*

Lera said that she had observed the regular learners completing answers ,may be a word or a sentence for learners with cerebral palsy with speech problems, but she said she did not encourage this because everyone is supposed to be given a chance to talk in class;

*“...I need first to listen to this person to settle to get what the child is saying and if I am not able I get the child to repeat it. These others should come in only when I ask them”*

Lera said that interaction was helped the learners with cerebral palsy as they read and write, in that they learn as they talk and as they read or write they are producing what they are reading and writing in their mouth, so to some extent it affects the interaction because like when they read a passage, and the rest of the class is not be able to give an answer to a question and the child who has got cerebral palsy gives correct answer, they appreciate the fact that the child has got cerebral palsy does not mean this child cannot understand things like anybody else.

#### **4.2.8 Teacher-teacher collaboration**

The teacher stated that the teacher with whom they shared the class at times Kuci to stabilize the hand in all the subjects taught. But this was not observed during the lesson. Learners’ different needs may be met if the teacher gets help and support from colleagues and other professionals.

#### **4.2.9 Teacher-Parent collaboration**

Lera explained that the parents only came to school when they were asked to and they had no planned timetables of when they were to visit the school for meetings. She

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however stated that it was important to involve the parents so that the children can be encouraged in the activities they did in school thus boosting their morals. She went on to say that she has never involved parents in getting strategies which they could use at home to guide their children in reading and writing but felt it was necessary, she gave an example;

*“Like this one who is helped to write when she goes home she brings work that is already written and when I ask her who did it she says my dad did it so they work together though am not the one who initiated”*

During the informal talk she mentioned that she had invited the Kuci’s mother to school but she had never bothered to come. Lera said that teacher- parent collaboration was important as this was one way in which a teacher can work with the parents especially those with denial problems. They would accept their children and know that their children are just like any other child and that they can achieve given time and if they are understood well and assisted.

### 4.3 Cross-case analysis of the teachers studied

A cross-case analysis was done to find out some findings that cut across the cases. The two teachers had undergone training in special needs education, therefore understood what inclusion meant. Nemat both were diploma holders from KISE though Lera had further obtained a bachelor’s degree in special needs education. This was an indication they had basic skills and knowledge about learners with cerebral palsy.

School A had learners with physical disabilities and those without physical disabilities. Whereas school B there were learners with physical disabilities, intellectually challenged, learners with hearing impairment and those without disabilities. Both schools therefore practiced inclusive education. Both teachers were knowledgeable about the educational needs of learners with cerebral palsy with

limited functional ability. However Lera did not provide an adaptation for Kuci who had difficulty holding a pen to write.

Nemat had a spacious class which allowed for easier movement and learners used desks except for Winwin, Koluta and Alum who shared a table with two other learners without disabilities. The learners faced the teacher and this did not allow for maximum interaction among learners. Lera on the other hand, learners sat in a U-shaped pattern and those learners using wheelchair were in the middle of the U-shape. Placing these learners in the middle could lead to labelling and stigmatization.

Nemat had few learners and this created good opportunity for the teacher to give individual attention to learners with cerebral palsy experiencing difficulties in motor and speech which can be useful in reading and writing. Lera's class had 37 learners, as mentioned earlier, is large for a school having many children with special educational needs. Nemat's class was totally bare with no charts or any learning centre, the available teaching resource was the blackboard and the flash card used for the learner with low vision. There were charts on different subjects English included in Lera's class, but they were very old.

They both physically assisted learners by holding the hand during writing and also verbally prompted them during reading. There was also an aspect of addressing the questions to the whole class, learners with cerebral palsy were given opportunity to read or answer questions but this was not equal to learners without disabilities.

Lera mentioned she got assistance from the teacher with whom she taught the class with. However this was not observed during the study. Both teachers were of the opinion collaborating with the parents of learners with cerebral palsy so that they could assist their children in reading and writing activities.

## **5. Discussions, conclusion and recommendations**

### **5.1 Introduction**

The main purpose of the study was to investigate how teachers trained in special needs education included learners with cerebral palsy in reading and writing and how the training has an influence in the way they include. The discussions are based on the research questions and discussed in relation to the reviewed literature

#### **5.1.1 Nemat**

#### **5.1.2 Teacher understanding of inclusion**

The findings revealed the teacher had training in special needs education and understood the concept of inclusion. This was based on what she had learnt during the training. Wormnæs (2001) stated that through teacher training the teacher gets a better understanding of inclusive education and its implication thus making him/her feel secure in their job, and the ability to teach children with different abilities and needs, which influence the teacher's willingness to take on the responsibility of teaching a diversity of learners. Her understanding in regard to her teacher training is that learners with special needs should be educated in the same school and classroom with the other regular learners and become members of the community. The result shows that the teacher has a wide understanding of inclusion as not only being at the school level but even in the community level. It is therefore evident that inclusion is not only a school affair but also a community issue. Different authors describe inclusion as giving opportunity to a learner so that he/she takes full and active part in school-life to enable him to be a valued member of the school community and be seen as an integral member. A learner experiencing difficulty using the hand or voice should be given an opportunity to participate in the classroom activities just like any other learner within the class. They should be actively involved in the classroom

activities in enabling environment. This reduces their exclusion from the curricula, cultures and communities of the neighbourhood mainstream of learning. It implies that all teachers are responsible for the education of all children (Farrell 2000, Booth 1999). The findings revealed

The report also indicated the training of teachers in special needs education is crucial for teachers to be able to include learners with cerebral palsy in their classrooms. Avramidis, Bayliss and Burden (2000) in chapter two, contends that teachers who had received training of high quality appeared to feel more competent in their teaching skills and found the concept of inclusion easy to deal with. For inclusive practices to be promoted, the level and depth of teacher training is of major concern (UNESCO 1994)

### **5.1.3 Teacher's knowledge about the educational needs of learners with cerebral palsy**

This question was geared to finding out what knowledge the teacher had about the educational needs of learners with cerebral palsy and how this influenced the ways in which the teacher did the inclusion. The discussion about needs will not be based on medical terms but in a wider range.

The findings indicated the teacher was aware of some of the characteristics of learners with cerebral palsy. She mentioned that, due some brain disorder there were those who were not able to participate fully in classroom activities that involved speech and mobility. Previously before undergoing through the training she grouped them under one umbrella term physical disability. Wood (2007) state that some children with cerebral palsy may not develop speech, but their receptive language and understanding may be quiet normal. This was confirmed from the interview and also from observation. The teacher was patient with Lensy when she answered the oral questions, was given opportunity like the rest of the learners. Even though Lensy had speech problems being given a chance made her to feel recognized in the class. The



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child cannot control the slurred speech, but they make the child to be isolated by the others.

According to Salamanca statement, all children have a right to participate in quality education that is meaningful for each individual (UNESCO 1994). For the teacher to understand the learners with cerebral palsy they need to focus their attention on, to be conscious of and to put into words their own view of mankind, of childhood and of the nature of learning (Johnsen 2001). This is supported by Moffett, 2000 cited in Gaad & Khan, 2007 who states that teachers need to be sensitive to the educational needs of students with Special educational needs, and utilize strategies such as students need to learn, if they are to be provided with the most appropriate educational services. The learners with cerebral palsy each had their unique needs. Winwin despite having cerebral palsy, he had a problem of sight. Nemat involved him by providing flash cards which he could read at close range. She also held Lensy's hand to guide her how to write.

From the result the teacher mentioned the educational needs based on what the learner could not do. However from observation it was found that the learners were able to read but needed extra time. In writing Lensy was able to write but had a problem holding the pen. To assist the learner in the classroom activities, she said a teacher should establish the performance level of the learner. This may be an evidence of the teacher's understanding of the strengths and weaknesses of a learner. Through this the teacher was aware of the starting level of assisting the learner and moving to the next level. This is what Vygotsky, 1978 referred to as the Zone of Proximal Development (ZPD). According to Vygotsky, it is important to build on what the child can do to reach to the next level.

The results also show that for the teacher to include these learners there was the need to re-adjust the curriculum, she mentioned that due to limited functional ability the amount of work given to these learners was reduced. From observation the written exercises were found to be the same. The content for reading was the same but instead of reading complete sentences Lensy was asked to read single words. According to

ICF, the reduction in motor ability may hinder full participation of a learner with cerebral palsy, more so in reading and writing. For such kind of learners, time limit had to be increased.

Social needs were also found to be important for a learner with cerebral palsy. There is a need for a learner to feel accepted and not labeled, from observation the teacher referred to all learners by their names. Socialization she mentioned is important as it boosts one's self-esteem. The same view is held by Schweinhart, Weikart, Lamer, 1986 in their study they found how important the roles teachers have and how strong an influence on self-concept they have in creating relationships with students during school activities. The process leading to an enhancement of or decrease in the learner's self-concept begins with the interaction between teachers and students.

#### **5.1.4 The classroom environment**

Learners with cerebral palsy need a learning environment which is stimulating for involvement in activities. The classroom had good ventilation, the class size was generally small; there were only seventeen learners in the classroom and only four with cerebral palsy. In reference to chapter one, in Kenya the official number of learners in a class in a special school is twenty five. This number allows for individual attention of the learner as the lesson progresses. Nemat had seven learners with disability; the number was an indicator of a favourable environment for individual attention. Befring (2001) asserts that physical factors such as classroom need to be addressed for there cannot be quality education in an unconducive environment. A well organised classroom is a motivation to the learners. This is further emphasised by (Rye 2005), it is important to create a learning environment that is welcoming to the child. From the observations, the learners sat in three rows as they faced the teacher, the middle row as was mentioned in chapter three had two tables which were shared with regular learners and those with cerebral palsy. This kind of seating arrangement indicated inclusion of learners with cerebral palsy among their non-

disabled peers. The learners need to feel they are members of a group (Skjørten 2001).

This kind of seating arrangement makes the child to have a sense of belongingness in the classroom. It also enabled the teacher to have full view of the learners. The learning environment needs to be organised in such a way that the teacher is able to attend to diverse needs learners. The spaces between the desks were large enough for easier accessibility by the learners using wheel chairs and crutches. However the size and height of the desks and tables were observed to be too low. Heller, (2005) asserts that proper positioning allows the learner to have full control of the arm and hand movement and that poor positioning may impede manipulating of a book during reading or writing activities. This was observed to lead to negative attitude of the regular peers as they felt disturbed by the uncoordinated movement of the learner with cerebral palsy as they made attempts to write. Some of the regular learners were observed to be placing the books on their laps during writing activities.

The classroom was found to lack learning centres such as nature corner, science corner or the shop area. Such kind of areas reinforces the content which has been covered in class. The environment should play the role of the teacher. The teacher should arrange and position learning materials so the materials play an active role in the teaching process.

### **5.1.5 Teaching and learning materials**

The teaching and learning materials here referred to the educational resources that the teacher used to reflect the inclusion of learners with cerebral palsy in reading and writing activities. Teaching and learning resources make the learning to be interesting to both learners with disabilities and those without disabilities. Teaching and learning materials assist learners in the mastery of concepts and therefore reduces the level of abstraction of information (Clark et al, 1995). The materials and activities used in developing reading and writing skills were of critical importance. To be maximally

effective, they must consistently be selected with sensitivity to the needs and interests of the learners with whom they will be used.

In all the lessons observed the teacher used only flash cards, to assist the learner with low vision and the one with poor grasp. The use of the flash cards was found to be a way in which the teacher included the learners in the classroom activities. Being able to access reading books of different levels for all children helps children with reading difficulties to develop reading competencies at their level, Gross in (Mapsea 2006). The other learners were also observed to benefit during the time the teacher showed the flash card to either Winwin or Lensy. Nemat also made and used the flash cards based on the knowledge she had gained during her training.

Nemat did not have adequate teaching and learning materials such as the English course book, assistive devices for writing, book holders and page turners. The teacher used only the course books recommended in the curriculum but they were not enough. Learners with more resources such as books, teacher's attention were found typically to have more learning opportunities, and capitalized on them to perform better academically (Baker, Goesling & Letendre, 2002). The learners shared a book between two or three, the learners were observed to talk to one another as they read. Lensy who had poor grasp had no device available for her to enable her write well. The idling as the peers wrote was seen as a form of exclusion. The teacher had understanding about learners with cerebral palsy when she mentioned that the teachers could take part in adapting the teaching and learning materials for learners with cerebral palsy. The class observation also indicated the teacher had no other teaching and learning material, looking at the classroom there was no hanging of the teacher's or the learners' written work. Johnsen, (2001) in her Curriculum Model postulates that some learners prefer to study things on their own to remember them. If the written work of learners with cerebral palsy is displayed along those of their peers without disability, they get motivated. They feel part of the group thus self-esteem is raised. For successful inclusion of learners with cerebral palsy in reading and writing, the teacher should avail and use relevant learning materials. Lack of these

lead to exclusion during the lesson, from the observation Winwin could not follow as a passage was read since the book was placed at the edge of the table where the reader sat. Lensy had a book to herself but she looked isolated reading alone while the others sat together.

The findings also indicated that even though the teacher would have wished to avail charts for reference in the classroom, it was not possible since the sponsor was against use of the walls. This is an evidence of lack of knowledge on the part of the stakeholders who should provide the needed support to the teacher. Through positive support the teacher is able to plan and implement inclusive practices for learners with cerebral palsy in reading and writing.

#### **5.1.6 The methods used by the teacher to teach reading and writing to learners with cerebral palsy**

Reading and writing are the most valuable skills a child can learn (chapter 2). The findings indicate the teacher used both analytical and synthetic method. In analytical method one learns words or entire sentences as entities. Using of phonic method assist in linking speech with writing (Haskell & Barret 1993). The observations also show use of demonstration and rote method. The teacher asked the learners to read the words or sentences she had written on the blackboard. She addressed her questions to the whole class and gave opportunity to all groups of learners.

In teaching comprehension the teacher read loudly to the learners before asking for a learner to take up the reading. She corrected the learners as they read by prompting verbally. There was also an aspect of turn taking during reading lesson and this was controlled by the teacher. The learners did not take the initiative to request to be given the opportunity to read. This in a way made the lesson to be teacher-centred.

During writing the learners were asked copy words written by the teacher on the blackboard or writing sentences from the English course book by filling in. The tasks given were rather the same as for the whole class.

The teacher paid attention to individual needs of the learners, for example Winwin and Lensy were provided with flash cards so as to read and write the words that the teacher had written on the board. She also gave physical assistance to Winwin and Lensy during writing activities. According to Vygotsky's (1978) Zone of Proximal Development a child should be brought from one level to the other. This theory is in line with the concept of inclusive education of adapting teaching strategies based on the needs of the learners. UNESCO, (1994)

### **5.1.7 Interaction**

#### *Teacher- learner interaction*

The interaction between the teacher and the learners in the classroom is a crucial factor for both successful teaching and learning, and child development. (Bruner, 1987; Vygotsky, 1978). Bruner refers to it as scaffolding whereas vygotsky uses the concept Zone of Proximal Development. For example the teacher gave verbal prompts to Lensy as she pronounced the word 'keyhole'. The interaction tended to be teacher initiated as she asked oral questions and gave instruction of what the learners had to do. This agrees with Westwood 2007, who contends that teacher-learner interaction does not simply comprise verbal exchanges between the teacher and students, the teacher must make effective use of instructional media and hold students attention. It has been noted that children acquire a variety of information by imitating adults, and being instructed about how to act. This in essence means that every child should be an equally valued member of the classroom culture. Inclusion is therefore seen as a process of increasing participation of children (Booth 1999). The same view is held by Rogoff, 2003 that children learn from their opportunity to observe and adults often expect them to learn through watching.

Lera reinforced the learners who made attempt to answer oral questions asked. Gilbert 2004 in Westwood (2007), states that students' responses are deliberately shaped and refined through a process of feed back and reinforcement. For learners

with cerebral palsy who have speech problems this makes him or her to feel valued and be motivated to participate in the subsequent learning activities.

### *Learner- learner interaction*

For successful inclusion and participation in lessons in the classroom, depends to a large extent on the teacher's implementation of the practices, and the involvement of the learners. In this class the learners did their own individual work during writing or reading lessons. The regular learner ensured Lensy had a book or pen. They were observed murmuring inaudibly to one another, though the teacher discouraged this. It has found that peer support contributes to school improvement especially where a learner is supported in reading and writing by peers, the standard in literacy improves (NCB 2004). Peer support is also used to promote inclusion by promoting friendships between learners with disabilities and those without disabilities. She indicated that such assistance made the others not to make any personal effort. However Winwin and Lensy were given help by their friends in giving pencils or books and by pushing them outside and into the classroom.

## 5.2 Lera

### **5.2.1 Understanding of inclusion**

The findings revealed Lera understood inclusion was all about children with diverse needs learning together with individual attention being given as per their needs. She had learners with different educational needs in her class. Booth & Ainscow (1998) gave a broad view of inclusion as giving equal opportunities for all learners including learners with special educational needs. Her understanding was found to be based on the training she had undergone; this had therefore assisted her in working with learners with disabilities.

### **5.2.2 Knowledge of educational needs of learners with cerebral palsy**

To teach learners with diverse needs, it is important for the teacher to be aware of the individual needs of the learners. The results showed teacher had some knowledge of some characteristics of learners with cerebral palsy such as limited use of the limbs and problems of speech due to brain disorder (as mentioned earlier). This is inadequate knowledge may be assumed could likely to lead to exclusion of learners with cerebral palsy in the classroom during reading and writing. She admitted the content she had covered in school did not focus fully on the education of learners with cerebral palsy as mentioned earlier. Educators should understand that inclusion involves serving learners with full range of abilities and disabilities in the general education classroom with appropriate in-class support (Crawford, 1994; Roach, 1995; LoVette, 1996; Saline, 2001). This finding may be assumed to have contributed to lack of attention to Kuci who experienced difficulties holding a pen in order to write and therefore did not participate in the writing activities. The findings revealed teacher was not aware of the relevant skills to use in order to assist this learner. The result therefore suggests that lack of training and experience in a specific area of disability such as cerebral palsy may hinder any appropriate effort to assist a learner. Jana too wrote sluggishly, the teacher seemed to have negative attitude towards her for it had been indicated that by the end of the school year she would be phased out (end of formal school). This was due to the fact that she was over age for the class and performance in all the academic subject was below average. They findings indicate lack of attention to Jana may have been due to an already formed opinion that learner was no longer fit for attending school. As mentioned earlier attitudes of classroom teachers have long been recognised as being key to the successful inclusion of learners with special educational needs in inclusive classrooms (Norwich 2002; Carrington 1999 cited in Lambe, 2007).

It can be assumed that there had been lack of proper assessment to establish the specific needs of Jana. For successful inclusion assessment for academic performance is crucial. Lack of knowledge may make teachers to have negative attitude towards



learners with disabilities and how they treat them. This in line with the study done by (Wolfensberger in Beirne, 1994), that how a person is viewed affects how that person is treated. It is therefore assumed lack of attention to Jana and Kuci could have been due to lack of skills to identify the needs. The task of identifying learner needs and providing environments that address and support those needs has been found to be complicated. To design proper assessment tools for instructional outcome the teachers must understand the characteristics of both the learner and the learning process (Sands, Kozleski, & French 2000)

### **5.2.3 Classroom environment**

The results indicated class size was a bit large for a special school. Given this number, adequate individual attention becomes difficult. Learners with cerebral palsy have varied functional abilities, least restrictive environment therefore recommended for full participation.

The learners sat on desks which were arranged in a U-shaped pattern. The learners faced each other which was found to promote interaction among the learners. The finding revealed the classroom arrangement did not promote good interaction among the learners, learners using wheel chairs had their wheel chairs placed in the middle of the U. This finding showed these learners could end up being stigmatized and labelled due to their conditions and sitting positions. The teacher explained it was for easier accessibility of the wheel chairs.

The study also revealed the furniture used was not to be very suitable, the surface for placing the book for reading or writing was found to be too narrow. For example Lina encountered difficulty positioning herself during writing as she kept on brushing on the learner next to her. This could lead to negativity on the part of the learner. Szczepanski (2004) states that proper seating position for learners with cerebral palsy is very important as this provides the child with the needed support to maintain an upright position in good alignment, it also facilitates classroom participation.

The findings revealed the learning environment was not quiet motivating, the class had charts on English and other subjects hanged on the walls. However they were old indicating the teachers was not making any new ones. The class had no learning centres such as language, science, or nature centres, the an old cupboard meant to be a shop corner also had very old and dirty papers an indication they were not being used. Such areas make the class to be more child-centred as learners would refer to them in the absence of the teacher to build their vocabularies and writing skills. A classroom should be an inspiring environment for learning and promoting learners own activity and participation in the learning process. A child-centred education gives room for diversity, creativity and responsibility in an implication of inclusion (Befring, 2001; Johnsen, 2001; Ainscow, 1994, UNESCO, 1993).

#### **5.2.4 Teaching and learning Materials**

The findings revealed the teacher used books the recommended English course book for teaching reading and writing. At least one book was shared among two learners. Kuci and Lina shared with the other learners with whom they shared the same desk. Kanjo and Jana had their own copy and did not share even though his desk was placed next to the one of a regular learner next to the teachers table. When learners work on a task together, those with difficulties are assisted. Cooperative learning makes each member a strong individual in his/her own right (Roger & Johnson, 1997). The results also showed the teacher the teacher had no supplementary story books for learners as had been mentioned. It can therefore be assumed that teachers need to have enough textbooks in a classroom. This would be used by learners with cerebral palsy who experiencing difficulty in speech and use of the upper limbs to access the reading materials with their peers in the absence of the teacher. As previously mentioned peer support can be given without the teacher planning or intervening.

The study also revealed apart from the books mentioned the teacher used only the blackboard as a teaching resource. The teacher mentioned using flash cards but in all

the lessons observed none was used. The study revealed there was no learning material made for Kuci who experienced difficulty holding a pen. By providing an aid Kuci could have been helped to come out of the level of no performance to a level of independence (Vygotsky 1978).

### **5.2.5 Methods of teaching reading and writing to learners with cerebral palsy**

The findings revealed the teacher used demonstration, physical and verbal prompts to involve Kanjo and Lina. The teacher held their hands to control the involuntary movement. Physical prompting is essential for learners with cerebral palsy who may experience difficulty using the hands. According to Brunner & Ross (1976), in scaffolding the teacher helps the learner to master a skill that the learner was not unable to grasp independently. The learner is then left to complete unassisted. However the assistance took a very short time as the teacher moved to attend to other learners. Guided writing involves modeling by the teacher of specific writing strategies, styles or genres, followed by guided and independent application of the same techniques by the students.

The findings also revealed teacher did not give equal opportunity during reading. Kanjo read only one sentence unlike the other learners without disability who were given a paragraph to read. Kuci and Lina read just single words when the teacher taught new words written on the blackboard. This may have been due to the attitude the teacher had towards learners with speech problems. They were asked to repeat the words several times. In writing the teacher stated that she gave a sentence or a word. This did not take place during the observation. The learners were given the same work to write

The results revealed further that individual attention was given to learners experiencing difficulty in reading and writing. The teacher moved from one desk to the other checking the learners work. For example the teacher went assist Kanjo who had called for help. Unfortunately the teacher did not attend to Jana nor Kuci who

was not writing. When a learner is left unattended the learner feels out of place, and loses the sense of belongingness.

## **5.2.6 Classroom interaction**

### ***Teacher –learner interaction***

The results revealed teacher –learner interaction was both friendly and unfriendly. The study revealed the teacher addressed the learners as a class when she greeted them at the beginning of the lesson, when she asked oral questions which she expected them to answer orally as a group or in a chorus. It was also revealed the learners were quite motivated and tried to get the attention of the teacher to be given a chance to answer read or answer the questions asked. The study indicated the teacher gave learners with cerebral palsy opportunity to participate in the writing and reading activities just like the regular learners.

It was also revealed that the teacher rewarded and encouraged the learners whether they gave correct answers or wrong ones. By praising the learners the teacher in a way helped them to move from the level where they could read on their own to a level where they would only read with assistance from the teacher Vygotsky in Vygotsky & Dixon Kruass (1996). The regular learners were found to be assisting the teacher by telling her what Kanjo or Lina was saying when she was not able to get what they were saying.

The findings also revealed the relationship between the teacher and the learners was both friendly and unfriendly. She reprimanded the learners who misbehaved in unprofessional way. The learners were either pinched or the heads were hit with a pen. This could create fear in the learners especially cerebral palsied learners with functional impairments. The teacher did most of the initiation but the learners also asked questions or teacher assistance.

Learner-learner interaction

The results showed that the learners interacted freely with one another; they shared items such as pens rubber. The regular learners did not discriminate against those with cerebral palsy. The learner seated next to Kuci assisted by turning the pages for her during reading (Connors & Stalker 2003; Davis & Watson 2001; Higgins 2001; MacArthur et al. 2007) Cited in Higgins, MacArthur & Kelly 2009) suggest that peers and teachers play an important role in supporting learners with disabilities in being active members in the classroom.

The findings revealed the interactions were initiated by either the learner with cerebral palsy or the one without disability. The finding is in line with (Hunt et al. 1994 in Katz & Mirenda 2002) in their study found that students with severe disabilities in inclusive classrooms initiated social interactions with others more often than did those in special class programmes. Peer support has been found to be effective in the teaching of reading, so long as the tutor is properly prepared and supported and the pupil is willing to accept the help. Children also support one another informally and without teacher planning. Rye (2001) has described the importance of for recognition and acceptance. According to him expression of acceptance, recognition or praise provides an important foundation for development of the child's self-confidence abilities and social adjustment. With great deal of diversities demonstration of acceptance and recognition are normally integrated as important aspects of interaction

### **5.2.7 Collaboration**

#### ***Teacher-teacher collaboration***

The results revealed there was team teaching in the classroom. There is no preferred formula for doing this but teachers come together to assist learners with special educational needs in the classroom (Mittler 2002). Teacher collaboration is one way in which the educational needs of learners with cerebral palsy are met in an inclusive classroom. Even though it was not observed in any of the lessons observed it was an

indication the teacher was aware of inclusive practices for learners with cerebral palsy.

The teacher stated that the teacher with whom they shared the class at times Kuci to stabilize the hand in all the subjects taught. But this was not observed during the lesson. Learners' different needs may be met if the teacher gets help and support from colleagues and other professionals.

### ***Teacher- parent collaboration***

The findings also indicated there was need for teacher parent collaboration to enhance inclusion of learners with cerebral palsy in reading and writing activities. Kirk et al 2006 asserts that when parents are trained, they are able to reinforce learning at home. The functional skills the child learns at school are applied in the home. Like this girl Kuci the parent did for her the written homework but the teacher had no consultation with the parent. The findings suggests that if the parents are brought closer to play a role in decision-making and sharing in their child's interests and capabilities learners with special needs would benefit in the classroom activities.

## **5.2.8 Conclusions and Recommendations**

The study aimed at investigating the way in which teachers trained in special needs education implemented inclusive education for learners with cerebral palsy during reading and writing lessons. The focus was on; the knowledge teachers have about educational needs for learners with cerebral palsy, classroom organization to meet the needs of learners with cerebral palsy, teaching of reading and writing to learners with cerebral palsy, teaching and learning materials.

The findings in this study have shown that training in special needs education is an important factor in implementing inclusive education for learners with cerebral palsy. Both teachers had training in special needs education and this influenced the way in which they involved learners with cerebral palsy in reading and writing activities. There was notable difference between the two teachers. There have been studies that

have indicated that teachers even though they understand what inclusive education means, they still express lack of skills necessary to attend to learners with various educational needs. The teachers therefore end up losing confidence in guiding learners in the classroom-

It is therefore necessary for teachers to be aware of the educational needs of learners with cerebral palsy in order assist them acquire literacy skills which are important in every day life. To include learners with cerebral palsy in reading and writing activities the teacher should give physical assistance and equal opportunities in participation. Assistive devices are also important if these learners are to benefit in an inclusive setting.

Good classroom organization with relevant teaching and learning materials makes the classroom to be a beehive of activity. The learners are able to support one another in problem solving activities which would lead to inclusion, learners with and without disabilities share with one another. However in both classes there was lack of learning and teaching materials.

Teacher-parent collaboration also emerged to be an important factor in teaching of reading and writing to learners with cerebral palsy who experience motor and speech problems. Teachers need to share the difficulties the children face with parents to find ways of solving such situations together.

It would be of interest for persons interested in doing studies in the area of inclusive education to look deeply at ways teachers implement inclusive education to learners with special educational needs in specific areas of disabilities.

### **Recommendations**

There have been several studies on the inclusion of learners with special needs education in regular classroom which have come up with many recommendations which are of importance. This study has come up with the following

recommendations which I hoped would shed more light in inclusion of learners with cerebral palsy and learners with special needs in general.

The findings have indicated that even though teachers are trained in special needs education, there is need for continued in-service training for teachers of classes having children with cerebral palsy and handling reading and writing. This will re-orient them to meet the individual needs of learners with cerebral palsy to acquire and improve on their reading and writing skills.

As it's done for other special needs area, there is need to adjust the curriculum for and assessment of learners with cerebral palsy.

Increased awareness about the needs and potentiality of learners with cerebral palsy should be done. Focus should be on peer support, teacher collaboration, parent-teacher relationship and use of relevant necessary equipment.

There should be increased collaboration between the teachers and other professionals such as occupational therapist, physiotherapists, speech therapists, other teachers and also parents.

Government policy should be clear on inclusive education and its contribution to the education of learners with cerebral palsy.

In Kenya learners with cerebral palsy follow the same curriculum and the system of education is exam oriented. For teachers to successfully include learners with cerebral palsy in the classroom activities the curriculum should be looked into.

Peer support is should be encouraged in schools as learners who assist learners with special needs also benefit in the process.

Increased awareness campaigns for stakeholders should be put in place. This could be done if the government could implement policy for inclusive education, which could lead to positive attitude of all concerned.



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## Appendix i



**UNIVERSITY  
OF OSLO**

Department of Special Needs Education

P.O.Box 1140, Blindern  
N-0318 Oslo  
NORWAY

Your ref:  
Our ref: 12/08 ST/db  
Contact person: Denese Brittain [d.a.brittain@isp.uio.no](mailto:d.a.brittain@isp.uio.no)

*Visiting address:*  
Helga Eng's Building  
3rd and 4th floor

Date: June 4. 2008

Telephone: + 47 22 85 80 59  
Telefax: + 47 22 85 80 21

**FACULTY OF EDUCATION**

### TO WHOM IT MAY CONCERN:

This is to certify that **OBIERO, Nereah Atieno**, date of birth 25.04.1960, is a full-time student pursuing a course of study at the Department of Special Needs Education at the University of Oslo, Norway, leading to the degree of Master of Philosophy in Special Needs Education (M. Phil. SNE).

This is a continuous two-year programme run on the "sandwich" principle, which involves periods of study and field work/research in both Norway and the home country. The student has concluded the initial study period in Norway and will be working on the collection of data and the writing of a thesis during the autumn semester 2008. This involves a period of field work in Kenya from 1 July to 31 December 2008. The student will then return to Norway for the final part of the degree. The period of study will be completed at the end of May 2009.

The main responsibility for supervising the research, developmental work and thesis remains with the Department of Special Needs Education, University of Oslo, Norway. However, we would kindly request that the relevant authorities give the student the access required to the schools and educational establishments necessary in order to undertake field work and research. We would also be most grateful for any assistance that is afforded to the student which enables her to carry out this work, particularly the use of facilities such as access to telephone, fax, e-mail, computer services and libraries at the various educational establishments.

Yours sincerely

Ass. Professor Steinar Theie  
Academic Head of International Master's Programme  
Department of Special Needs Education

Institutt for spesialpedagogikk  
Det utdanningsvitenskapelige fakultet  
Universitetet i Oslo  
Norge

## Appendix ii



REPUBLIC OF KENYA

### MINISTRY OF HIGHER EDUCATION SCIENCE & TECHNOLOGY

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

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

When Replying please quote  
Ref. MOHEST 13/001/ 38C 565/2

17<sup>th</sup> September 2008

Obiero Nereah Atieno  
University of Oslo  
NORWAY

#### RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on, *'Teacher Education for the Inclusion of Learners with Cerebral Palsy in Reading and Writing Lessons in Std 4,*

I am pleased to inform you that you have been authorized to carry out research in Nairobi and Nyanza Provinces for a period ending 31<sup>st</sup> December 2008.

You are advised to report to the Provincial Commissioners and the Provincial Directors of Education Nairobi and Nyanza Provinces before embarking on your research.

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

  
**M. GATOBU**  
FOR: PERMANENT SECRETARY

Copy to:

The Provincial Commissioner  
Nairobi Province  
Nyanza Province

The Provincial Director of Education  
Nairobi Province  
Nyanza Province





## Appendix iii

### MINISTRY OF EDUCATION.

Telegrams: "schooling",  
Kisumu  
Telephone: Kisumu 2024599  
When replying please quote

Ref NP/GA/23/8/165



PROVINCIAL DIRECTOR OF EDUCATION  
NYANZA PROVINCE  
P.O. BOX 575  
Kisumu

23<sup>rd</sup> SEP 2008

**RE: AUTHORITY TO CARRY OUT RESEARCH "TEACHER  
EDUCATION FOR THE INCLUSION OF LEARNERS  
WITH CEREBRAL PALSY IN READING AND WRITING  
LESSONS IN STD 4 IN NYANDO AND KISUMU DISTRICTS.**

Ms Obiero Neriah Atieno, who is a master of Education at the University of Oslo in Norway is hereby authorized by this office to carry out research in special education programmes in Nyando and Kisumu Districts w.e.f September until December 2008.

She will be visiting, the schools and classes of cerebral palsy learners for both interaction and observation.

Kindly do accord her with all the necessary assistance she might need in order to successfully accomplish her task.


Thank you.

A BENSON MRIMA  
FOR: PROVINCIAL DIRECTOR OF EDUCATION  
NYANZA PROVINCE

## Appendix iv

OFFICE OF THE PRESIDENT

Telegrams: .....  
Telephone: Nairobi  
When replying please quote  
Ref. No. NBI-WST/ED/10/9 (41)  
and date



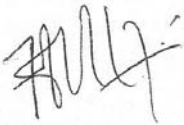
DISTRICT COMMISSIONER  
NAIROBI WEST DISTRICT  
P.O. Box 30124-00100  
NAIROBI  
29 Sept, 2008  
....., 20.....

District Officer,  
**DAGORETTI DIVISION**

**RE: RESEARCH AUTHORISATION –  
OBIERO NEREAH ATIENO**

The above mentioned student has been authorized to carry out research on  
“Teacher education for the inclusion of Learners with cerebral palsy in  
Reading and Writing Lessons in Std 4.

Please accord her the necessary assistance.



**A. S. Biko**  
**FOR: DISTRICT COMMISSIONER**  
**NAIROBI WEST DISTRICT**

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## Appendix v

### **Appendices**

#### **INSTRUMENTS**

##### INTERVIEW GUIDE FOR TEACHERS

###### **Concept of inclusion**

Have you come across the word inclusion?

How do you understand the term inclusion?

###### **Teacher's training**

Are you trained in special needs education?

How long was your training?

Do you feel the content you learnt was adequate?

Can you briefly tell what your training entailed in the following areas:

Inclusion

Special Needs Education

Cerebral palsy

Can you tell me how what you learnt during your training has been of use to you in your teaching of children with CP? Explain briefly.

Are there some aspects you feel have been left out in your training?

Tell me what you feel should be included in your training?

###### **Teacher's experience**

How long have you taught learners with cerebral palsy?

Can you tell me how has your experience been working with learners with CP?

###### **Educational needs of learners with CP**

Can you tell me the important needs for learners with CP you feel every teacher need to know?

Tell me why you feel it is necessary?

Briefly tell me how you learnt about the learners needs? Do you consult other persons?

Can you tell me the ways the skills you gained during your training helped you in identifying the educational needs of learners with CP?

What educational needs do learners with CP have in reading and writing?

###### **Organization of the class**

Tell me the numbers of learners you have in your class?

Can you tell me the number of those with cerebral palsy?

What type of furniture do the learners use in your class?

Are they suitable/unsuitable for the learners with CP?

*Can you briefly tell me how suitable/unsuitable they are for learners with CP?*

How many learners share each?

Tell me how you think the furniture can be further adapted for these learners?

#### **Teaching and learning materials**

Can you tell me if you have enough teaching and learning resources in terms of books, equipments and adaptations related to subject matter taught during your teacher education?

Tell me are they accessible to learners with CP?

*If not, what suggestions do you have to solve this difficulty?*

Can you tell me the kind of teaching and learning materials you think are important in teaching reading and writing to learners with CP?

*Why do you think so?*

Which ones have you as teacher made on your own?

Tell me how you got the skills for making the materials?

*How helpful are they to you in teaching of reading and writing?*

#### **Methods teachers use in teaching reading and writing**

Tell me the number of reading and writing lessons you have per week?

*Can you tell me the ways in which you teach reading and writing?*

How do you go about it?

*Is it the best way? Explain.*

Can you tell me how you teach reading and writing to learners with cerebral palsy and have other associated challenges such as,

Seeing

Hearing

Communication and body movement?

Tell me the difficulties these learners experience in reading and writing lessons?

Tell me how you make them participate in reading and writing lessons?

Do you use individual or group teaching?

*Can you tell me reasons for your preference?*

Can you tell me any difficulty you encounter in using these methods?

Why is this so?

**How teachers think they can adapt their teaching methods.**

Can you tell me if you feel you are a competent teacher for learners with cerebral palsy?

Tell me your reasons for your feelings?

What other necessary skill does one need to teach reading and writing?

Tell me whom you think should provide these skills?

What kind of adaptation do think is necessary for methods and materials used for teaching reading and writing to CP learners?

**Interaction of learners with cerebral palsy with the peers during reading and writing lessons**

Can you tell me how learners with cerebral palsy interact with the other learners during reading and writing lessons?

What kind of interaction do they involve in?

Can you tell me how you facilitate the interaction of the learners during the reading and writing lessons?

Tell me how other learners assist those learners with:

Mobility

Speech problems?

Do the learners work in pairs or in group?

Can you tell me how often the learners work together?

Tell me how you feel the learners' interaction influence their acquisition of reading and writing skills?

## Appendix vi

### Observation school B Writing 1

(JANA) struggles to speak and use of body language (pointing)

The teacher greets the children then tells them to take out their textbooks, she sit at her desk looking through her book. Throughout the lesson the teacher has not attended to her. The teacher is seated on her chair at the table sideways not very much into the lesson. she gets up and tells learners they are going to write letter. She asks the class, "How many of you have written a letter? Nobody puts up their hand; she then explains that she will show them on the blackboard. She draws a frame of the paper on the blackboard and guides the learners where to write the address and start the letter. The learners are quite and pay attention to her. Pepe puts up his hand asks the teacher, "where do you put the stamp?" she answers, "On the cover of the envelope."

She then tells them to write a letter to a friend. The learners take out their exercise books some not sure what to do, Kanjo goes to the teacher's table and asks the teacher to explain to him how to write a letter. He is shown on paper where to begin. He goes back his desk. The learner next to him is asking Kanjo to help him with a rubber till the end of the lesson. Kanjo holds the pen in his palm and shakes as he writes; he holds the table as he writes for more support. He is not able to write on a straight line. The teacher comes to him and guides him further how ton write

Lina has her head slanted to the left as she stares the blackboard. She is left-handed and holds the pen between the thumb and the index finger. Her letters are extremely big covering two lines in a book. As they write the teacher goes to her and guides her on how to write small letters.

The teacher also moves to the regular learners to check how they are writing.

The learners interact freely on their own and also with the teacher as they assist one another to finish the task given (they talk in low tones it is not easy to hear what they are saying), Moreno points on his book then to the blackboard. The teacher asks the learners "Have you written the date?" the learners answer in a chorus, "Yes! But Jana and Annette are quiet, Jana is leaning on her board as if she is writing but her pen does not move. Annette is not given any attention as she does not write; her upper limbs are not quite functional. She is just observing as the others write, the teacher does not pay any attention to her.

Kanjo finishes writing and moves from the desk to take his book to the teacher for making. The teacher tells him, "Kaa chini (sit down) am coming to your desk, the teacher is marking Otih's (child sitting with Jana) book. She moves to the next desk before looking at Favour's work, she guides him as she says, "andika hivi" (write this way) she takes his pen and shows him to write on the line. Favour has difficulty controlling the movement of his hand.

The teacher moves to the next desk the bell rings for the end of the lesson, she tells the learners to collect their books for marking.

## Appendix vii

### **Observation guide**

1. Organisation of the learning environment
2. Availability of learning materials
3. Show of positive feelings to the learners by the teacher
4. Opportunity given to learners with cerebral palsy to answer questions
5. Opportunity given to learners with cerebral palsy to read
6. Assistance given to learners with cerebral palsy by the teacher and other learners
7. Interaction between the teacher and learners and between learners with cerebral palsy and the regular learners.