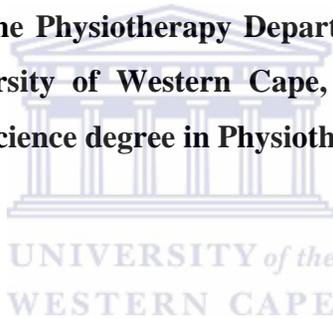


**THE NEED FOR PHYSIOTHERAPY SUPPORT FOR TEACHERS IN
INCLUSIVE EDUCATION FOR THE INCLUSION OF LEARNERS WITH
PHYSICAL DISABILITIES IN SELECTED SCHOOLS IN ZAMBIA.**

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**A mini thesis submitted to the Physiotherapy Department, Faculty of Community
and Health Sciences, University of Western Cape, in partial fulfillment of the
requirements for Master of Science degree in Physiotherapy.**



SUPERVISOR: Mrs. P. STRUTHERS

NOVEMBER 2005

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SALLY SALOME KASHIMBA

KEY WORDS

Attitudes

Disability

Inclusive education

Learners

Physical disabilities

Physiotherapy

Special education needs

Support

Teachers

Zambia



ABSTRACT

The right to education for learners with special education needs is being put into law all over the world including Zambia. The Zambian government has affirmed a commitment to reducing the number of learners educated in segregated special schools and to move more of these learners into ordinary schools. However, there is a vacuum in the provision of the support services for the inclusion of learners with physical disabilities in the inclusive schools in Zambia. The Zambian policy on inclusive education is not clear on who should be included in the provision of support services for learners with special education needs in inclusive education. Therefore the need for physiotherapy support for teachers has not been identified or addressed. Selected studies identify the role of physiotherapists in inclusive education as being to support teachers by imparting practical skills and knowledge to them for the inclusion of learners with physical disabilities. In order to achieve this, the government needs to integrate the physiotherapists into the school systems where there is inclusive education. The purpose of the study was to explore the need for physiotherapy support for teachers in selected inclusive schools in Zambia. The study aimed to determine teachers' skills and teachers' attitudes as they included learners with physical disabilities in their classrooms. A qualitative approach that utilized a face-to-face method of data collection was used. Data were drawn from eight teachers selected from two schools, using purposive sampling. Audiotape recorded interviews were transcribed verbatim and thematically analysed. The results of the study revealed that most teachers felt that there was a need to include physiotherapists in the school systems to provide the required practical support and knowledge to the teachers as they include learners with physical disabilities in their classrooms. In general the study provided evidence for the need for physiotherapy support for teachers in selected inclusive schools in Zambia.

DECLARATION

I hereby declare that “**The need for physiotherapy support for teachers in inclusive education for the inclusion of learners with physical disabilities in selected schools in Zambia,**” is my own work, that it has not been submitted for any degree or examination at any other university, and that all the sources used or quoted have been indicated and acknowledged by complete references.

Signature.....

Sally Salome Kashimba

November 2005

Witness.....

Mrs. P. Struthers



ACKNOWLEDGEMENTS

I thank the almighty God for giving me the grace and strength to persevere to whom I am deeply grateful for all the blessings. I ascribe all the Honour, the Glory, Power and Majesty **“IN ALL PLACES YOU RULE”**. (Psalms 103 v 22, 146 v 10).

My heartfelt gratitude to my supervisor Mrs. P. Struthers of the Physiotherapy Department at the University of the Western Cape for her dedicated support, guidance and valuable comments to who I have always looked upon as my mentor. May God bless you richly.

Special thanks go to the teachers at the two schools in Kalulushi, Zambia who participated in the study for having shared their experiences, views, perspectives without fear. I also wish to thank Dr. Kaona and Mrs. Mary Tuba in Zambia for their help during data collection for the study.

My sincere appreciation goes to my entire family for their support, for their encouragements and prayers. Special thanks go to Christian and Mwiche my children for staying without a mother for two years. Finally I wish to thank all my friends and colleagues at UWC and may God bless you all.

DEDICATION

This thesis is dedicated to the memory of my beloved father, Mr. Dick Kashimba who passed away in 1964.

My mother, Mrs. Maria Sekwila Kashimba for her love and sacrifice for me to be what I am today.

My beloved son Christian Lusamba Tshimanga. You have been and are a blessing, source of inspiration and my all weather best friend. Thank you for believing in me and for loving me under very trying circumstances. You are indeed the crown of my joy.



ABBREVIATIONS

APTA	American Physical Therapy Association
CISE	Center for Innovation in Special Education
CRC	Convention on the Right of the Child
CSP	Chartered Society of Physiotherapy
CSPCF	Chartered Society of Physiotherapy Curriculum Framework
DSS	Disability Services for Student
ICF	International Classification of Functioning
NCCC	National Curriculum Council Canada
SENs	Special Education Needs
UN	United Nations
UNDRDP	United Nations on the Right of Disabled Persons
UNESCO	United Nations Education Scientific Cultural Organisation
WHO	World Health Organisation

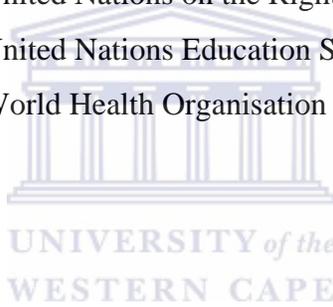


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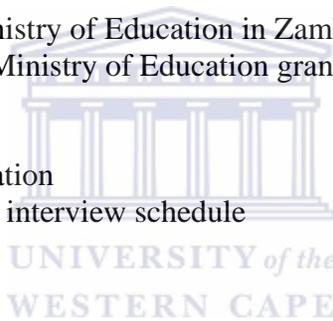
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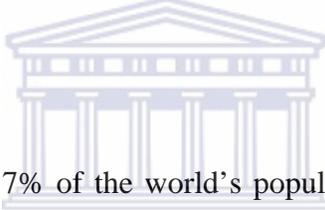
CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION

This chapter begins with the description of disability prevalence and information on rights of disabled persons, inclusive education and learners with physical disabilities in ordinary classrooms, education support for teachers in ordinary schools in inclusive education. The problem statement, research question, the aim of the study, specific objectives and the significance of the study are stated. The chapter ends with a definition of terms used in the study and the outline of the chapters in the thesis.

1.2 BACKGROUND



Worldwide it is estimated that 7% of the world's population live with various types of disabilities (WHO, 2002). The vast majority of them, about 80%, live in developing countries, where only 2% have access to the necessary rehabilitation services (WHO, 2002). Further, WHO estimates only 5% of disabled children in sub - Saharan Africa have access to any kind of services such as health, education and social welfare. Various international organizations state that only 2% of disabled children in sub - Saharan Africa attend school (UNESCO, 2002). These figures vary from country to country, but it is clear that there is much work to be done if all disabled children are to have access to educational opportunities (WHO, 2002).

The United Nations Declaration on the Rights of Disabled Persons (1975) states: "Disabled persons have the inherent right to respect for their human dignity. Disabled persons whatever the origin, nature and seriousness of their handicaps and disabilities have the same fundamental rights as their fellow citizens of the same age, which implies first and foremost the right to enjoy a decent life, as normal as possible". Likewise the governments of the world have agreed that the same rights apply to all learners

irrespective of their impairments or environments. Hence the UN Convention on the Rights of the Child (1989) states that: “recognising the special needs of a disabled learner, assistance shall be provided to ensure that the disabled learner has effective access to and receives education, conducive to the learner achieving the fullest possible social integration and individual development.” The Salamanca Statement of 1994 reaffirms the right to education for learners with special education needs as enshrined in the 1948 Universal Declaration of Human Rights and renewed at the 1990 World Conference on Education for all in Jomtien, Thailand, to ensure that education is provided to all regardless of each individual difference. Further, the Statement recalls the United Nations policies of the right of all learners to be valued equally, treated with respect and provided with equal opportunities within ordinary schools. The UN Standard Rules for the Equalisation of Opportunities (1993) states that the education of disabled learners should be an integral part of the education system.

Inclusive education has been described and discussed in the education literature for more than a decade (Stainback and Stainback, 1984; Brown, Davis and Johnson, 1989; Blacher and Meyers, 1987). It is defined as the placement of learners with disabilities in ordinary classrooms with typical age peers (Ryndak, Morrison and Sommerstein, 1999). Inclusive education represents one approach to education reform. As an educational philosophy, inclusive education has two central features; moving learners with disabilities into ordinary classrooms and providing education support services such as physiotherapy, occupational therapy and speech therapy in the same classrooms (Stainback and Stainback, 1990; National Association for State Boards of Education, 1995). In this view, special education is not a place, but instead a set of services, which can and should follow a learner with disability into a learner’s neighbourhood school setting. Inclusive education schools meet the needs of all learners by establishing learning communities for learners with and without disabilities (Ferguson, 1996). Although questions about the inclusion of learners with disabilities should no longer be controversial, passionate discussion about inclusion continues to escalate because its philosophy not only focuses on learners with disabilities of any type and severity level, but also seeks to alter the

education for all learners and hence ordinary education (O'Neil, 1994-1995; Brown, Davis and Johnson, 1989).

Inclusive educational opportunities have expanded steadily as school-aged learners with increasingly severe physical disabilities are being provided with access to ordinary education classes (Hunt, Staub, Alwel and Goetz, 1994; McGregor and Vogelsberg, 1998). To help teachers effectively carry out these new responsibilities, policymakers have turned to paraprofessionals to support and expand the program management and administrative functions of teachers (Mueller, 1997; Passaro and Wallace, 1997). Paraprofessionals are members from different professions who provide services to learners and help teachers in the classrooms. Therefore, teachers are expected to determine how to best work with paraprofessionals within this changing context. Having paraprofessionals accompany these learners in ordinary classes is considered by many teachers to be an essential support (Wolery, Werts, Caldwell, Snyder and Liskowski, 1995). In developed countries it is common to find paraprofessionals assigned to support learners with and without disabilities in ordinary classrooms. In today's inclusive schools, a glance into ordinary classroom often presents a different image. The learner population is more diverse. Learners who historically had been educated in special education classes increasingly are being taught in ordinary classrooms, including learners with physical disabilities, autism, and multiple disabilities (Lipsky and Gartner, 1997; McGregor and Vogelsberg, 1998). As more learners with different and more severe disabilities have been included in ordinary classroom, it is common to find that the teachers are no longer alone in the classroom (Pickett and Gerlach, 1997). Effective inclusion of learners with disabilities requires concerted effort and collaboration among the Individualized Education Program teams: which are responsible for individual assessment of learners: such as teachers, physiotherapists, occupational therapists, families, speech therapists and administrators (Doyle, 2002; French, 2003). Mahon and Cusack (2002) state that teachers believe there is an important role for physiotherapists in the school system. They defined the role as offering programming suggestions, consulting with school personnel, providing and adapting equipment, liaising with the school, home, community and assessing school aged learners.

As the movement toward fully including all learners with disabilities becomes a reality in many school settings around the world (Boyer and Bandy, 1997) more school personnel are adopting a collaborative approach to serving learners with special education needs. In a collaborative approach to providing services, all learners are educated with the assistance of related-service providers. Physiotherapists, occupational therapists and speech therapists work collaboratively with teachers to teach learners with disabilities within ordinary classroom (Bauwens, and Hourcade, 1995; Friend and Cook, 1996). In a collaborative approach, teachers share the responsibility for all activities related to planning and delivering of instruction, as well as evaluating, grading, and disciplining learners (Phillips, Sapona and Lubic, 1995; Salend, 2000).

Of equal importance to the development of teachers' skills and competencies, is the need for ordinary teachers to develop positive attitudes toward learners with disabilities if the notion of inclusion is to be successful (Chow and Winzer, 1992; Westwood, 1982). Although teacher skill and attitude have been identified as critical variables in the success of inclusive practice, studies have indicated that, historically, teachers have not reacted favourably toward the notion of increased inclusion of learners with disabilities (Bacon and Schultz, 1991; Larrivee and Cook, 1979). The reasons for a lack of enthusiasm for inclusive programs by many teachers are varied but include concerns about the quality of work that learners with disabilities in ordinary classes will produce, the amount of teacher time that these learners will require often to the detriment of other learners in the class, lack of support services: such as speech therapists, physiotherapists, occupation therapists, school psychologists, and the general inadequacy of ordinary classroom to meet the highly individualized needs of learner with disabilities (Bender, Vail and Scott, 1995). Early studies showed that as well as being apprehensive about the quality of the academic work that learners with disabilities in ordinary classes could produce, teachers also are concerned about their own levels of preparation for inclusive practice (Bender, 1985). Murphy (1996) for instance, found that only 22% of teachers in inclusive classrooms said they had received special training, and just half of those teachers thought their training was good.

The inclusion of learners with special education needs in ordinary schools is a focus of debate in education systems across the world. The Zambian government has affirmed a commitment to reducing the number of learners educated in segregated special schools and to move more of these learners into ordinary schools. “Focus on Learning” Department of Education in Zambia (1992) and “Educating Our Future” Department of Education of Zambia (1996) the Zambian government policies, establish targets that the government believes will move schools forward towards greater effectiveness in meeting special education needs (SENs). Increased inclusion is stressed along with more collaboration between special and ordinary schools. It is recognized that teachers in ordinary schools should embrace a change of attitude towards learners with SENs and for schools to reconsider some of their existing practices. In spite of all these policy recommendations in Zambia to these inclusive schools, the physiotherapy support for teachers in ordinary schools is not mentioned.

1.3 STATEMENT OF THE PROBLEM

Physiotherapists in Zambia are directly employed by the Ministry of Health and take up posts in hospitals and specialised institutions for learners with special education needs. With the policy of inclusion many learners with physical disabilities are being incorporated in ordinary schools. These learners with physical disabilities are deprived of the services of the physiotherapists because physiotherapists are not part of the policy of inclusion of the Ministry of Education Document “Educating Our Future” (1996) a key document in the policy of inclusion for Zambian schools. The physiotherapy support to the inclusive schools in Zambia is not mentioned in the Zambian policy. Therefore, there is a need to determine physiotherapy support for teachers involved in inclusive education.

1.4 RESEARCH QUESTION

What role do physiotherapists in Zambia have as a support service to teachers in ordinary schools in the inclusion of learners with physical disabilities?

1.5 AIM OF THE STUDY

To identify the physiotherapy support needed for teachers, to facilitate the inclusion of learners with physical disabilities in ordinary schools.

1.6 SPECIFIC OBJECTIVES

1. To determine what skills teachers need to be able to provide appropriate support for learners with physical disabilities in the classroom
2. To determine teachers' attitudes towards having learners with physical disabilities in the classroom.
3. To determine what support physiotherapists need to give to teachers.

1.7 SIGNIFICANCE OF THE STUDY

The findings of the study will inform physiotherapists and the education sector of the potential role of physiotherapists in inclusive education in Zambian schools and will contribute to the body of knowledge and literature on inclusive education.

1.8 DEFINITION OF TERMS USED IN THE THESIS

Physiotherapy - is a “health care profession concerned with human function and movement and maximising potential. It uses physical approaches to promote, maintain and restore physical, psychological and social well being, taking account of variations in health status. It is science-based, committed to extending, applying, evaluating and reviewing the evidence that underpins and informs its practice and delivery. The exercise of clinical judgment and informed interpretation is at its core” (Chartered Society of Physiotherapy (2002:19).

Physiotherapists - work with learners having difficulty with gross-motor skills, mobility skills, posture, or range of motion. They help learners acquire the skills needed for functional mobility in the school environment. Physiotherapists train learners in the use of assistive devices, and may recommend environmental modifications that give learners more independence (CSP, 2002).

Disability – denotes the collective economic, political, cultural and social disadvantage encountered by people who have a physical, sensory, intellectual or psychological deviation or loss and which results in restricted participation in the life situation (Coleridge, 1993). In the International Classification of Functioning, Disability and Health (ICF) (2001) the term serves as an umbrella term for impairments, activity limitation or participation restrictions.

Impairment – describes problems in body function or structure such as a significant deviation or loss (WHO, 2001).

Learners – children, youth, students at school.

Special education needs – The child has special education needs if he/she experiences difficulties in learning for one or other reason and might need some special support in order to learn successfully in mainstream schools. These learners could be referred to as having learning difficulties and/or disabilities (Engelbrecht, 1999).

Attitude - refers to inclinations to react in a certain way to certain situations, to see and interpret events according to certain predispositions or to organize opinions into coherent and interrelated structures (Badran, 2003).

Rehabilitation - is an active process by which those disabled by injury or disease achieve a full recovery or, if full recovery is not possible, realise their optimal physical, mental and social potential and are integrated into their appropriate environment (WHO, 2004).

1.9 SUMMARY

This chapter presented the background of the study; formulation of the problem, the objectives and the significance of doing research on the need of physiotherapy support for teachers in an inclusive education system in selected schools in Zambia. The terms used in the study were defined.

1.10 OUTLINE OF CHAPTERS

In chapter one the background of the study is described. The inclusion of learner with physical disabilities and the physiotherapy support for teachers in inclusive education are described.

Chapter two presents a review of literature that is relevant to the study. Some of the concepts highlighted include, learners with physical disabilities, inclusive education, the social and the medical models of disability, the teachers' needs in the classroom, the teachers' attitudes.

Chapter three highlights the research methodology of the present study. The research setting, selection of participants, inclusion criteria and study design are described. Analyses of data procedure are outlined. The chapter ends with the explanation of the ethical considerations for the study.

Chapter four presents the results and the interpretation of results. The responses obtained are an indication of the teachers' skills and their needs and the teacher's attitudes to having learners with physical disabilities in the classroom.

In chapter five major findings are summarized, discussed and compared with previous studies in the field and discussed in relation to the purpose and objectives of the study and relevant literature.

Chapter six consists of the conclusion, summary of the thesis, limitation of the study and recommendations based on the results, are highlighted

CHAPTER TWO

LITERATURE REVIEW

1.1 INTRODUCTION

This chapter reviews literature related to the need for physiotherapy support for teachers in inclusive education: theoretical framework, inclusive education; social and medical models of disability; learners with physical disabilities; teachers' needs for skills and knowledge; factors affecting teachers' attitudes; teachers' training needs; education support services for teachers; intersectoral collaboration, physiotherapy support and summary.

2.2 THEORETICAL FRAMEWORK

Mouton (1996) said that scientific research does not take place in a vacuum; it forms part of the theoretical framework. The theoretical framework is the outmost frame of research which is the body of literature that is drawn on to situate the study (Merriam, 1998). This study will use the framework of eco-systemic perspective theory and inclusive education to situate the constructed realities and experiences of teachers and learners with physical disabilities in inclusive education, within their particular contexts.

2.2.1 Eco-systemic perspective theory

This theory evolved out of a blend of systems and ecological theories. The theory seeks to show how individual people/ learners are linked in interacting, interdependent and dynamic relationships in their particular social contexts.

“The eco- systemic perspective theory carries the characteristics that individuals are shaped in their social context. The way in which we feel, think and develop as an individual person is linked to social economic structures, cultures and political forces which make our environment. What is true in one social context may not be so in another social context. Similarly the special education needs and interventions in one socio-

economic context may not necessarily be applicable in the other” (Donald, Lazarus and Lolwane, 1997).

Different levels of groupings of a social context as a system can be seen where the functioning of the whole is dependant on the interaction of all parts. A fundamental part of system thinking is that cause and effect relationships are not seen as taking place in one direction only. Rather, they are seen as a circular interaction (Donald, Lazarus and Lolwane, 1997:4).

Donald, Lazarus and Lolwane (1997) further state that although remediation and intervention can reduce educational problems and the special needs of differently abled learners, it is unlikely to ever eliminate them. Ordinary classroom remediation or intervention in ordinary classrooms is a process of helping learners with learning difficulties to alleviate their learning impairments within ordinary classroom.

In the systems theory, change in one part of the system will affect changes in other parts and it is impossible to use an intervention in one part without putting the other into consideration. Pianta (1996) described the systems theory as a multilevel system that contains components which are related to each other. These components can be societies, families, schools, teachers, physiotherapists and learners. Pianta (1996) described a multilevel systems theory for understanding learner's development and learning within the context of four different system levels. The most distal level includes the culture and community within the specific systems of school and neighborhood. The next two levels include the smaller social groups, which encompass the classroom, peers, and family systems, and the dyadic systems, which encompass teacher, friend, and parent interactions with the learner. The final system level is the individual learner's biological and behavioral systems. All of these levels are interactive and affect each other in various idiosyncratic ways.

Pianta (1996) has indicated that an education system must consist of teacher, learner content, and context subsystems. Schools have their own systems and subsystems which can be used in shaping and limiting each other. In other words an individual learner is

seen as part of the school or the system and also the family, it is impossible to address his or her special education needs without considering the school, teachers, curriculum, society and family. The community, society, school and family are systems and staff in the school, peer groups are subsystems. Therefore, all these different levels of systems can indirectly or directly influence learners' development.

From an ecological perspective, human behaviour is viewed in terms of contexts in which the individual adapts, which are family, parents, school, community and the broader society. A school is a system which has different parts, consisting of its staff, learners, curriculum and administration. All these systems depend on each other. On the other hand ecological theories of learning focus less on the individual learner and more on the interaction or 'goodness-of-fit' between the learner and his or her environment. Ecological models operate within a concept of 'nested systems' or 'levels' often referred to as bio, micro, meso, macro exo and chronosystems (Bronfenbrenner and Morris, 1998).

In such a model the learner is situated in the centre of the system interacting at various levels each of which are part of a larger system, for example, the level of the classroom (micro level), the level of the school not involving the learner directly (macro level) and society (macro level). Teaching strategies and approaches often focus at a micro level but acknowledge or incorporate activity at broader levels. The meso-system refers to the relationships between two or more settings in which the learner participates. Such an approach allows consideration of the role of such things as school or community culture in learning (Bronfenbrenner and Morris, 1998).

In the schools there are systems which have different parts or departments, consisting of teachers, learners, curricula and administration. All these systems depend on each other. Similarly physiotherapists could be used as systems to bring about change in addressing special education needs of learners with physical disabilities in the school system through identifying the physiotherapy support needed for teachers as the study will provide. This ecological perspective theory and the systems theory both operate to bring about change to the environment.

The eco-systemic thinking broadens ones perspective from the traditional focus on the ‘individual’ to a broader social system in addressing the learners’ special education needs and subsequently to identify the physiotherapy needs of teachers for the inclusion of learners with physical disabilities in inclusive education in Zambia. Therefore, this theory will provide the framework in the study.

2.2.2 Inclusive education

Inclusive education is a developmental approach seeking to address the learning needs of all learners with a specific focus on those who are vulnerable to marginalisation and exclusion (UNESCO, 2002). “The fundamental principal of inclusion is that all learners should learn together regardless of any difficulties or differences they may have. Inclusive education should recognize and respond to the diverse needs of learners accommodating all styles of learning. The school system should ensure quality education for all through appropriate curricula, organisation arrangement, teaching strategies and partnership with communities and there should be a continuum of support and services in regards to special needs encountered in every school” (UNESCO, 1994:5). The Salamanca Statement 1994 states: "Regular schools with this inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society and achieving education for all; moreover, they provide an effective education to the majority of learners and improve the efficiency and ultimately the cost-effectiveness of the entire education system"(UNESCO,1994: para 2-5). Frequently the integration practice results in a learner with special needs being made to fit into the school environment or being rejected, whereas with an inclusive educational approach, the culture and curriculum of the school is flexible to include all learners whatever the extent of their special needs (Ainscow, 1997; Weddell, 1995; Norwich, 1996). In inclusive education the education approach is restructured and adapted to include learners with special needs (Engelbrecht, 1999). In this regard the classroom, teaching techniques, curriculum and assessment methods are adapted to meet the individual needs of all learners (Department of Education, 2001:17).

The South African Education White Paper 6 (2001) states that there is a definite difference between mainstreaming and inclusion. Mainstreaming is about getting learners to fit into a particular kind of system or integrating them into the existing system, while inclusion is about reorganizing the system and respecting the differences among all learners and building on similarities. Mainstreaming is about giving some learners extra support so that they can be integrated in the ordinary classroom. Therefore mainstreaming education is all about seeing the learner as a problem, who cannot respond, cannot learn has special needs and differs from the other learners. Inclusive education sees the education system as a problem that may result from the teachers' attitudes, inadequate training, rigid curriculum, inaccessible environment, lack of parent involvement, lack of equipment and lack of support to the school and the teachers. Inclusive movements suggest that every one be included and be involved in decision making of the neighbourhood school.

Inclusion according to the Education White Paper 6 (2001) on the other hand, is about supporting all learners, teachers and the system as a whole so that the full range of learning needs could be met. Here the focus is on teaching and learning factors, with the emphasis on the development of good teaching strategies that would be of benefit to all learners. Mainstreaming focuses on changes that need to take place in the learners, while inclusion focuses on overcoming barriers in the system. From the above comparison it could be deduced that mainstreaming emphasises the change in the individual "learner" whilst, inclusion deals with the change in the learning system or school environment. Therefore, inclusion is a far more positive approach than mainstreaming.

Inclusion has become one of the contentious issues in the field of education (Clough and Barton, 1995). It has had a major impact on the role of the ordinary teacher who is required to cater for the needs of diverse group of learners (Fuchs and Fuchs, 1999). Engelbrecht (1999:5) states: "inclusive education promotes a single system of education dedicated to ensuring that all learners are empowered to become caring and competent citizens in an inclusive changing and diverse society," Booth (1996) expects society to facilitate the acceptance of learners who do not fit in the school system by accepting them

as they are. UNESCO (1994:5) states that: “all learners should learn together regardless of difficulties and differences.” The goal of inclusion is not to erase differences, but to enable all learners to belong within an educational community that validates and values their individuality (Stainback and Stainback, 1994: 489).

Wilson (2000) suggests that an inclusive school is community based and reflects on the community as a whole. It is barrier free and membership of the school is open, positive and diverse. It promotes collaboration, equality and democracy. Stainback and Stainback (1992) state that inclusion should be practiced in the community as well as in the schools. In some developed countries learners with special education needs have been accepted to be educated in ordinary schools (Ashman and Elkin, 1998). Putman, Spiegel and Bruinisk (1995) argue that the full range of placement options including special schools, special classes should be retained. Schumm and Vaughn (1995) suggest that choices be made concerning the appropriate educational place for each individual learner. The new South African Constitution (1994) and The White Paper on Education and Training (Department of Education, 1995) refer to inclusion as a “human right,” the principal of inclusion within education operates within a framework of a human rights approach, which emphasizes that all learners have access to education.

The White Paper 6 (2001: 4) of the Ministry of Education in South Africa confirms its commitment to address the special needs of learners with disabilities. It states: “It will hold out great hope that through the measures put forward in the White Paper, they will be able to convince the thousands of fathers and mothers of some of the 280,000 disabled learners who are less than eighteen years and are not in school, that the place for these learners is not of isolation in dark backrooms. It is with their peers in schools on the play grounds, where they become part of the local community and cultural life and part of the reconstruction of the country.”

2.2.3 Social and Medical model of disability

A paradigm shift in education thinking has taken place and people realize that segregation is a form of discrimination and of exclusion and there is a need to restructure

and redesign the education system (UNESCO, 2002; Van-Niekerk, Duncan and Shefer and Deleray, 1997). Learners with disabilities were segregated from mainstream of society, thus persons with disabilities were viewed as helpless individuals in need of care and treatment (Oliver, 1998). The shift in education thinking characterised a shift from the medical model to the social model of disability. The social model of disability had its origins in the 1970's when people with disabilities started to use their experiences to show that disability was rooted in society's failure to make allowances for their other differences. That indicated a move towards an understanding of disability that was situated in a wider social context. Disability is understood as a social and developmental issue rather than a medical one. The social model makes the important distinction between impairment and disability. Impairment refers to an individual's biological condition, while disability denotes the collective economic, political, cultural and social disadvantages encountered by people with impairments (Coleridge, 1993). The social model moved beyond the personal limitations that impaired individuals could face, to social restrictions imposed by unthinking society (Oliver, 1998). The social model therefore implies that the reconstruction and development of our society involves a recognition of and intention to address the developmental needs of disabled persons within a framework of inclusion. The social model encourages self independence and self esteem for an individual to stand on ones feet.

The medical model of disability means that non disabled people who provide services to the persons with disabilities usually control organizations for persons with disabilities. The medical model therefore disempowers and isolates the persons with disabilities from mainstream of society. The problem of rehabilitation based on the medical model is that it focused on the individual's impairment without relating to the overall social and environment context. Hartley (2001) argues that the solutions between the medical and social model is in the form of a universal or comprehensive model of rehabilitation. Hartley asserts that that tension is necessary for the development of rehabilitation and that it needs to be harnessed constructively. Coleridge (1993) and Hartley (2001) propose a need for health professionals to give wider recognition to the social model in service provision and research. Bricher (2000) states that health professionals have played a

significant role in the marginalisation of people with disabilities while Kitchin (2000) argues that research which used the medical model as an approach, presented the researcher as the expert on disability issues. Coleridge (1993); Kendall, Buys and Lerner (2000) suggest that professionals should change their attitudes. They argue that there is a need for them to develop a new professionalism which involved a change in their reductionist, imposed approaches to rehabilitation.

Inclusion and the social model of disability both work to overcome barriers in the school systems and environments so that learners with physical disabilities could be included into mainstream classrooms and into their communities. It is the responsibility of the society at large to make the environmental modifications necessary for full participation of learners with physical disabilities in all areas of social life. The issue therefore is an attitudinal one requiring social change, which at the political level becomes a question of human rights. Inclusion and the social model of disability both promote equality and democracy for learners with physical disabilities (WHO, 2002).

2.3 OBSTACLES TO INCLUSION

2.3.1 The physical environment

Zola and Foucault as cited in Law and Dunn (1993) have written about influences from the physical, social, cultural and institutional environments that restrict learner's activity and participation. The physical environment of the school would be a barrier to learners with physical disabilities, if it is inaccessible. An additional area of accommodation needed for these learners relates to the potential architectural barriers within the classroom and the school at large. This applies to the surrounding terrain, school buildings and classrooms. The way the school is built could be a barrier to learners using wheelchairs if there are no ramps leading to classes and doors should be wide enough to accommodate learners in wheelchairs (Lazarus, Donald, Engelbrecht, 1999)

As with any innovation or educational reform effort, the successful inclusion of learners with disabilities requires fundamental change in the organizational structures of schools

and in the roles and responsibilities of teachers. Change in schools can be difficult, however, given school structures that promote traditional practices and provide little support for innovation (McLeskey and Waldron, 2000; Scruggs and Mastropieri, 1996). The initial barrier experienced by some learners with physical disabilities is getting to the place of learning. For many the inaccessibility of buildings is a problem. Therefore certain arrangements have to be made to the school environment to make these learners with physical disabilities move freely within the school environment (CISE, 1998). Lazarus, Donald, Engelbrecht, 1999 maintain that “The physical space of the schools does not only relate to disability. If co-operative teaching and learning are to occur, schools and classrooms need to be built to accommodate both flexibility and cooperative methods of teaching and learning. This requires sufficient space as well as flexibility of space regarding tables and chairs and other equipment...” (Page 50). The learners’ mobility needs reflect the means by which he or she moves from one location in the school or community to another. Therefore teachers should address each learner’s needs according to the manner in which he or she moves as well as need for additional mobility equipment such as a walking stick or walking frame. If the learner will be using the wheelchair, then cushions pads and straps will need to be used to facilitate his or her ability to sit in the midline position with ankles and knees, hips flexed at the right angle. They need to be checked daily for potential problems regarding appropriate fit (Engelbrecht, 2001).

2.3.2 The psychological environment

Design limitations are not the only important influences in the creation of disabling environments for learners. Segregation of learners in the society is considered an important determinant (Foucault, 1977). In inclusive education psychological environments can be deduced from the general culture of the school because of its attitudes, norms and values. Hence, the general culture should reflect the school values, norms which embody the principles of inclusion. Inclusive norms and values should be practiced throughout the school life. Teachers’ negative attitudes towards learners are regarded as an obstacle in developing an inclusive school (Engelbrecht, 2001). Learners with disabilities often experience isolation in their daily environment and they learn that

they are abnormal, different from society's "norm". The learners with disabilities, however, experience social injustice and are not supported by the moral principles (Gliedman and Roth, 1980; Law and Dunn, 1993).

2.3.3 The curriculum

In order to meet the needs of learners in inclusive education the curriculum should be flexible regarding the teaching and learning process and to ensure that the diverse needs of learners are addressed and met (UNESCO, 2002). All learners, with special educational needs for example learners with physical disabilities should have access to a broad, balanced and relevant curriculum. Effective teaching and learning for learners with special educational needs including learners with physical disabilities should be suitably differentiated and emphasize active learning. It should encourage respect for the environment. Opportunities to promote learners' self esteem should be developed (UNESCO), 2003).

In helping all learners, the curriculum and teaching approaches should address learner's individual needs, motivations, learning patterns and interests. Planning and implementing learning experiences should be appropriate to the age of the learner as well as their cognitive, social and emotional levels of functioning. Progress at all levels should be carefully monitored through a range of appropriate assessment strategies that inform further learning and development. Learners' own ideas and views about learning opportunities should be taken into account. Equal values and flexibility in the design and delivery of the curriculum and in the evaluation of the learners' progress should be seen as an appropriate response to the diversity of learners' needs. All curriculum arrangements should promote inclusion and have equal value (UNESCO), 2003).

2.4 LEARNERS WITH PHYSICAL DISABILITIES

Disability Services for Students, USA (1997: 2) states physical impairment includes "any physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: neurological, musculoskeletal, special sense organs, respiratory, including speech organs, cardiovascular. Loss of mobility and hand

functioning are examples of two impairments that may affect a learner's classroom performance.”

“The learners with physical disabilities have the same range of intellectual abilities as the population as a whole. Much physical impairment can take many different forms. They can be temporary or permanent, fluctuating, stable or degenerative, and may affect parts of the body or the whole of it. The learners may have experienced barriers to learning that relate to negative perceptions of disability and low expectations. The learners would have missed out on vital stages of learning during their schooling, affecting language acquisition and the development of literacy” (Center for Innovation in Special Education, 1998:3). Learners with physical disabilities may have a number of issues which impact on their ability to perform educational activities, may be unduly impaired by limitation which could affect eye hand co-ordination, range of arm movement, head and trunk control, arm strength, overall stamina and endurance, reaching and grasping, speech, muscle tone (Engelbrecht, 2001). Learners may also have difficulty getting to or from class (i.e. transportation difficulties) for learners with problems with hand function, increased time may be needed in and out of class for writing assignments. As a result of the extra physical effort required to perform tasks, some learners may become easily fatigued. Some learners may be taking medication that adversely affects their concentration and performance (Disability Services for Students, University of Oregon, USA, 1997; Engelbrecht, 2001).

Farlow (1996), Clark, Field, Patton, Sitting and Brolin (1994) suggest that where schools are prepared to accept the challenge of full inclusion it is vital to provide appropriate teaching programmes for learners. Farlow (1996) further states that schools should continue to provide services to the learners with special education needs but have to network if they require information and specialized support. Learners with physical disabilities face a lot of challenges when trying to access ordinary schools. Attitudinal barriers from society lead to social exclusion and reinforcement of negative attitudes. In this regard Lazarus and Donald (1995) recommend a framework of the provision of support to the learners which would be holistic, integrated and require inter-disciplinary

and inter-sectoral collaboration between various sectors. Addressing the education needs of learners with physical disabilities in ordinary education setting requires teachers to accommodate and provide reasonable solutions in the instructional process. Accommodation allows these learners to learn and perform in concert with their chronological age peers. Areas of potential educational consideration include, mobility, physical management and positioning, placement of instructional material and adaptation and assistive devices. Physical management of the learners is necessary in order for them to carry out education activities and daily routines. Appropriate physical management refers to procedures that allow teachers to lift and handle learners with mobility disorders without hurting themselves or the learner in the process (Engelbrecht, 2001).

2.5 TEACHERS' NEEDS FOR SKILLS AND KNOWLEDGE

It has been widely documented in the academic literature that the success of the inclusive movement thrives largely as a function of teachers' willingness to work with learners who have disabilities (Bender and Vail, 1995; Schumm and Vaughn, 1995). Teachers are primarily responsible for learners with physical disabilities who are placed in their classes (Semmel, Abarnathy, Butera, Lesar and Scott, 1991). Nevertheless, teachers at the service and pre-service levels have frequently expressed that they feel inadequately prepared to teach learners with disabilities who are in their inclusive classes. In particular, teachers report that they are unable or unwilling to adapt their teaching to meet the needs of individual learners (Semmel, Abernathy, Butera, Lesar and Scott, 1991; Hutchinson and Martin, 1999). The issue of inclusion of learners with physical disabilities in the ordinary classroom is one that must be considered with care and detachment. Many teachers have expressed reservations about inclusion of learners with physical disabilities despite its advantages (Hutchinson and Martin, 1999). Schumm and Vaughn (1991) found that many teachers perceived classroom adaptations as being more desirable than feasible. Schumm and Vaughn (1997) further suggested that there was growing emphasis on inclusive education which poses a challenge to all involved with learners with physical disabilities.

Alper and Ryndak (1992) state that in inclusive schools opportunities exist for learners to imitate socially accepted behaviour, providing the basis for living and working in society. This highlights how consultations between physiotherapists and teachers could improve learner's ability to function effectively in school. Teachers and physiotherapists are the key participants in helping learners feel like class members (William and Downing 1998). Abosi and Molosiwa (1997) point out that inclusion of learners with physical disabilities in ordinary classrooms has many implications for teachers and planners. Therefore, it requires additional support for teachers, additional teaching materials and modification of infrastructure. Safarik (1997) states that placement of a learner with a physical disability in ordinary classroom without the relevant provisions could be frustrating for both teacher and the learner.

The multidisplinary team and the process of consultation should be important vehicles for bringing knowledge to the classroom (Bundy, Niehues, Mattingly and Lawler, 1991). This perspective is supported by Engelbrecht (2001) who states that professionals like physiotherapists should be involved in building a positive teaching and learning environment and responsive curricula to minimise and address barriers to learning and development and promote the well being of all learners. She further notes that the involvement of health professionals and learning support specialists within the school context enables and encourages them to contribute towards the development of a healthy teaching and learning environment and a culture of tolerance and inclusion.

Research suggests that many teachers are questioning their knowledge and skills for adequately planning and instructing learners with special needs in their classrooms (Schumm and Vaughn, 1991). With the increasing diversity and numbers of learners with special needs served in ordinary classrooms, teachers need more knowledge about who these learners are and more skills training that has been shown to be effective with such populations. Teacher preparation programs are continually challenged to rethink their practices and revamp their strategies to prepare future teachers with the skills they need to meet the instructional needs of learners that are increasingly culturally and instructionally diverse (Schumm, Vaughn and Kouzekanani, 1993). Knowledge about the

characteristics of various disabilities and the ability to adapt one's teaching to meet the needs of learners with disabilities in ordinary classroom are essential responsibilities of the teachers. Providing the kind of preparation and training that teachers need to be effective catalysts of the inclusive movement begins at the pre-service level, before teachers enter the field. Leaders in the field of education and special education have articulated repeatedly that teachers' training need to incorporate specialized courses and training experiences in teacher training programs to prepare general education teacher candidates for inclusion (Giangreco, Dennis, Cloninger, Elderman and Shattman, 1993; Schumm and Vaughn 1995).

Hutchinson and Martin (1999) suggest that teachers, particularly pre-service teachers, may not be adequately prepared to provide educational modifications and work successfully with included learners who have disabilities. Semmel, Abernathy, Butera, Lesar and Scott (1991) corroborated these findings in an earlier study. In their study, teachers reported that they did not believe that they had the skills and knowledge they needed to adapt their teaching for individual learners with disabilities who were placed in their classes. On the other hand, other research has demonstrated that some teachers do report making educational modifications for individual learners (Gelzheiser and Meyers, 1997). However, in one study, only one in four teachers reported that they routinely adapted their teaching (Fuchs, Fuchs and Bishop, 1992). Furthermore, when teachers do make adaptations to their teaching, they are more likely to apply general class-wide accommodations rather than the individualized adaptations and accommodations that are often critical to the success of learners with disabilities who are educated in ordinary classrooms. Knowledge about educational accommodations and willingness to adapt one's instruction may be especially challenging for pre-service and novice teachers who have limited experience in the classroom (Schumm and Vaughn, 1991; Leyser and Tappendorf, 2001).

2.6 FACTORS AFFECTING TEACHERS' ATTITUDES

Although the movement for inclusive education is part of a broad human rights agenda, many teachers have serious reservations about supporting the widespread placement of

learners with special education needs in ordinary classrooms (Schumm, Vaughn, Jallard, Slusher and Sammuell, 1996). The attitudes of teachers towards learners with disabilities are of the utmost importance if equitable access is to be ensured for all learners. There is little doubt that teachers are going to be required to cater for the needs of learners with many diverse abilities including learners with physical disabilities in their ordinary classrooms (Booth and Ainscow, 1998). Studies have revealed that these attitudes could be either positive or negative (Schumm, Vaughn, Jallard, Slusher and Sammuell, 1996). Some teachers have been found to express positive attitudes toward the inclusion of learners with special education needs (Scruggs and Mastropieri, 1996).

According to Booth and Ainscow (1998) in studies involving teachers' attitudes to inclusive education, it is important for the researcher to specify the type of special needs which each individual learner has, because teachers' attitudes vary with the type of disability and the extent of adaptations required to suit such a learner. Rajeck (1982) agrees that attitudes are an important area to study because of their influence on personal lives; this includes convictions, feelings, views, beliefs, judgments and sentiments towards learners with special education needs. Mushoriwa (1998) further stresses that the study of attitudes is important because it is a general belief that human behavior and actions are influenced by attitudes, whereby attitudes are seen as the cause and behavior as the result.

Bochner, Ward and Center (1994) suggest that teachers' attitudes towards inclusion are strongly influenced by the nature of the disabilities and/or educational problems being presented and to a lesser extent, by the professional background. Studies have also shown that attitudes and confidence of teachers vary significantly according to the type and severity of learners' disability. Learners with severe physical disabilities and behaviourally disordered learners are commonly regarded as the most problematic and a potential source of teacher stress (Forlin, 1995; Avramidis, Bayliss and Burden, 2000; Westwood and Graham, 2000). Teachers appear to be more willing to include learners with mild disabilities, rather than those with more severe disabilities (Forlin, 1995). Similar results, indicating that teachers' attitudes varied with the severity of the disability,

have been consistently reported in research studies in the United States (Rainforth, 2000; Scruggs and Mastropieri, 1996) and have been replicated by Forlin (1998) with educators in Western Australia. In some developed countries some teachers did not welcome learners with certain disabilities. If the teachers' attitudes towards learners' physical disabilities are negative then including such learners in ordinary classroom could not result in a beneficial experience for learners (Fuchs and Norris, 1994). This suggests that to change it, it would be better to build teachers' attitudes as this could have a great impact on the inclusion of learners with physical disabilities.

Research suggests that teachers' attitudes might be influenced by a number of factors which are, in many ways, interrelated. For example, in the majority of studies on attitudes reviewed by Shimman (1990) the responses appeared to vary according to disabling conditions. In other words, the natures of the disabilities and/or educational problems presented have been noted to influence teachers' attitudes. The responses have stressed the importance of increased experience, social contact with learners with SENs, in conjunction with the attainment of knowledge and specific skills in instructional and class management, in the formation of favourable attitudes towards inclusion. These studies seem to suggest that contact with learners with significant disabilities, if carefully planned, results in positive changes in teachers' attitudes. These studies, coupled with more recent ones on teachers' attitudes towards inclusion indicate that as experience of ordinary teachers with learners with SEN increases, their attitudes change in a positive direction (DeLe Roy and Simpson, 1996). Shade and Stewart (2001) in their study found that a single course could significantly change teachers' attitudes toward the inclusion of learners with mild disabilities in the classroom from negative to positive. Since the majority of learners with disabilities attend ordinary classes in inclusive education this single course would benefit not only the teacher, but also the learners with special needs.

The successful implementation of inclusive practices relies heavily on teachers' attitudes toward inclusion. Teachers believe that ordinary classrooms are the best placement for learners with disabilities, though their attitudes are frequently negative (deBettencourt, 1999; Schuum, Vaughn, Jallard, Slusher and Sammuel, 1996). Alternatively, other

research has suggested that some teachers have positive attitudes toward inclusion (Smith and Smith, 2000). Scruggs and Mastropieri (1996) conclude that teachers are generally positive to increased inclusion of learners with disabilities. The most positive attitudes toward inclusion can be found in teachers who have received the most intense training for working with learners with disabilities (Jobe, Rust and Brissie, 1996).

Meijer, Hegarty and Pijl (1994) state that in societies such as the United Kingdom and some Scandinavian countries where inclusive education had been recognised and accepted, teachers tend to have positive attitudes towards having learners with special education needs in their classrooms. It is now generally accepted that teachers who are required to include learners with physical disabilities into their classrooms must feel confident in their own ability to cope with the situation, and must have some positive expectations about the learners learning potential (Forlin, 1998; Webster, 1999). Wilzenski cited in Booth and Ainscow (1998) conducted studies in Australia on teachers' attitudes towards including learners with physical disabilities in the classroom. These findings indicate that teachers were more positive about learners' inclusion in ordinary classroom. Buell, Hallan, Gamel- McGormick and Scheer (1999) report on positive relationship between teachers' attitudes towards inclusion and their influence on the educational outcomes of learners with special needs.

Teachers with more positive views of inclusion had more confidence in their ability to support learners in inclusive settings and to adapt classroom materials and procedures to accommodate the learners' needs. According to Bender, Vail and Scott (1995) teachers with more experience of having had learners with disabilities in their classes have more favorable attitudes toward inclusion. Other researchers have reported that teachers with more experience have less positive attitudes toward inclusion (Forlin, 1995; Forlin and Hattie, 1996). According to Whinnery, Fuchs and Fuchs (1991) and Curtis (1985) female teachers are more supportive of inclusion than male teachers and special education teachers are more supportive of increased inclusion than ordinary teachers. Scruggs and Mastropieri (1996) suggested that teachers should also have some degree of empathy with learners who have special needs. Deisinger (2000) points out that many teachers

would not have had direct personal contact with learners who have disabilities, and therefore their own beliefs and attitudes tend to be based entirely on common myths prevalent in the community. Such beliefs may be either unreasonably negative or unrealistically positive.

Recent studies which include those of Avramidis, Bayliss and Burden (2000); Smith (2000); Wei and Yuen (2000) reveal that when teachers are first confronted with the prospect of inclusion of learners with disabilities in their own classes, teachers tend to be somewhat negative and uncertain about their own ability to cope and they often point to lack of personal experience and relevant training, lack of skills and knowledge. If positive attitudes are to be developed, teacher skills and competencies need consideration and support in education courses (Hasting, Hughes and Witting, 1996). Another study by Schumm, Vaughn, Jallard, Slusher and Sammuel (1996) examined ordinary and special teachers' attitudes to inclusion of learners in ordinary schools. The majority of these teachers had strong negative feelings about inclusion and felt that decision-makers were out of touch with classroom realities. However, in a more recent study by Hastings and Oakford (2003) it was found that teachers expressed more negative attitudes toward the inclusion of learners with physical disabilities than those with emotional problems and behavioral problems. Bender, Vail and Scott (1995) found that teachers with more negative attitudes towards inclusion reported much less frequent use of instructional strategies known to facilitate the effective inclusion of learners with physical disabilities.

2.6.1 Effect and benefit of inclusion on teachers' attitudes

Benefits as a result of inclusive education practices have been reported frequently lending considerable support for the inclusive movement. Benefits for learners with severe disabilities have been numerous and well documented. Through interviews nineteen teachers reported increased awareness, responsiveness and skill acquisition for learners with severe disabilities (Giangreco, Elderman, Cloninger, Dennis and Shattman, 1993). York, Vandercook, McDonald, Caughey and Heise-Neff (1992) note that learners with severe disabilities were more visible in the school community and experienced growth as

a result of inclusion. Despite reported benefits for learners with and without disabilities, perceptions of inclusion by teachers are not uniformly positive. The benefit of inclusion is significant. Inclusion improves the social development of learners with and without disabilities who are educated in inclusive classrooms, in terms of getting along with others, interacting, seeking assistance and lending assistance, moving from one context to another and asking questions (Lipsky and Gartner, 1997). Benefits of inclusion are that all learners feel that they belong and diversity of abilities is equally valued. In inclusive settings learners learn tolerance and acceptance of differences, which are very important for building democracy and overcoming conflict. The learning needs of all learners are recognized and met for the teachers; they have the skills and ideal confidence to address the learning needs of any learner who are included into their classrooms (Chesley and Calaluce, 1997).

2.7 TEACHERS' TRAINING NEEDS

Training and preparation for teachers are important prerequisites of promoting positive attitudes and increasing understanding of including learners with physical disabilities in the classroom (Bennett, Deluca and Bruns, 1997). The teachers are concerned about deficiencies in their own training and support for inclusive educational practice within the classrooms (Bender, Vial and Scott, 1995; Tait and Purdie, 2000). Ait-Hocaine (1990) indicates that teachers are poorly trained in teaching learners with physical disabilities and that this exacerbates the fear, frustration and anxiety experienced by the teachers. Lack of training is not the reflection of teachers' reluctance, with many teachers requesting further training and acknowledging its importance. Many schools systems are not offering continuing in - service training to help teachers with their needs in ordinary classroom with the inclusion of learners with physical disabilities.

Research studies conducted by Schuum, Vaughn, Gordon and Rothlem (1994) indicate that teachers do not feel prepared to teach learners who have special needs and lack the skills and are not well prepared for the inclusion of learners. Eloff, Engelbrecht, Swart (2000) report that pre-service and in-service training is inadequate to prepare teachers for

inclusive education. Teachers experience stress as a result of needing to sustain an active learning environment for the learner with a disability and by determining how much to challenge the learner. Their reduced ability to teach other learners as effectively as they would like when including a learner with a disability is also stressful.

It has been recommended that at minimum, an introduction to special education course should be provided early on in the training of all ordinary pre-service teachers (Hinders, 1995; Strawderman and Lindsey, 1995; Shade and Stewart, 2001). White Paper 6 (DOE, 2001) illustrates that teachers need sufficient training in order to work with diverse needs of learners. Teachers should understand that because a learner has a physical disability it does not mean that the learner has a cognitive or intellectual difficulty. Meijer, Sheiba, Monahan and Mitler (2000) indicate that positive and willing teachers are not enough. Teachers must not only be willing but must also be able to deliver education of high quality and according to individual needs. Uplifting the competence of teachers in order to meet special needs of learners in ordinary schools is in-service training. Hegarty (1993) mentions that initial and pre-service training is the initial solution to the problem and can be regarded as an investment in future.

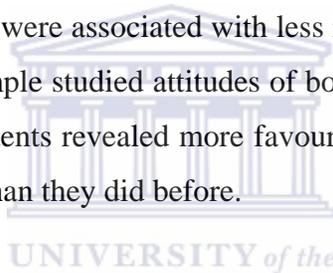
Studies conducted by Goodman and Yasumura (1992) conclude that teachers experience difficulties working with learners with physical disabilities because their teacher training programmes focus largely on improving academic performance and never include conditions causing physical disabilities in their training programmes. This is similar to the study done by Danks (1990) where teachers accepted learners with physical disabilities in their classrooms but were very skeptical about accepting learners with severe physical disabilities into their classroom because of inadequate preservice training, knowledge and skills. However, Ainscow (1999) has suggested that experience may well be an important part of training teachers and that it is easier to identify training needs and to tailor these needs to personal circumstances once the process of inclusion has begun. Lipsky and Gartner (1996) indicate successful training is likely to occur in school teams who have had some experience of working with learners with special education needs and who can thereby focus upon these learners when undertaking training. For in service

and preservice teachers, coursework and training which focuses on promoting the acceptance of learners with disabilities and providing specific strategies to work in inclusive settings are imperative for encouraging positive attitudes toward increased mainstreaming (Pavri and Luftig, 2000).

Indeed, recent research has indicated that teachers with more training in special education are more optimistic about inclusive practices than teachers with less special education preparation (Leyser and Tappendorf, 2001). Helping teachers understand the philosophy of inclusion and the benefits of inclusion for learners with and without disabilities may encourage them to seek information, collaborate with colleagues and learn techniques throughout their careers that will help them achieve successful inclusive classrooms (Stanovich and Jordan, 2002). Meijer, Monahan, Sheiba and Mitler (2000) conducted the study in South Carolina to evaluate teachers' attitudes towards the inclusion of learners with special education needs in ordinary schools. There were three hundred and forty four questionnaires randomly distributed, three hundred and forty were returned and responded to. The survey included twenty five statements to which the respondents evaluated each on a 5 point scale from "Strongly Agree" to "Strongly Disagree." The major areas addressed in the survey included teachers rights, skills and perceptions. The findings as by Meijer and Monahan, Sheiba and Mitler (2000) are as follows: 75% of the respondents indicated that teachers do not have the instructional skills and education background to teach learners with special education needs; 72% indicated that the inclusion of learners with special education needs will not succeed because of resistance from the teachers; 51% percent of respondents felt that the teachers have the primary responsibility to educate learners in ordinary classrooms. These findings indicate and conclude that teachers resist the presence of learners with special education needs in the classroom. This is due to lack of proper training and poor educational background of teachers.

Another factor which has attracted considerable attention is the knowledge of teachers about learners with special education needs gained through formal studies during pre- and in-service training. This is considered an important factor in improving teachers' attitudes

towards the implementation of an inclusive policy. Without a coherent plan for teacher training in the educational needs of learners with special education needs, attempts to include these learners in the ordinary classrooms would be difficult (Stanovich and Jordan, 2002). The importance of training in the formation of positive attitudes towards inclusion is supported by the findings of Beh-Pajoooh (1992) and Shimman (1990) based on teachers in colleges. Both studied the attitudes of college teachers in the UK towards learners with SENs and their inclusion into ordinary college courses. Their findings showed that college teachers who had been trained to teach learners with physical disabilities expressed more favourable attitudes and emotional reactions to learners with SENs and their inclusion than did those who had no such training. Several other studies conducted in the USA (Van-Reusen, Shoho and Barker, 2000; Avramidis, Bayliss and Burden, 2000) tend to reinforce the view that special education qualifications acquired from pre- or in-service courses were associated with less resistance to inclusive practices. Dicken- Smith (1995) for example studied attitudes of both special and ordinary teachers towards inclusion. Her respondents revealed more favourable attitudes towards inclusion after their in- service training than they did before.



2.8 EDUCATION SUPPORT SERVICES FOR TEACHERS

The Ministry of Education Policy Document “Educating our Future” (1996) on inclusive education in Zambia which was based on the resolutions passed at the Salamanca (Spain) World Conference on Special Education Needs (1994) states that ordinary schools need to accommodate all learners regardless of their physical, intellectual, emotional, social, linguistic differences or other conditions. The policy does not directly talk about support for teachers but support for learners with Special Education Needs (SENs). It states that the learners with Special Education Needs will be assisted by working in conjunction with the Ministry of Health who will provide them with assistive devices such as wheel chairs, crutches and other appliances. In terms of human resources it does not name any health profession who needs to be involved in inclusive education. In the districts where inclusive education has been established in Zambia, teachers are getting funding support

from donor agencies such as UNESCO and DANIDA, for seminars and workshops in the sensitization, advocacy and awareness process in the districts with inclusive education.

In South Africa the policy states that for successful inclusion to take place specialist help must be available. Education support includes school health, school social work, psychological services, specialised education services, guidance and counseling services. Teachers and parents are of particular importance in this process (Gwalla- Ogisi, 1990). However without specialised support, restructuring will fail (Donald, 1996). Donald (1996) further elaborates that for learners with special needs to be successfully included in ordinary classroom or a special class it is, firstly, necessary for the teacher to be able to identify that the learner has difficulty. Donald, Lazarus and Lolwane (1997) propose that the education support service team needs to support teachers in ordinary schools. This would be made up of medium and high skilled specialists such as doctors, physiotherapists and senior social workers. It is proposed that health personnel have dual accountability to the Department of Health and the Department of Education.

Donald, Lazarus and Lolwana (1997) state that the notion of education support services should include a health promotive as well as curative orientation, the role as a supporter teacher in the classroom needs to include both dimensions. They point out that health promotion in the classroom involves all aspects of creating and supporting a healthy classroom environment. This includes the idea of primary prevention in so far as you are addressing the problem at their roots. The curative role of the supporter teacher involves being able to identify and address special needs as they arise. If curative is seen as linked to the promotive part of the teacher supportive role, the teacher will find that the one feeds the other. The more teachers promote a healthy classroom environment for all, the more teachers will be helping those with special needs. The more teachers develop an understanding of special needs and ways of addressing them, the more the teacher will be able to use this for the benefit of learners (Donald, Lazarus and Lolwana, 1997).

Education support services include all human and other resources that help develop and support the education system so that it is responsive to the different needs of learners and

the system. Education support should be given to individual learners and to all aspects of the system. Further it should address problems of learners and the system; it should also focus on the prevention of physical, psychological, social and learning problems. There should be a focus on supportive learning environments for all learners. Support required by all learners and the system include teaching and learning support and various forms of therapeutic support which include medical support, psychological support, occupational therapy, speech therapy, physiotherapy, teacher training and support for whole school development (Donald, Lazarus and Lolwana, 1997; Engelbrecht, 2001).

Eloff, Engelbrecht and Swart (2000) recommend the framework for support based on the work of Cooley, Yovanoff, Soto and Goetz. This support programme focuses on addressing the issues that teachers who are currently involved with including learners with disabilities have found most stressful. It additionally aims to employ the coping strategies that these teachers have indicated are most useful for them. The proposed support program features three key areas of attention namely a team approach, professional in-service training and behaviour management. Each key area is designed to address specific stressors identified by teachers in regard to including a learner with a disability into ordinary classes. Selections of focus coping skills are based on those indicated by teachers as being most useful during inclusion. Although the use of maintaining a sense of humour has not been categorically stated in this support programme this type of strategy should be considered at all stages of intervention.

The implementation of the different types of support for teachers can incorporate a range of formats such as interactive presentations, small or large group discussions, applications during sessions and practice between sessions. It is posited that by addressing the stressors found to be associated with inclusion this will simultaneously enable teachers to develop a higher sense of efficacy (Eloff, Engelbrecht and Swart, 2000). Such support programme will provide teachers with a range of opportunities to gain knowledge about their own performance, to access further knowledge, and have appropriate opportunities to practice the skills and apply the knowledge in own classrooms. Regular meetings to discuss learner concerns will also provide opportunities

to discuss and experience their own and others' struggles and challenges which are crucial to ensure participants that they are capable of successfully coping with inclusive education (Eloff, Engelbrecht and Swart, 2000)

2.9 INTERSECTORAL COLLABORATION

Pugach and Johnson (1995) state that teachers need to develop skills for meeting diverse needs of learners. They further elaborate that teachers somehow might be having difficulty in developing the flexibility for working with diverse learners. Therefore, teachers should follow some strategies in order to make inclusion effective. The three strategies include: collaboration and teaming; strategies to accommodate diverse learners; and problem solving. Friend and Cook (1997) state that teachers' support could occur in many different ways ranging from consultation and support teams to more ongoing collaborative relationship that may take the form of co-teaching. Therefore collaboration should play a major role and with collaborative systems, understanding and tolerance should guide the process. Strategies to accommodate diverse learners suggest teachers need grounding in curriculum and instruction for coping with individual difference. As stated by Pugach and Johnson (1995) teachers should focus on curriculum development and implementation from a whole group perspective.

Successful inclusion at school is dependant on intersectoral collaboration at district and at interdepartmental level. Lazarus and Reddy (1995) refer to intersectoral collaboration as persons or groups representing various formal and informal constituencies working together. The education support services include the professional area of school health, physiotherapists, occupational therapists, speech therapists, school social work, specialized education, teachers and parents. It also includes various forms of partnership across particular traditional boundaries: inter-ministerial, interdepartmental, inter-disciplinary, inter-professional and intersectoral collaboration. However, Lazarus and Reddy (1995) state that there is a need for people to work together in order to develop a comprehensive understanding of issues. When collective goals are evident across

particular sectors, collective planning and action need to be facilitated (UNESCO, WHO, 2000).

In a multi-disciplinary approach to support, Duck, Showers and Imber (1980) state that the collective effort of administrators, special teachers and special education providers in collaborative decision making enhance ownership and commitment to program goals. McCullough (cited in Wade 1999) illustrates that the exchange of knowledge, skills and resources from a range of professionals such as physiotherapists with diverse experiences helps conceptualize issues and goals because more dimensions of an issue can be explored. Collaboration broadens a group understanding of a given situation. Curtis and Curtis (1990) state that collaboration generates a broader range and possible answers. Significant work in the examination of conditions to encourage and develop inclusive practice has been undertaken by Giangreco, Elderman, Luiselli and Macfarland (1997) who have identified what they see as common features of schools where inclusion has succeeded. These he describes as: collaborative teamwork; a shared framework; family involvement; teacher ownership; clear role relationships amongst professionals; effective use of support staff; meaningful Individual Education Plans and Procedures for evaluating effectiveness. He describes the process of developing a shared framework for inclusion with well-defined common goals. Systems designed specifically to promote inclusion and which provide all involved staff with training that enhances both skills and positive attitudes are seen as having positive benefit for schools.

2.10 PHYSIOTHERAPY SUPPORT FOR TEACHERS

Physiotherapy services in the past few years have operated comfortably in the medical service model and many physiotherapists have moved away from the environment of the hospital with their medical partners. With the inclusion of learners with physical disabilities in ordinary schools, physiotherapists have been placed in an entirely new context in which services are provided to support teachers and learners rather than the medical well being of the client (Holmes, 1968; William and Downing, 1998).

Learners with physical disabilities encounter environmental problems that limit their participation both at home, in communities and in inclusive schools. Factors such as restricted physical environments, normative classification of learners and the power of health disciplines are cited as contributing to the disabling environments for learners with physical disabilities in inclusive schools. Dissatisfaction with the ability of health care to change these factors has led to changes, in the recognition of disability rights, the need for consumer participation in life planning and the importance of social policy (Law and Dunn, 1993).

Disability advocates assert the need for a change in planning services for learners with physical disabilities to participate actively in their daily activities in the school and in communities (Hahn, 1987). Boggs (1986) recommends adopting health planning to shape our environments and communities. The fundamental principle of this approach would be the recognition of the ecological nature of disability. This must be seen as the collective problem and social policy needs to be used to increase participation of learners with physical disabilities (Funk, 1987). The social political model of disability will actively work with health professionals such as the physiotherapists to change the classroom environment by imparting practical skills and knowledge to the teachers as they support their learners in the classroom. This policy enables action with teachers working together with professionals to co- produce solutions concerning learners with physical disabilities.

To be compatible with this model, instead of being the expert, the health professional, such as the physiotherapist, will have to support teachers and families in natural environments of the schools and communities. Physiotherapists will have to relinquish power and work together with teachers to resolve the problems of learners (Funk, 1987). Galvez (2000) recommends professionals such as physiotherapists from the multidisciplinary team be involved in the training and consultation services for the teachers in ordinary schools.

Whitworth (1994) states that physiotherapists have been required to perform as consultants to provide inclusive support services in inclusive schools, building the skills

of other professionals like teachers through using collaboration. This is further supported by William and Downing (1998) who stated that physiotherapists need to become advocates for learners with physical disabilities and their families as well as for services and systems that support a diverse range of individual needs. Bundy, Niehues, Mattingly and Lawler (1991) acknowledge that therapists should assume a number of roles within the school setting and their role must be determined in response to the goals and objectives specified for the learners' education needs. The expertise of other educational personnel makes an important and unique contributions to the education of the learner.

Physiotherapists are becoming essential staff members at ordinary schools (Thomson and Lillie, 1995). Physiotherapists assess functional activities; observe and document data on learner performance and behavior; implement behavior-management programs; instruct individuals and small groups; and assist teachers with modifying programs to meet the needs of individual learners (Giangreco, Edelman, Luiselli and MacFarland, 1997; Safarik, 1997). Teachers can identify the learner's functional difficulties within the classroom and the skills required in coping with the physical environment (Gregory, Fairgive, Anderson and Hammond, 1992). Physiotherapists can in-corporate such considerations into their treatment while advising teachers appropriately (Sandler, 1997).

In studies which were conducted by Fairbairn and Davidson (1993) teachers indicate that there is an important role for physiotherapists in the school system in providing knowledge and skills to the teachers, skills for learners, and providing practical programming, physical exercises and adapted equipment.. The National Curriculum Council Canada (1992) further suggest that the whole curriculum for the learner should be balanced to promote the learners' personal and social development and prepare them for adult life which include shared skills provided by physiotherapists including personal care skills, physical skills relating to safety, posture and motor planning. Canadian Surveys of 1977-1986 explored the roles of physiotherapists. The findings from studies indicate that the most common diagnostic categories of learners were physical disabilities and multiple handicaps of young learners of school age and the intervention programmes provided by physiotherapists included activities of daily living, classroom adaptation,

modifications, positioning, sensorimotor therapy, independent living skills, neuro-developmental therapy, fine and gross motor skills. The surveys further recommend that physiotherapists act as consultants for learners, who are no longer in active therapy, and work with teachers to provide physical activities for all learners in the school.

The American Physical Therapy Association (1990) supports the approach of physiotherapists working with general and special education teachers who work with learners with physical disabilities. The knowledge and skills acquired by the teachers will influence the success of consultative therapy from physiotherapists. If teachers are to possess the skills needed to assume hands on responsibility for their learners with physical disabilities in the context of consultative therapy, formal training in areas which include positioning and handling techniques is vital and should be thorough and rigorous.

Mackey and McQueen (1998) suggest that physiotherapists are ideal professionals to be involved in the preparation of teachers in inclusive education. These physiotherapists have an important role to play in supporting schools to promote an inclusive healthy environment (Bundy, Niehues, Mattingly and Lawler, 1991). They enable learners to function in school. Physiotherapists assist learners with assuming their role as learners, performing self-care tasks, improving posture and mobility (Bundy, Niehues, Mattingly and Lawler, 1991). Further, because of their unique training, physiotherapists assist other educational team members to understand learners with special needs better, develop more effective strategies for interacting with learners, and develop skills for managing learners' specialised physical needs. Mackey and McQueen (1998) recommend that physiotherapists work with the teachers and the learners in the classroom while they undertake their education, rather than taking learners out of the classroom for therapy. This approach reduces interruption to lessons and is favoured by the school staff as it helps academic work and improves understanding of the physiotherapists' role.

2.11 SUMMARY

The researcher has described the theoretical framework: eco- systemic theory; systems theory and inclusive education, social and medical models of disability, learners with physical disabilities, teachers' needs in the classroom: teachers' skills and knowledge; teachers' attitudes to the inclusion of the learner with physical disabilities in ordinary classroom; and physiotherapy support to teachers. The researcher has attempted to engage with the limited literature concerning physiotherapy support to teachers in inclusive education to support the arguments. The methodology follows in the next chapter.



CHAPTER THREE

METHODOLOGY

3.1 INTRODUCTION

This chapter outlines the methodology used in the study, in which a qualitative approach to data collection was used. The research setting, inclusion criteria, selection of participants and research design are described. The data collection and data analysis are outlined. The chapter ends with an explanation of ethical considerations.

3.2 RESEARCH SETTING

The research was conducted at two schools which practiced inclusive education in Kalulushi district, Copperbelt Province in Zambia. The two schools are namely Mitobo Upper Basic and Masamba Upper Basic Schools. The description of the schools is as follows:

3.2.1 Mitobo Upper Basic School

This school was built immediately after independence in 1964. Inclusive education for Special Education Needs started in 1998 at this school. The school has 1300 learners and caters for learners from pre- school to grade nine. There are thirty teachers of whom six are trained in special education. There are thirteen classrooms and each class has a minimum of forty learners and some of these learners have special education needs.

3.2.2 Masamba Upper Basic School

This school was built in 1960 during the colonial days. It became an inclusive school in 1998 as one of the pilot projects for inclusive education. The school has 1242 learners and offers services from pre- school to grade nine. There are twenty nine teachers at the school of whom four are trained in special education. There are eighteen classrooms and has a minimum of forty learners in a class and some of these learners have special education needs.

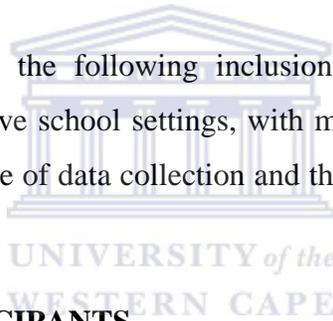
NB. Permission was granted by the Department of Education, Zambia and the schools to identify the schools and use the full names of the above mentioned schools.

3.2.3 The rationale for choice of two schools

The District Education Board in Kalulushi district proposed four schools to the researcher which practiced inclusive education. From the four schools the researcher chose Mitobo and Masamba Upper Basic Schools because the two schools were among the first schools in the district to practice inclusive education therefore was deemed appropriate for the study. Secondly the two schools were close to each other and easily accessible by the researcher and deemed appropriate to conduct the research.

3.3 INCLUSION CRITERIA

The participants had to meet the following inclusion criteria. These were teachers working in the selected inclusive school settings, with more than two years of inclusive education experience at the time of data collection and they were willing to participate in the study.



3.4 SELECTION OF PARTICIPANTS

The populations under study were teachers at the particular schools in Kalulushi district in Zambia. Purposive sampling was used to achieve a diversity of the sample and maximum information. Neuman (2000) says purposive sampling occurs when one selects cases with a specific purpose in mind. According to Bloor, Flankland, Thomas and Robson (2001) and Stewart and Shandasani (1990) in purposive sampling the researcher is able to find ways of obtaining participants that represent all the important groups of the population by targeting specific people because they represent an important tool of discovery and exploration, when little is known about a particular subject or certain phenomenon. In this case the need for physiotherapy support for teachers in inclusive education in selected schools in Zambia was the phenomenon under study. Bloor, Flankland, Thomas and Robson (2001) state purposive sampling can be used where researchers can be guided by their particular research questions and key characteristics

that are considered relevant and individuals recruited accordingly. Bloor, Flankland, Thomas and Robson (2001) recommend six to eight participants as the optimum size for individual interviews

3.5 STUDY DESIGN

The study was a qualitative, interpretive as well as exploratory, where by the researcher attempted to understand people in their own definition of their world. A qualitative interpretive approach was used, aimed at eliciting in-depth information. Qualitative research aims to provide an in-depth understanding of people's experiences, perspectives and histories in the context of their personal circumstances or settings. Among many distinctive features, it is characterized by a concern with exploring phenomena from the perspective of those being studied; with the use of unstructured methods which are sensitive to the social context of the study; the capture of data which are detailed, rich and complex; a mainly inductive rather than deductive analytic process; developing explanations at the level of meaning or micro-social processes rather than context-free laws; and answering 'what is', 'how' and 'why' questions (Mason, 2002; Patton, 2000; Ritchie and Lewis, 2003; Silverman, 2000).

Qualitative methodology allowed the researcher to gain an in-depth understanding of issues (Burns and Grove 2001). Parahoo (1999) states that the value of qualitative methods lies in their ability to pursue systematically the kinds of research questions that identify people's perceptions, providing a flexible approach to allow for discovery of the unexpected and to enable the in-depth investigation of particular topics. This method is characterized by an approach that seeks to describe and analyse the culture and behaviour of humans and their groupings, from the point of view of those being studied (Mouton, 2001). Qualitative methodology is a useful method to identify themes and was deemed appropriate for this study (Rubin and Rubin, 1995). This approach allows the discovery of new issues instead of the researcher being limited to a predefined set of questions. In qualitative research, initial choices are made concerning research questions and data collection methods, but these may be modified as new information is collected. This is different from quantitative research where all procedures must be specified before the

beginning of data collection and followed as an unalterable course (Polit, Beck, and Hungler, 2001).

3.6 PROCEDURE

Field work began by identifying the research assistant who was going to be the observer as well as to write field notes during the interviews. The researcher had to familiarize the assistant on the nature of the study and made her understand the research topic, her role in the study and the aim and ethical principles of the study.

The researcher verbally presented the letter from the University of Western Cape, South Africa to the Ministry of Education in Ndola Provincial Administration so that the researcher could get permission to conduct the study in Zambia. The Ministry of Education Provincial Administration gave the researcher the authority letter to conduct the research at schools in Kalulushi district which practiced inclusive education. The District Education Board further gave the researcher a letter of authority to conduct the research at the two schools namely Mitobo and Masamba Upper Basic Schools. The two headmasters at the two schools were approached and gave the researcher permission to conduct the study at their schools and arranged the dates when the interviews could be conducted. Letters of invitation and consent forms were delivered to the selected teachers four weeks before the actual interviews. The interviews took place in the senior teacher's office which offered a quiet atmosphere. The researcher facilitated the interviews and the assistant took down notes while the session was in progress in order not to miss out any expressions or nuances. Data was collected at two schools in Kalulushi District, Copperbelt Province in Zambia between January, 2005 and February, 2005.

3.7 DATA COLLECTION AND FACE TO FACE INDIVIDUAL INTERVIEWS

The researcher explained the details of the study to the teachers and if they agreed to participate in the study, an appointment for the interview at an acceptable time and location was made. The teachers were asked to participate in sixty minutes audiotaped interviews. Informed consent was obtained from the teachers. The teachers were informed that there would be no right or wrong answer during the interviews and were

allowed to talk freely about their experiences with the inclusion of learners with physical disabilities in their classrooms.

A semi-structured interview guide with open-ended questions, informed by existing literature on the subject, was used (**Appendix D**). The instrument consisted of a section for obtaining demographic data such as age, area of practice, years of service and the level of education of the teachers. Probing as a technique was used to get clarity and further explanation of the issues being discussed. Using open ended questions (**Appendix D**) the researcher conducted individual face-to-face interviews with eight teachers to obtain in-depth opinions and perceptions from them. The interviews were conducted in English. By using individual face to face interviews, the opinions of individual teachers and the motivation for these opinions could be discovered without the opinion being influenced by others. Individual interviews are especially suited for getting insight in meaning and processes of thought (Silverman, 2000). This technique was appropriate for the research question. It allowed the researcher to find out the concerns related to matters of perceptions, values and other human characteristics as well as situational factors concerning the need for physiotherapy support for teachers in inclusive education through in-depth interviews conducted with the teachers. In depth questions were used to elicit information from the individual interviews. The discussions were tape recorded with the permission from the teachers and the tapes were subsequently transcribed.

3.8 RELIABILITY AND VALIDITY

Methods for establishing reliability and validity in qualitative research differ from those used in quantitative research. Instead of the terms reliability and validity, terms such as consistency, dependability, confirmability, audibility, recurrent patterning, credibility, trustworthiness and transferability are used when referring to reliability and validity (Polit, Beck and Hungler, 2001). Therefore, this study used the criteria credibility, transferability and confirmability to establish trustworthiness.

3.8.1 CREDIBILITY

In qualitative research, credibility refers to internal validity. The technique used to achieve credibility includes using a variety of sources in data gathering (triangulation) and having research participants or fellow researchers review, validate and verify the researcher's interpretation and conclusion. In this study this was applied by allowing the research assistant to listen to the audio taped information. The researcher and the research assistant then listened to the audio taped information and transcribed verbatim.

3.8.2 TRANSFERABILITY

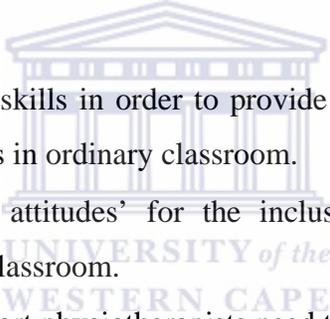
External validity, defined as the degree to which the results of a study can be generalized to settings or samples other than the ones studied are, usually referred to as transferability. In this regard the researcher kept as evidence the data that was gathered through tapes, methodological notes and analytical notes (Marshall and Rossman, 1995; Polit, and Hugler, 1995: 430). The results section in chapter four provides sufficient detail of teachers' verbatim quotations to permit the reader to assess transferability. Although the results of this study cannot be generalized to all teachers in inclusive schools in Zambia, if a study using the same methods was undertaken similar results may be found.

3.8.3 CONFIRMABILITY

Confirmability implies the repeated affirmation of what the researcher has heard, seen or experienced during the research process. The method of analysis by the researcher was based on thematic content analysis. The researcher listened to the recorded session immediately after the individual interviews and noted emerging topics, the body language of the teachers and impressions of the individual interviews. The transcribed tape recordings were then read and re-read and general themes were written down. Through discussion with the research assistant, a final list of categories and themes were compiled. Data was then discussed under these categories.

3.9 DATA ANALYSIS

Data analysis began with the transcription of the data of the interviews. All audio taped data were transcribed verbatim. Transcriptions were compared to the audiotape recoding to verify accuracy. Each transcript was read through and scrutinized. After re-reading the transcriptions several times analysis of the data commenced using content analysis. Transcriptions and field notes were coded manually. These codes were then interlinked using a mind – mapping approach. This visual display facilitated identification of key components and the relationship between them. The transcripts were then re-read to ensure that all the original codes were covered by the wider categories. The coded data was re- contextualized according to thematically based files and explored again. This time with interpretation in mind, looking for patterns and meanings in relation to the three specific objectives.

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- To determine teachers' skills in order to provide appropriate support to learners with physical disabilities in ordinary classroom.
 - To determine teachers' attitudes' for the inclusion of learners with physical disabilities in ordinary classroom.
 - To determine what support physiotherapists need to give to teachers.

It turned out that some of the themes were more relevant than the others. However, the less relevant themes remain an important contextual background for understanding the views of the participants and the frame of reference, which emerged (Silverman, 1993; Bryman, 2001). The search for such themes and the peer validation provided by the research supervisor throughout the data analysis enhanced the trustworthiness of the findings (Lincoln and Guba, 1985).

3.10 ETHICAL CONSIDERATION

Approval was sought from the University of Western Cape Senate, the Ministry of Education Provincial Headquarters in Ndola, Zambia and District Education Board in Kalulushi district, headmasters from the two schools namely Mitobo and Masamba Upper Basic Schools before the commencement of the study. Participants were given letters of

invitation four weeks before individual interviews to give them time to consider the purpose of the study and their participation. Their selection criteria were also explained and the fact that their participation was voluntary and they were given the choice to withdraw if they so wished. The participants were assured of anonymity; names were not used but alphabetical letters. Confidentiality was also ensured as the researcher told the participants that the information obtained was only going to be for research purposes. The consent form and the letter for information for the teachers who took in the study are on **Appendices B and C**. Letters from the University of Western Cape seeking for permission to conduct the research in Zambia to the Ministry of Education and the subsequent permission letter from the Ministry of Education in Zambia are on **Appendices A1 and A2**. Permission was given to conduct the research at the two schools and to include them in the study.

3.11 SUMMARY

In this chapter the methodology used for the study has been explained. The study used qualitative research methodology using individual, face to face in-depth interviews. The participants and sampling design, data collection technique for individual interviews were addressed. The trustworthiness of the data collection instruments and analysis were substantiated. The next chapter deals with the presentation of findings obtained through individual interviews.

CHAPTER FOUR

RESULTS

4.1 INTRODUCTION

The purpose of this chapter is to present the findings from the study using a narrative type of reporting and to report on the outcome of data analysis; the demographic profile of the teachers' age, gender, and educational level. The qualitative responses from the teachers are presented. The excerpts from the teachers are presented in terms of each teacher's interpretation of his or her perception of the need for physiotherapy support for teachers in inclusive education. Alphabetical letters are used throughout the chapter to protect the anonymity and confidentiality of the teachers.

4.2 TEACHERS' DEMOGRAPHIC INFORMATION

The sample consisted of eight teachers from two schools in Kalulushi district in Zambia. The teachers' age ranged from twenty nine to forty seven years with a mean age of thirty eight years. They included three male and five female teachers. Three teachers had initial training plus in-service training in special education needs and five teachers only had initial training from college (see table 4.1).

Table 4.1 Demographic profile of the teachers (n =8)

Teacher	Age	Gender	Qualification	Experience *
Teacher (a)	29 years	Female	Certificate in Primary Education	2 years
Teacher (b)	32 years	Male	Certificate in Primary Education	3 years
Teacher (c)	36 years	Male	Diploma in Education	6 years
Teacher (d)	47 years	Male	Diploma in Education	5 years
Teacher (e)	36 years	Female	Certificate in Primary Education	4 years
Teacher (f)	43 years	Female	Diploma in Education	6 years
Teacher (g)	44 years	Female	Certificate in Primary Education	4 years
Teacher (h)	37 years	Female	Certificate in Primary Education	3 years

* Experience in inclusive education

The aim of the study was to determine teachers' skills, teachers' attitudes and to identify physiotherapy support needs for teachers for the inclusion of learners with physical disabilities in ordinary classrooms. The results from the individual interviews are reported using the following three major themes and sub - themes that emerged from the study.

4.3 TEACHERS' NEEDS

4.3.1 Knowledge

4.3.2 Skills

4.4 TEACHERS' ATTITUDES

4.4.1 Positive attitudes

4.4.2 Negative attitudes

4.4.3 Effect of inclusion on teachers' attitudes

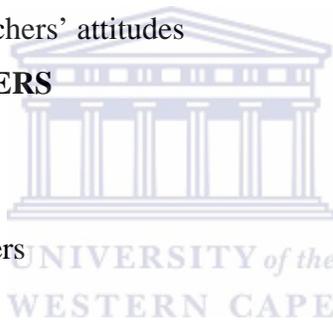
4.5 SUPPORT FOR TEACHERS

4.5.1 Training

4.5.2 Physiotherapy support

4.5.3 Support from other teachers

4.5.4 Government support



4.3 TEACHERS' NEEDS

Most teachers indicated and mentioned the importance of instructional classroom support in terms of skill building for teachers in order for them to support their learners in their classrooms. Most teachers further indicated that they lacked the necessary skills and were inadequately prepared to accommodate learners with physical disabilities in their classrooms. This was a constant theme expressed by most teachers. Some teachers specifically mentioned the skills which they considered most relevant to them and which could assist them support their learners in the classrooms. In order to determine what skills teachers needed in order to support learners in the classroom, it was important to find out what skills they had and how they supported their learners with physical disabilities in the classroom. The teachers indicated that they lacked basic skills such as the ability to correct posture; the ability to develop finger and hand function; and the

ability to position learners correctly in their chairs. They said they were inadequately prepared to accommodate learners with physical disabilities in inclusive education.

4.3.1 Knowledge

Some teachers indicated that their knowledge about learners with physical disabilities was insufficient. The teachers further said they could not provide appropriate support to learners in their classrooms because of lack of medical knowledge. Teachers (e) and (b) said:

Basically I wouldn't know where to start with these learners with physical disabilities. It's because of not knowing I think. Teacher (e)

I have limited medical knowledge relating to learners with physical disabilities and that's why I am not able to give the needed support to learners. Teacher (b)

4.3.2 Skills

It was very clear that the teachers did not feel adequately prepared for their new role in inclusive education and they said that skills were vital as they had learners with physical disabilities in their classrooms. The inclusion of learners with severe physical disabilities was a threat for some. They said they only had basic skills which were insufficient. These were some of the teachers' responses:

The learners with severe disabilities are the most crucial in the classroom and to make matters worse, I have never taught a child in a wheelchair before. To correct some of these difficulties the learners have is a problem because you will find that the skills you have are very limited and you can't even help out. Teacher (d)

I am very interested to support these learners but you will find some of these learners are severe cases, you don't really know where to start the support because the skills you have are only the basics and these basics are not really connected to the learner. Teacher(c)

Yes skills concerning these learners are very vital for us teachers in inclusive education, but you will find especially in the classroom you observe something is going on from these learners with SENs but you don't really know how to support them and where to start from because you just have the basics and the basics are not even there. Teacher (e)

Another teacher said he did not think he had the skills to support learners in the classroom and that he was not ready to support the learners.

I don't think I have the skills to support these learners in the classroom and as at now I don't think I am ready to support the learners. Teacher (a)

The teachers said that learners needed to be supported and showed willingness to support them but were not sure of what type of support to give to the learners due to their lack of skills for supporting learners in the classroom. They realized there was a lot of work ahead of them. As teacher (h) said:

These learners are very demanding they need to be supported but one should be careful what support to give and it would be very difficult for the teacher if they didn't have the skills like at now I don't have enough skills concerning supporting the learners. Teacher (h)

Most teachers felt they wanted to acquire some relevant basic skills concerning their learners who were in their classes and specifically mentioned they lacked skills such as positioning of learners correctly in wheelchairs; posture in sitting; midline orientation for learners with mild and severe disabilities; fine motor skills especially for hand and finger function which they considered necessary for grade ones who had just started to use pencils; and proper lifting techniques were also vital in their classroom as support to their learners. Some teachers said:

We need to be taught some of these basic skills like midline orientation for learners with mild and severe disabilities as they frequently lean to one side as you are teaching and we will welcome some expert to come and show us because most us have limited skills concerning these learners. Teacher (f)

As teachers in these mixed schools it is important to know the relevant skills like positioning, posture correction, and the fine motor skills like finger and hand movements to assist learners with holding pencils. As you know most of these learners with disabilities, their fine motor skills are not fully developed so it is very vital for us to acquire such skills. Teacher (g)

We need to know some basic skills like positioning of learners with severe disabilities in wheelchairs, hand skills to assist learners with holding of pencils and holding of good posture as well as lifting techniques are very necessary to us teachers in inclusive education. Teacher (a)

It is important to know the skills concerning these learners in the classroom such as positioning, hand function, posture correction. You will notice a learner sitting awkward in the chair you would want to help but how do you help because you realize the skills are not enough which you have. Teacher (d)

One teacher showed concern that he needed to acquire the right skills to support the learners but on the other hand the teacher thought teachers trained in special education were in a better position to support learners since they were probably more motivated than those who were not trained in special education. Teacher (b) said:

I think, above all things, I need to know some skills to support learners, so that I know how to support them in the classroom but you will find that there are these special education teachers trained in special needs education and sometimes you feel they are the right people to support the learners since they are motivated, unlike us not trained. Teacher (b)

4.4 TEACHERS' ATTITUDES

The majority of teachers reported positive attitudes towards having learners with physical disabilities in the classrooms. A small number of teachers described their negative attitudes to having learners with physical disabilities in their classrooms.

4.4.1 Positive Attitudes

A teacher said it was an enriching experience for both the teacher and the learners to have learners with physical disabilities in the classroom. The teacher further indicated that it made the class more accepting, more caring and complete. Teacher (a) said:

Overall, I feel that having learners with disabilities in my class has been an enriching experience for my self and for other learners in the class and I think it has made the class complete, more caring, accepting that some learners are different. Teacher (a)

The teacher indicated that these learners with physical disabilities were normal thinking people and that the disabled learners were just as good as other learners in the classroom. The teacher further said that he looked at the learner as a person and not as an inconvenience in the classroom. One teacher said:

I feel and realize that inside the disabled learner is a normal, thinking being and that they are real people too and I look at a learner as a person, not an inconvenience or a bother. Teacher (a)

A teacher said one should have confidence to teach at an inclusive school. You take the learners as a whole and that makes teaching complete. One should look at the learners with physical disabilities as having the same background as other learners. Further these disabled learners have families too just like other learners. Teacher (h) said:

I think it all begins with confidence. You take them as a whole and that makes teaching complete. When you think of disabled learners, they have a life. You think of the family and where they come from and it is the same like other learners. Teacher (h)

4.4.2 Negative attitudes

A small number of teachers described negative attitudes of having the learner with physical disabilities in the classroom. Some of these attitudes were dependent upon the perceived level and type of disability.

The teacher said that he did not understand why they included learners in wheelchairs and who did not walk on their own in the classrooms. He said such cases were fit to be in segregated schools like Dagama (Special school for SENs). Teachers (g) said:

I don't understand why they included these learners in wheelchairs who can't walk on their own... I think some of these are physical problems and that is why they are in wheelchairs, then that is a big issue. But if they have severe disability then I think they will need to go to Dagama (Special school for SENs).Teacher (g)

4.4.3 Effect of inclusion on teachers' attitudes

Some teachers spoke of positive benefits of inclusion for both teachers and learners. Most teachers had positive feelings of inclusion of learners into their classrooms. Few teachers had negative feelings that these learners had no benefits because of their disabilities. Most teachers expressed excitement that inclusion had played a big role in bridging the gulf between the learners. They said inclusion had enhanced the learners' emotional and social growth and learners were able to socialize with their nondisabled peer learners and become integrated into society. The teachers said it was the learners' right to be at an inclusive school. Some teachers further reported that they got satisfaction teaching at an inclusive school. These were some of the teachers' responses:

I feel it is a good experience for learners to be exposed to others with differences as it widens their opinions and enhances their social and emotional growth by being in an inclusive school as well as broadening their personal experiences. Teacher (h)

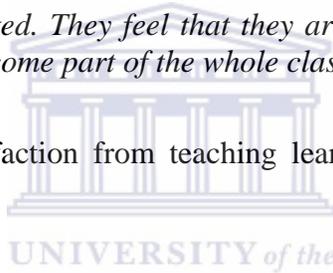
The benefit is to teach a disabled learner and they pass their examination. They enjoy coming to school and it is nice to see a learner finishes school and grows into someone important and goes back to society. I have a learner who is now working as a telephone operator in one of the ministries. Teacher (f)

It is good for these learners because they are able to socialise with nondisabled peers and as a result they mature mentally and socially and overall it is their right to be at an inclusive school. Teacher (b)

The benefit of inclusion is that learners feel they belong to a community school and become part of the class community.

One of the benefits of inclusion is that these learners are mixed with those who are normal, they don't feel neglected. They feel that they are loved, and they are cared for and they have friends. They become part of the whole class community. Teacher (f)

The teacher said he got satisfaction from teaching learners with physical disabilities. Teacher (g) said:



The most important thing is the satisfaction we get from teaching the learners with physical disabilities. Teacher (g)

The teachers explained that there were benefits to inclusive education but it depended upon how severe the disability was on the learner. The milder the disability the more benefit of interacting with other learners. Teacher (b) said:

It is quite difficult to say there are immediate benefits for the learners with physical disabilities. Some learners are severe and some are mild. Depending on the level of disability, you will find that those who are mild, you are able to say, I have done this for the learner and the learner has indicated to interact with other learners. But for severe ones it is difficult. Teacher (b)

4.5 SUPPORT FOR TEACHERS

The need for additional training and concern about their personal professional experience was a theme expressed by some teachers. There was some agreement amongst teachers

especially those who had only the initial training from college. Some teachers said they had not received training in special education needs (including physical disabilities) and that the initial training was insufficient as it did not include special education needs.

4.5.1 Training and knowledge

The teachers said before including learners in ordinary classrooms the school system should first look at whether the teaching staff are trained. When there are learners included in classrooms, authorities always look at a teacher in that class as the one who is responsible for learners forgetting that the issue belongs to everybody in the school system. Teachers and non teaching staff need to be trained to accommodate the learners. Teacher (e) said:

If we are thinking of inclusion of learners with disabilities in the classrooms we should look at staff training issues. When there is inclusion into a particular class, we automatically think that it is the responsibility of that class teacher, whereas the issue is a multi-dimensional matter. Teaching and non-teaching staff would need to be trained to prepare them for inclusion. Teacher (e)

Teachers not trained in special education expressed their concern saying that their initial training at the college was minimal because it did not include detailed curricula on disability. The teachers said further that they could not expand on their basic teacher training as to meet the needs of learners in the classroom.

It is quite difficult to expand on the initial basics. It will be better for somebody to go back for further in- service training or to attend workshops because most of the things are missing. Teacher (d)

Most teachers went on to acknowledge that the initial training was not very informative in relation to physical disabilities and that's why they were finding it difficult to support the learners. Teacher (h) said:

I have not really taken up may be a formal type of training to handle these learners with physical disabilities, it is difficult without skills; some body has to teach us. Teacher (h)

The teachers with initial training from college and those trained in special education said they needed more workshops and seminars because seminars and workshops helped them to acquire knowledge, skills and remove some of the negative attitudes they had towards learners with physical disabilities and that their attitudes were slowly changing from negative to positive because of the acquired knowledge and skills from workshops. The importance of workshops was stressed in that they were necessary to update their handling skills of learners and that priority should be given to the right people to teach them. Two teachers said:

We need more workshops to help us update our handling skills. Because of the sensitizations at the work shops negative attitudes are slowly changing from negative to positive. Teacher (a)

In-service training, workshops and seminars are of great importance especially on the skills building in supporting learners in the classrooms. We would welcome people to teach us the skills and we need the right people to teach us. Teacher (f)

4.5.2 Physiotherapy Support

Although few teachers said they did not need the physiotherapy support as they had special education teachers to help them, many teachers said they wanted support from physiotherapists to support them in inclusive education.

The teachers specifically wanted the physiotherapists to help learners with specific skills such as head and trunk control, positioning and skill building to teachers. Teacher (b) said:

We need physiotherapists to help learners who are physically disabled in terms of learner's skills such as head and trunk control, positioning and us teachers in skill building. Teacher (b)

Teachers suggested that physiotherapists could play an important role in developing inclusive schools.

Physiotherapists are vital now as the schools are inclusive and we would welcome them if they came to our aid. Teacher (g)

The teachers said they would welcome the physiotherapists in inclusive education not only to support teachers and learners with physical disabilities but also for all learners in the schools system. They said most of the grade ones lacked fine motor skills and would benefit from physiotherapy support for building fine motor skills

We would like the physiotherapist to be available not only to give support to teachers and learners with disabilities but all learners especially learners in grade ones who sometimes fail to hold pencils because their fine motor skills are not fully developed. Teacher (d)

4.5.3 Support from other teachers

The teachers said they had teacher groups within the schools which met once a week to discuss problems concerning the support for learners. These teachers' groups had helped them acquire skills necessary to support their learners and that they had benefited from these teacher groups. They further went on to say that teachers trained in special education played an important role in solving some of their problems concerning support for learners in the classrooms. Teachers (f) and (e) said:

We do have some teacher groups within the school and we meet once a week to discuss our problems, so from these groups we get to learn some of the skills required to support learners. So if you have a problem with the learner it will be solved and that has helped us. From these meetings we learn some skills of how to support our learners in our classrooms. Teacher (f)

We have teachers who have skills and in a position to support the learners, like teachers trained in special education. They help us. We help each other, once you make a mistake they correct you and the following day you won't be the same again. Teacher (e)

4.5.4 Government support

The teachers strongly appealed to the Zambian government to help the physically disabled learners in inclusive education. The teachers felt there was an important role for physiotherapists in the school systems in inclusive education. They said the physiotherapists could assist teachers in skill building and skills for learners, so that the teachers will be able to effectively accommodate their learners with physical disabilities in the classroom. Teacher (b) said:

My appeal is to ask the Zambian government to make it law, that professionals such as physiotherapists work with teachers in inclusive education. Physiotherapists could assist the teachers with skill building as well as skills for learners with physical disabilities in the classroom, so that the teachers could effectively accommodate learners in their classrooms. But like it is at the moment...you will find that it is the last thing to be recognized...and if the government does not recognise it is quite difficult for people at the grass root to appreciate the efforts made by the authorities' concerned. Teacher (b)

4.6 SUMMARY

In this chapter the findings are presented in three themes and sub- themes that emerged from the study. The teachers' views are presented through the use of descriptive statements illustrated by selected verbatim quotations from the transcripts of the interviews to emphasise the themes. The needs of the teachers, their attitudes towards having learners with physical disabilities in the classroom and the support needed by teachers are presented. The researcher's findings indicate teachers need to acquire practical handling skills and medical knowledge from physiotherapists in order to facilitate learners with physical disabilities in inclusive classrooms. Most teachers have indicated positive attitudes to learners with physical disabilities while included in their classrooms. The main findings drawn from the study are discussed in relation to the appropriate literature in the next chapter.



CHAPTER FIVE

DISCUSSION

5.1 INTRODUCTION

The purpose of the study was to identify the physiotherapy support needed for teachers to facilitate the inclusion of learners with physical disabilities in ordinary schools and to determine teachers' attitudes to inclusion of learners with physical disabilities in the classrooms in selected schools in Zambia. It is important to note that, due to the focus of these specific teachers and to the qualitative research methodology, the findings presented here cannot be generalized to other groups of teachers. Major findings in the study are summarized and discussed in relation to the appropriate literature in the area.

5.2 GENERAL FINDINGS RELATED TO DEMOGRAPHIC FACTORS

There were eight teachers in the study. This study found that the mean age of teachers was thirty eight years. There were more female teachers who participated in the study than male teachers and there were three teachers trained in special education and five were not trained in special education. This has some implications as female teachers were found to be more supportive of inclusion of learners than male teachers and special education teachers respond more positively to increased inclusion because of the knowledge acquired during training as special education teachers. This finding is in agreement with the studies which were done by Whinnery, Fuchs and Fuchs (1991) and Curtis (1985) which found that female teachers were more supportive of inclusion than male teachers and special education teachers were more supportive to increased mainstreaming than ordinary teachers.

5.3 PHYSIOTHERAPISTS' ROLES IN INCLUSIVE EDUCATION

Physiotherapy support to inclusive education is vital if inclusion of learners with physical disabilities is to be successful in Zambia. The physiotherapy support to inclusive schools

in Zambia will create potential for mutual learning. It will foster a holistic approach and will promote and facilitate understanding in inclusive education. The multi-disciplinary approach as suggested by Mackey and McQueen (1998) is vital but in Zambia, as there are no occupational therapists and no speech therapists for the time being it is not applicable.

The majority of teachers interviewed in the study on the role of the physiotherapists, felt that physiotherapists have a vital role to play in facilitating the inclusion of learners with physical disabilities in inclusive education. The teachers in the study expressed and admitted their inadequacies having learners with physical disabilities in their classrooms. They explained the difficulties they were going through and how they require assistance from the physiotherapists as a support service in the school systems. In segregated or special schools physiotherapists are part and parcel of rendering services to the learners (Jackling and Lacy, 1991). Similarly physiotherapists have the responsibility to ensure that the physically disabled learners and the teachers are capable of coping in an inclusive education environment. To ensure this the physiotherapists have the duty to impart knowledge and practical skills to the teachers as stated by Gregory, Fairgive, Anderson and Hammond (1992). Bower and Mclellan (1992) indicate that certain functional activities such as; positioning of learners with physical disabilities in wheelchairs and finger hand function could be maintained by regular activities by physiotherapists. This confirms the importance of involving physiotherapists in imparting practical skills and knowledge to the teachers and learners with physical disabilities. This will help the learners advance both physically and mentally in school.

Some of the problems experienced by the teachers could be alleviated by ensuring that teachers are skilled in the management of learners with physical disabilities in their classes. Teachers specifically identified skills which they considered most important in the classrooms such as the ability to correct posture; the ability to develop finger and hand function; the ability to position learners correctly in their wheelchairs. This suggests that physiotherapists have an important role to play in practical skill building for teachers to enable them accommodate their learners with physical disabilities effectively in their

classrooms. These basic skills requested by the teachers could be acquired if physiotherapists are part of the school system in inclusive education in selected schools in Zambia. Yasumura and Goodman (1992) stated that experts in the management of disabled learners should provide appropriate support for training individuals like teachers in inclusive education. The results in this research demonstrate that teachers are willing to get support from physiotherapists through workshops, seminars for their practical skill building and medical knowledge. There were many positive responses to the concept of having physiotherapy support from the teachers. Most of them indicated that it was important to have physiotherapists in the school system and that they would welcome the physiotherapists to support teachers as they supported their learners in the classrooms. These findings are similar to other studies conducted by researchers where teachers recommended physiotherapists as ideal professionals to assist teachers in the school system as they carried on their work in the classrooms with learners with physical disabilities (Mackey and MacQueen, 1998).

Mackey and McQueen (1998) suggest that physiotherapists are ideal professionals to be involved in the preparation of teachers in inclusive education. These physiotherapists have an important role to play in supporting schools to promote an inclusive healthy environment. They enable learners to function in school. Physiotherapists assist learners with assuming their role as learners, performing self-care tasks, improving posture and mobility (Bundy, Niehues, Mattingly and Lawler, 1991). Further, because of their unique training, physiotherapists assist other educational team members to understand learners with special needs develop effective strategies for interacting with learners and develop skills necessary for managing learners' specialized physical needs (Bundy, Niehues, Mattingly and Lawler, 1991). Mackey and McQueen (1998) recommend that physiotherapists work with the teachers and the learners in the classroom while they undertake their education, rather than taking learners out of the classroom for therapy. This approach reduces interruption to lessons and is favoured by the school staff as it helps academic work and improves understanding of the physiotherapist's role.

The teachers in this study suggested that increased co-operation between teachers in inclusive schools and the physiotherapists could enhance the required support. It could be improved via the promotion of in-service training as indicated by Sandler (1997). In inclusive education teachers are key agents in the improvement of education, which requires ongoing changes in their roles and responsibilities. The present study was conducted to identify the practical handling skills such as: develop finger hand function, ability to position learners, posture in sitting and medical knowledge on learners with physical disabilities that teachers need to facilitate their work as they handle and include learners with physical disabilities in their classrooms.

The practical handling skills and medical knowledge needed by the teachers could be used as a basis for developing training programmes for teachers in inclusive education settings in Zambia. In addition these skill areas could be used as criteria for assessing the work of teachers who will be working with professionals such as physiotherapists in the school systems. This study indicates that teachers are wanting to get physiotherapy support and become actively involved in supporting the learners with physical disabilities to ensure they are included in inclusive education.

5.4 TEACHERS' TRAINING NEEDS

The need for teacher training on health matters has been widely recommended in the past (Hill, 1987; Clunies-Ross, 1984). Hill suggested that the health professionals such as physiotherapists could play a vital role in teacher training. As indicated in the study the majority of the teachers had received no training regarding managing learners with physical disabilities. They indicate the need for additional training and concern about their personal professional experience. This is similar to the findings of Danks (1990) who reported that 89% of teachers lacked training in practical skills concerning learners with special education needs. There was agreement about this amongst some teachers especially those who had only the initial training from college. The teachers indicated that they did not feel prepared to accommodate learners in the classroom because of insufficient knowledge and practical skills. Linked to the teachers' lack of training is their

lack of knowledge about learners with physical disabilities. In this study the teachers expressed their lack of knowledge resulting in frustration to their work. Williams and Downing (1998) report that teachers are vital figures in class membership. This shows that teacher education is vital if inclusive education is to be successful. The physiotherapists, the experts in physical problems experienced by learners with physical disabilities can be key support to teachers.

Some teachers said they had not received training in special education needs including physical disabilities. The following studies present similar findings of teachers who were involved in teaching learners with physical disabilities. In the studies conducted by Schuum, Vaughn and Gordon and Rothlem (1994) findings indicate that teachers do not feel prepared to teach learners who have special needs, they lack the necessary skills and they were not well prepared for the inclusion of learners in their classrooms because of insufficient training. Similar studies by Goodman and Yasumura (1992) concluded that teachers experienced difficulties working with learners with physical disabilities for the first time because their teacher training programmes focused largely on improving academic performance and never included conditions on physical disabilities in their training programmes. However, Ainscow (1999) suggests that work experience may well be an important part of training and that it is easier to identify training needs and to tailor these to personal circumstances once the process of inclusion has begun.

Lectures and workshops for teachers teaching learners with physical disabilities in the classrooms could include practical basic skills taught by the physiotherapists. But in the present study teachers reported that they learnt some skills from workshops and seminars held within the schools which were conducted by special education teachers and other experienced teachers and that helped the teachers acquire some practical handling skills. This finding is in line with Lipsky and Gartner (1996) findings which state that the most successful training is likely to occur in school teams who have had some experience of working with learners with SENs and who can thereby focus upon these learners when undertaking training. Since there is no educational support that can work without the full participation of teachers in-service and pre- service training is of great importance so as

to address the diverse needs of learners. Meijer, Piljl and Hergaty (1994:132) recommend in this regard that: “those teachers who have been in in-service for many years and who are experienced are able to make decisions on academic organizations of any school. Any move away from special schooling towards inclusion, will lead to training gap. In-service training must fill the gap.” Hegaty (1993:152-170) highlights the importance and necessity of teachers’ skills and training in order for teachers to adapt their teaching styles in relation to the learners needs.

Teacher development involving in-service and pre- service programmes are necessary in inclusive schools in Zambia. This could be achieved by sensitising physiotherapists in Zambia to take up this challenge to support teachers in inclusive schools in Zambia. Teachers in schools, policy making departments and training institutions should take up the challenge or else no progress will be made. It is of utmost importance that teachers are able to participate fully in deciding the content of the training and develop ownership of their professional training. Lastly, training and preparation for teachers are important pre-requisites of promoting positive attitudes and increasing understanding of including learners with physical disabilities in the classroom (Bennett, Deluca and Bruns, 1997).

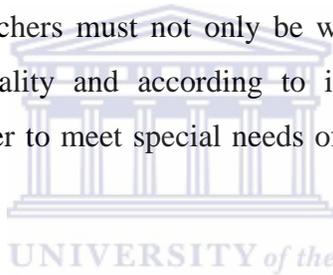
5.5 TEACHERS’ ATTITUDES

5.5.1 Positive attitudes

Inclusion has become a critical part of the reform effort to improve the delivery of services to learners with disabilities by focusing on the placement of these learners in ordinary classes. The literature on inclusion has identified a number of roles and responsibilities for teachers that are necessary to create and sustain successful inclusion settings. However, the degree to which teachers support change efforts is often determined by the attitudes and values they hold. Therefore, if inclusion is to be a feasible alternative to more segregated placements, its success will depend heavily upon the readiness and willingness of teachers to make decisions that will provide appropriate opportunities for learners with special needs to remain in ordinary schools (Ayres and Meyer, 1992).

This study was conducted to improve our understanding of teachers' attitudes toward inclusion, and their potential impact upon the placement of learners with physical disabilities. The findings demonstrate the importance of teachers' attitudes in the inclusion of learners with physical disabilities. Hence, findings from this study reveal that most of teachers have positive attitudes towards having learners with physical disabilities in their classrooms (Ayres and Meyer, 1992).

Most teachers in the present study displayed positive attitudes towards the inclusion of learners with physical disabilities in the classroom. Despite the fact that the teachers in ordinary schools have shown positive attitudes towards having learners with physical disabilities in ordinary schools, they contend that they cannot meet the needs of these learners. Meijer, Monahan, Sheiba and Mitler (2000:132-134) state "Positive and willing teachers are not enough." Teachers must not only be willing but must also be able to deliver education of high quality and according to individual needs. Uplifting the competence of teachers in order to meet special needs of learners in ordinary schools is in-service training.



In the present study most of the teachers indicate that they had been exposed to attending workshops as a form of sensitization process for teachers in inclusive education. Other teachers in the study were teachers who had been trained in special education and were exposed to teaching learners with physical disabilities in special units and were always in close contact with the learners. Therefore, special education teachers and ordinary teachers had some experience of courses that slowly changed their attitudes from negative to more positive attitudes towards inclusion of learners with physical disabilities. These finding agree with the study which was conducted by Shade and Stewart (2001) found that a single course of training could significantly change teachers' attitudes toward the inclusion of learners with mild disabilities in the classroom from negative to positive. Similarly De Le Roy and Simpson (1996) indicate that as experience of teachers with learners with SEN increases, their attitudes change in a positive direction. Another study is in agreement with this finding, states that the most positive attitudes toward inclusion can be found in teachers who have received the most intense

training for working with learners with disabilities (Jobe, Rust and Brissie, 1996). Shimman (1990) stresses the importance of increased experience and social contact with learners with SEN and class management, in the formation of favorable attitudes towards inclusion.

5.3.2 Negative attitudes

According to the results from this study, a relative small number of teachers displayed negative attitudes towards having learners in their classrooms. Their negative attitudes were mostly based on the nature of disability in particular to learners in wheelchairs or learners with severe physical disabilities. However, some comments indicate that teachers do not understand how to address the exceptional needs of some learners included into their classroom and confidence is lacking to accommodate learners into their classrooms. This finding is similar to most of the studies in the area. The professional background of some teachers in this study indicates they had only their initial training and had little knowledge about the conditions regarding disability of learners. Bochner, Ward and Center (1994) state that teachers' attitudes towards inclusion are strongly influenced by the nature of the disabilities and/or educational problems being presented and to a lesser extent, by the professional background of the teachers. Studies have also shown that attitudes and confidence of teachers vary significantly according to the type and severity of learners' disability, with severe physical disabilities and behaviourally disordered learners commonly regarded as the most problematic and a potential source of teacher stress (Forlin, 1995; Avramidis, Bayliss and Burden, 2000; Westwood and Graham, 2000). Teachers appear to be more willing to include learners with mild disabilities, rather than those with more severe disabilities (Forlin, 1995).

5.5.3 Effect of inclusion as a result of teachers' attitudes

Generally most teachers spoke of positive benefits of inclusion for learners. Some teachers spoke the value of learners being exposed to others with differences as it widens their opinions and enhances their social and emotional growth, skill acquisition by being

in an inclusive school. The teachers' further spoke of learners broadening their personal experiences by socialising with nondisabled peers and enabled learners to be integrated back into society. Other teachers expressed excitement that learners had the right to be in inclusive education, and that inclusion promoted and formed a good class community where disabled learners felt loved and cared for. This is in line with the inclusive education literature where numerous benefits for learners with mild and severe disabilities have been reported.

These findings are supported by other studies. Giangreco (1994) reported increased awareness and responsiveness and skill acquisition for learners with severe disabilities. Similarly Lipsky and Gartner (1997) and York, Vandercook, Macdonald, Heise-Neff and Caughley (1992) report that learners with severe disabilities were more visible in the school community and experienced growth as a result of inclusion. Inclusion improves the social development of learners with and without disabilities who are educated in inclusive classrooms, in terms of getting along with others, interacting, seeking assistance and lending assistance, moving from one context to another and asking questions. The teachers observed that learners with physical disabilities mixed freely with their non disabled peers as a result of inclusion. Hunt, Farron- Davies, Beckstead and Goetz (1994) reported learners with special education needs in ordinary classrooms were engaged in activities more often and made more social initiations to classmates. The teachers also indicated that it was the learners right to be at an inclusive school mixing with their nondisabled learners. This is supported by the White Paper of Education and Training (1995) which refers to inclusion as a "human right." It states the principle of inclusion within education operates within a framework of human rights approach, which emphasises that all learners have access to education. UNESCO (2002) further acknowledges that education be accessible to all learners and should be considered to be their right and that they be given the opportunity to participate in education programmes.

Some teachers thought inclusion was only suitable for learners with mild disabilities and that the learners with severe disabilities should be in segregated schools. This finding is similar to the study conducted by Schumm, Vaughn, Jallard, Slusher and Samuel (1996)

which examined ordinary and special teachers' attitudes on inclusion of learners in ordinary schools, the majority of these teachers had strong negative feelings about inclusion and felt that decision-makers were out of touch with classroom realities. However, in a more recent study by Hastings and Oakford (2003) it was found that teachers expressed more negative attitudes toward the inclusion of learners with physical disabilities than those with emotional problems and behavioral problems.

5.6 SUMMARY

This study has identified that there is a need for physiotherapy support to teachers in inclusive schools in Zambia. Whilst the teachers' opinions were based upon limited experience of inclusive education, it is clear that learners with special education needs (SENs) are seen as presenting a major challenge.



CHAPTER SIX

CONCLUSION, SUMMARY AND RECOMMENDATIONS

6.1 INTRODUCTION

In this chapter a brief conclusion, summary and the limitation of the study are presented and recommendations arising from the study are proposed.

6.2 CONCLUSION AND SUMMARY

This study aimed to identify the physiotherapy support needed for teachers to facilitate the inclusion of learners with physical disabilities in ordinary schools. The study identified teachers' needs and determined teachers' attitudes to having learners with physical disabilities in the classroom. The study was carried out with the expectation that there was a need for physiotherapy support to teachers for the inclusion of learners with physical disabilities in inclusive education in Zambia. According to literature on inclusive education in Zambia such a support was absent; hence the need to identify the support required was vital. Prior to this study the issue of teachers' support from physiotherapists had not been explored in Zambia since the introduction of inclusive education. In other parts of the world, teachers' support in the classroom has been widely explored. Most of the research studies in this area have indicated and recommended the physiotherapy support to teachers as a valuable support for teachers. As indicated from the results in the study most teachers wanted the physiotherapy support to become part of the education policy in the school system to hasten and facilitate the inclusion of learners with physical disabilities in inclusive education. It is evident that the provision of physiotherapy support in terms of practical handling skills and medical knowledge to teachers will go a long way in assisting teachers to support their learners with physical disabilities in the classrooms as well as in inclusive education in selected inclusive schools in Zambia.

Provision of support services to teachers in inclusive education should be the subject of joint action between The Ministry of Education and The Ministry of Health in Zambia. Such co-operation between these government departments is vital to enhance co-operation and co-ordination of service delivery especially for the success of inclusive education in Zambia. The two ministries should establish a more constructive, dynamic policy on support for inclusion of learners with Special Education Needs through incorporating health professionals such as physiotherapists in inclusive education.

The benefit of and necessity for providing physiotherapy support to teachers involved in inclusive education with the inclusion of learners with physical disabilities are evident. The inadequacy of training received by teachers is a travesty of the concept of inclusion. Physiotherapists could become important figures in the effective training of teachers with the specific aim of improving their ability to manage learners with physical disabilities in the classrooms. More extensive research is recommended to investigate the issue of inclusion of learners with physical disabilities and to how best the teachers and the physiotherapists can develop a support service to benefit both the teachers and the learners with physical disabilities in selected inclusive schools in Zambia.

6.3 LIMITATION OF THE STUDY

This study was a qualitative study with a sample of eight teachers who took part in in-depth face to face interviews. Therefore the findings of this study cannot be generalized to all teachers in inclusive education in selected inclusive schools in Zambia

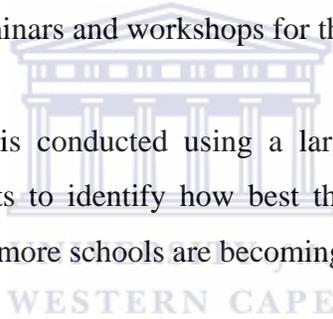
6.4 RECOMMENDATIONS

Based on the findings on this study it has been found that there is a great need to recommend strongly the following:

- That the Ministry of Education to liaise with the Ministry of Health and together formulate a policy for the two Ministries to provide services of physiotherapists

and other health professionals in inclusive education so that the teachers receive the support they are needing in the classrooms.

- That the Ministry of Education, whenever they are running workshops or seminars for teachers working in inclusive education, to consider inviting the physiotherapists to impart knowledge and teach practical skills to the teachers, such as basic skills for handling learners with physical disabilities.
- That physiotherapists in Zambia are informed of their potential and important role in supporting the teachers in imparting knowledge and practical basic skills in selected inclusive schools in Zambia. These physiotherapists could be informed at the Zambia Society of Physiotherapy Annual General Conferences or whenever there are seminars and workshops for them.
- That further research is conducted using a larger sample of teachers and to include physiotherapists to identify how best they can deal with the issues of inclusion, as more and more schools are becoming inclusive in Zambia.



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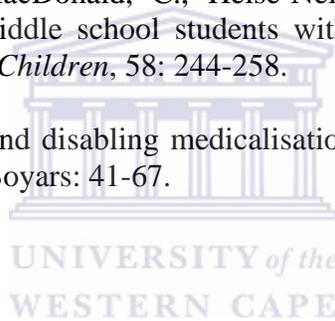
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Consent Form

APPENDIX B

I,agree to participate in this study exploring the role of physiotherapy as a support service to teachers in inclusive education with the inclusion of learners with physical disabilities in selected schools in Zambia. I have received the letter of information about the study, and the nature of the study has been explained to me and questions answered to my specification and understanding.

.....
Date

.....
Signature

.....
Witness



Letter of information

APPENDIX C

Dear respondent,

I am a postgraduate student doing a masters degree in the Department of Physiotherapy at the University of Western Cape. As part of the requirements of the masters of Science degree in physiotherapy, I am required to conduct a research study. The title of my research is: “The need for physiotherapy support for teachers in inclusive education with the inclusion of learners with physical disabilities in selected schools in Zambia.” The information gathered from the study will be used to formulate a policy where the Ministry of Education and The Ministry of Health will incorporate a deliberate policy of including physiotherapists in schools with inclusive education.

If you would like to take part in the study, I will liaise with you for the appropriate time for the collection of the relevant information. The study will involve face-to face interview. The face- to face interview will last approximately one hour and it will be conducted by the researcher and the research assistant and will be audio taped. The information given to me will be treated with total and strictly confidential. Your participation in the study is voluntary, if you agree to participate and you may withdraw your consent and discontinue your participation at any time. You will not be forced to answers questions that will make you uncomfortable. The researcher will be available for any queries that you may like to ask.

All research tools or information such as tapes, transcripts will be locked in a safe place to ensure and to protect your confidentiality. You are informed that your identity will be kept confidential should the study be presented or published.

Should you have any queries or questions before and after the study you can contact Sally Kashimba at cell 097 803200 (Zambia) or +27 076 499 4969 (South Africa).

I. Demographic Information

1. Age and sex of the teacher
2. Marital status of the teacher
3. Education Qualification of the teacher
4. Profession qualification of the teacher
5. How long have you been working in inclusive education?
6. Are you trained in Special Education Needs or not?

II. Teachers Knowledge

1. What type of knowledge do you have or know concerning learners with physical disabilities.

III. Teachers Skills

1. Tell me about your experience as a teacher working in inclusive schools?
2. Have you ever taught learners with physical disabilities in your classroom? If Yes...
3. What are your skills and how do you support your learners with physical disabilities?
4. What are their needs?
5. What type of skills do you have or know concerning these learners with physical disabilities?
6. What type of skills do you need to know with the inclusion of learners with physical disabilities in the classroom?
7. What type of physical problems do your learners with physical disabilities have?

IV. Teachers Training

1. What type of initial training do you have and does it include training in Special Needs Education especially with the inclusion of learners with physical disabilities?
2. What type of training do you receive in teaching learners with physical disabilities?
3. Are you trained in Special Education Needs or not?
4. Are workshops and seminars conducted for teachers in inclusive education? If yes...
5. Who conducts these workshops or seminars?

V. Physiotherapy support

1. What do you understand by the word physiotherapy or physiotherapist?

2. Are physiotherapists easily accessible at your school?
5. Do you think physiotherapy could help in your work?
3. What type of support would you like to get from physiotherapists?

VI. Teachers Attitudes

1. What does it mean to be at an inclusive school like this one?
2. What are your feelings towards learners with physical disabilities who are included in your classroom?
3. Are you concerned about teaching learners with physical disabilities?
4. How do you feel to have learners with physical disabilities in your class?
5. Describe how you view the inclusion of learners with physical disabilities in ordinary classrooms?
6. What is your opinion about having learners with physical disabilities in your class room?
7. How do you feel about teaching learners with physical disabilities? Probe, if yes, why? What are the concerns?
8. How do you suggest having your concerns addressed?
9. Do you think learners are entitled to the same care/ rights as any other students without physical disabilities?
10. Why do you say so?
11. What should be done to teachers that refuse to teach learners with physical disabilities/
12. Are there any changes you would like to see to improve the care of learners with physical disabilities?
13. What are the benefits of including learners with physical disabilities in ordinary classrooms?