INVESTIGATING TEACHING STRATEGIES THAT ENSURE THE INCLUSIVITY OF LEARNERS WITH PHYSICAL AND/OR MENTAL IMPAIRMENTS IN LESOTHO

by

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DECLARATION

I, Maphaphi Clement Mateusi declare that;

'INVESTIGATING TEACHING STRATEGIES THAT ENSURE INCLUSIVITY OF LEARNERS WITH PHYSICAL AND MENTAL IMPAIRMENTS IN A MAIN STREAM CLASSROOM IN LESOTHO'

is my own work and that all the resources quoted or used have been indicated and acknowledged by means of complete references and that this dissertation has not been previously submitted by me for a degree at the University.

M.C. MATEUSI	**DATE**

DEDICATION

To my son Neo, and my wife ‘Maneo I value your continued support and I am grateful to have you in my life.

To my parents, brothers and sisters, I thank you all for your consistent support.

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ABSTRACT

The purpose of this study is to investigate teaching strategies that ensure the inclusivity of learners with physical and/or mental impairments in the mainstream schools in Lesotho. The intention being to equip educators with strategies that can be employed in order to address this didactical challenge at mainstream schools. The inclusion of impaired learners can be achieved only if teachers understand the purpose of inclusive education as defined by Van Rooyen and De Beer (2006) that inclusive education is an education system that ensures that all children learn and participate regardless of their disabilities.

The study followed a mixed method approach, in the form of a survey, that is semi-structured questionnaire for teacher respondents while an observation coupled with informal discussion was utilized for the learner respondents. Population and sampling consisted of 211 teachers randomly drawn from 23 primary schools found in Berea and Maseru districts of Lesotho. The completed questionnaires were collected and analysed. The study found that there are challenges experienced by physically and/or mentally impaired learners with their teachers and peers. According to the findings of the research, Lesotho teachers in mainstream classes do not have enough training to work with impaired learners.

Given this situation, it is not only recommended that the current group of teachers are re-skilled and re-trained through short courses and workshops, but also that teacher training colleges and university in Lesotho are encouraged to constantly review and update their programmes so that they are responsive to the professional needs of educators. Appropriate inclusive teaching strategies are also recommended to assist in addressing this challenge. Educators should be sufficiently supported by the para-professionals in order to make inclusive education successful. Government experts should work collaboratively with the Lesotho College of Education and the National University of Lesotho with regard to the attainment of these skills and competencies, in order to improve the work of the educators at schools. At school level, special educators should be hired in order to identify learners with impairments.

Definitions of operational concepts

- **Mainstream**

According to the White Paper 6 (2001:17) mainstream education is about 'fitting' learners into a particular kind of system. It is about giving learners extra support so that they can 'fit' into the 'normal' classroom routine. Mainstream education focuses on changes that need to take place in learners so that they can 'fit' in.

- **Physical impairment**

According to Meyen (1996:540-542), impairment refers to the loss of psychological, physiological and anatomical function.

- **Special education**

It is the education which is designed for children with special educational needs. They are those whose behaviour cannot be accommodated in normal schools and who have physical and sensory impairment (Hallan, 1996:546).

- **Inclusive Education**

It is about acknowledging that all children and youth can learn and that they require support. It emphasises accepting and respecting the fact that all learners have different learning needs which should be equally valued. It is about empowering the learners by developing their individual strengths and enabling them to participate critically in the process of learning (White Paper 6, 2001:16).

- **Mental impairments**

According to England and Wales Mental Health Act (2010) mental impairments is a generalised disorder, characterised by significantly impaired cognitive functioning and deficits in two or more adaptive behaviours that appears before adulthood. It is historically been defined as an intelligence Quotient score below 70.

- **Physical impairment**

The Department of Education and Training defines physical impairment as a dysfunction of the musculoskeletal or neurological body systems, which affects the functional ability of a student to move or coordinate movement.

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CHAPTER 1
ORIENTATION TO THE STUDY

1.1 INTRODUCTION

According to Engelbrecht, Kriegler and Booysen (1996:36) general teacher-oriented training should enable all teachers to recognise children's special needs, to practise preventive teaching and to collaborate with specialists in carrying out remedial and corrective instructions. In the past, learners with physical disabilities were excluded and rejected by their community but the White Paper 6 (2001:17) reinforces the inclusion in which all learners should be supported so that the full range of learning can be achieved.

The most powerful thing teachers can do is to shift away from the medical model of teaching to the social model. In medical model teaching, learners' problems were not considered by anybody, but in the social model, learners' problems are considered holistically by all stakeholders. Everybody is responsible for the problem of the learners. In the social model, the belief is that each learner is different and should be approached differently.

One of the biggest challenges facing education of Lesotho is the need to accommodate physically and mentally impaired learners in the mainstream classroom. According to the White Paper 6 (2001:17) all learners should be given extra support so that they can 'fit in' or become integrated into the normal classroom routine. The new legislation on special education needs, the Disability Act and the policy document Republic of South Africa Department of Education (RSA DoE, 2001) on special education needs support, have been passed by parliament and the Department of Education respectively. This strengthens the right of learners with special education needs to attend or be accommodated in

mainstream classes. The legislation stipulates that mainstream schools should support all learners regardless of their physical impairments.

The education White Paper 6 (2001:16) states that every disabled child has the right to education and training. Every child has the right to enjoy a full service of education and maintain a high level of self-independence and social participation. The right to education is a basic need for every child. Unfortunately, uncountable thousands of children are not given this right. Physically impaired learners face challenges such as oppression, exclusion and marginalisation and they are seen only as objects of pity and their voices not heard.

There are not enough support services for learners with physical impairments National Education Policy Investigation (NEPI report, 1992:6). Hay (2003:135) states that education support service professionals are battling to come up with the relevant transformation and they have also not made the transition to support learners with impairment. Hay (2003) further indicates that educational support services should change its philosophy, as well as its service delivery in order to cater for the inclusion of physically and/or mentally impaired learners.

South African policy reveals that inclusive education and training are about maximising the participation of all learners in the curriculum of education institutions and uncovering and minimising the barriers to learning (White paper 6, 2001:16).

Learners with physical and/or mental impairments are very often faced with unique challenges that go beyond the control of an ordinary teacher. It is necessary to address appropriate ways or strategies for these learners with physical disabilities and mental impairments in education settings. This is why Engelbrecht and Green (2001:134-135) maintain that it is important to explore the various teaching strategies which can be useful to accommodate learners with physical and mental impairments.

1.2 PROBLEM STATEMENT

Lesotho is one of the developing countries in which learners with physical and mental impairments are not given special attention, yet it is stated that “education should be for all” and education should be accessible and made available to every child. It is also documented that Ministry of Education should aspire for an inclusive education that caters for the needs of all learners irrespective of their physical and mental impairments (UNICEF National Report Lesotho, 2010). According to the Special Education Report (2007:2) there are only 19 mainstreams schools in Maseru district and 10 schools in Berea district which have been identified as having learners with both physical and mental impairments. These schools are located only in the central regions of these two districts. This report indicates that most of the learners with physical and mental impairments have not yet been identified in the outskirts of these districts. This is because there are more than 500 schools in these districts and it is not only these schools that have impaired learners.

Thus, this situation is not in line with the education White Paper 6 (2001:16) which states that all learners should be supported and receive quality education.

This indicates that the medical model is still practised and exists in which impaired learners are not supported by the whole community, are not identified and as a result, their needs are not met. Learners are still marginalised; they are seen and not heard. It is true that the Department of Education has tried to shift away from the medical model to the social model in which impaired learners are supported by the community and the government (UNICEF National Report Lesotho, 2010). This fact is not fulfilled because learners who are identified do not get support from professionals such as occupational therapists, physiotherapists and educational nurses. This issue is supported by the Special Educational Report (2007:2) that there are constraints with regard to the visitation of schools with impaired learners by educational professionals.

The above issues are supported by Ntaote (2003:1) where he contends that preliminary investigations reveal that there are many learners with physical and mental impairments in the primary schools of Berea District of Lesotho. These include neurological conditions and general health conditions. Ntaote (2003) further emphasises that there is no evidence of a minimal systematic investigation into what the educational implications of such disabilities are in the primary schools in Berea District of Lesotho. Therefore, the researcher decided to explore this issue further, hoping to determine the actual hindrances to the effective accommodation /or inclusion of learners with physical and mental impairments in the classroom.

1.3 AIM AND OBJECTIVES OF THE STUDY

1.3.1 The aim of the study

The primary purpose of the study is to investigate and explore teaching strategies that can accommodate learners with both physical and mental impairments in selected primary schools of Berea District in Lesotho. In order to fulfil this aim, the following specific objectives have been formulated:

1.3.2 Specific objectives

- To investigate the difficulties facing the pupils with physical and/or mental impairments in Berea and Maseru districts of Lesotho.
- To highlight some of the difficulties confronting teachers teaching both able and disabled (that is, physically and/or mentally) learners in Lesotho.
- To identify strategies teachers can employ in order to accommodate physically/or mentally impaired learners.

1.4 HYPOTHESES

The following hypotheses will be used to achieve the aim of the study:

Hypothesis 1

There are challenges/difficulties faced by physically and/or mentally impaired learners within the teaching and learning milieu in the Berea and Maseru Districts of Lesotho.

Hypothesis 2

Most teachers in a normal classroom are not able to deal effectively with learners with either physical and/or mental impairments.

Hypothesis 3

There are various teaching strategies which can be used to accommodate learners with physical and/or mental impairments.

1.5 RESEARCH QUESTIONS

From the above discussion, the following research questions can be derived:

- What are the learning difficulties facing the pupils with physical and/or mental impairments in Berea and Maseru primary schools?
- What are the needs of learners with physical and mental impairments?
- What ways can teachers use to accommodate physically and/or mentally impaired learners?

1.6 RESEARCH METHODOLOGY

According to Opie (2004:16) “methodology refers to the theory of getting knowledge to the consideration of the best way, methods or procedure by which data will provide the evidence basis for the construction of knowledge about whatever it being researched.” The above author further indicates that methodology is concerned with the description of and analysis of research

methods rather than with the actual practical use of these methods. It is the way in which the researcher approaches problems and seeks answers which is critical.

In this study, the researcher will use both quantitative and qualitative methods. This will be in the form of in-depth literature study, as well as informal discussions with learner respondents. The integration of these research methods thus implies triangulation. Triangulation is understood as a means to increase depth and consistency in methodological proceedings so that these methodological approaches will be employed to reduce sound explanation. The limitation and strength of both approaches are highlighted to reduce the risk of systematic distortion inherent in the use of only one method. The combination of both methods may add the breadth and depth to the analysis. (Nkoane, 2006:77).

1.6.1 Qualitative versus Quantitative

1.6.1.1 Qualitative research method

According to Mertens (2010:22) 'qualitative research is a situational activity that locates the observer in the world. In a qualitative study, the researcher has the opportunity to consult literature, in cases where it is not easy to interview the respondents, such as people with physical and mental impairments. In this study, the researcher will consult the relevant literature and also have informal discussion concerning the needs and difficulties confronting these learners.

1.6.1.2 Quantitative research method

Unlike qualitative, quantitative research is a genre which uses of a special language for the ways in which scientists talk about how they investigate the natural order of variables, control, measurements and experiments, for example, quantitative research describes its phenomenon in counts and the measure of things, rather than in words (Berg, 2001:3; Silverman, 2000:4).

To collect quantitative data, the researcher intends to make use of a survey in the form of a semi-structured questionnaire. According to Sullivan (2001:255), a

survey is a data collection technique in which information is gathered. In the case of the qualitative method, where the needs and difficulties confronting these learners are identified, an extensive literature study on the documented materials will be used as the frame of reference and the primary source of data. These data will be supplemented by data collected by the researcher from his informal discussions with some of the learners with either physical or mental difficulties. The researcher conducted the survey among a total of 22 primary schools in the Maseru and Berea districts.

More details concerning qualitative and quantitative methods will follow later in chapter three (3.2.1 and 3.2.2)

1.6.2 Population and sample size

Population refers to the entire set of objects or people which is the focus of the research and about which the researcher wants to determine some characteristics. Population is the group to which the researcher wants to apply the results. It is the abstract idea of a large group of many cases from which a researcher draws a sample and to which results from the sample are generated (Bless and Higson-Smith, 2000:85; Neuman, 2006:224; Pali, 2006:62).

The target population sample for this study consisted of 411 randomly selected primary school teachers from the Berea and Maseru Districts of Lesotho. The researcher also had an informal discussion with 10 identified learners who either had physical and/or mental impairments. Some of these learners are well known to the researcher. Neuman (2006:219) defines a sample as a small set of cases a researcher selects from a large pool and generalises to the population.

The sampling procedure which was used for this study is stratified random sampling with simple random sampling and systematic sampling methods. In this method the target population is treated as a unitary whole when sampling from it. Stratified sampling changes this by dividing the population into subgroups called strata. Prior to drawing the sample, separate random or systematic samples are

drawn from each of the strata (Sullivan, 2001:196). One of the major reasons for using a stratified sample is that stratifying has the effect of reducing sample error for a given sample size to a level lower than a simple random sampling of the same size. Stratifying samples makes each stratum more homogeneous by eliminating the variation of the variables that are used for stratifying. It has the strength of being more representative than simple random sampling (Sullivan, 2001: 196).

In the Berea and Maseru Districts of Lesotho, there are a number of schools which have learners with physical and mental impairments, such as high schools, secondary and primary schools, but this study focused only on the selected primary school teachers who are teaching physically and/or mentally impaired learners at these schools.

1.6.3 Data collection strategy

This section describes the data collection methods were used in this study, starting with instrumentation.

1.6.3.1 Instrumentation

The research instrument which was used to collect data in this study is the questionnaire. According to Bell (1996:104), a questionnaire is a widely used social research technique that usually contains questions aiming at obtaining specific information on various topics. The purpose of the questionnaire was to elicit specific information with regard to the difficulties experienced by physically and mentally impaired learners in a mainstream class.

The questionnaire consisted of four sections: Section A relates to demographic information; for example age, sex, working experience, qualifications and level taught. Section B focuses on the challenges facing teachers who have learners with physical and mental impairments. Section C pertains to the training of teachers who teach learners with physical and mental impairments in the

mainstream classroom. Section C concludes with open-ended question where respondents are asked to comment on the feasibility of including physically and mentally impaired learners in a mainstream classroom. The questionnaire in section A, B and C was a combination of two to three Likert-rating scales such as: *yes*, *no* and always, sometimes and not at all.

In order to ensure that the respondents understand the questionnaire, the researcher formulated it based on the following guidelines:

Good questionnaire design principles relate to the wording of the questions such as simple, clear and unambiguous language and how the variables will be categorised, scaled and coded, as well as the general appearance. The language used in the questionnaire should be appropriate to the level of the respondents. Questions should be sequenced to minimise discomfort and confusion and should keep the respondents' perspective in mind. Questions should also communicate exactly what the researcher wants to know. The researcher should avoid terms respondents do not know (Leedy and Ormrod, 2005:190; Neuman, 2006:292).The researcher weaves questions together so that they flow smoothly. He or she includes introductory remarks and instructions for clarification and measures each variable with one or more survey questions. Good survey questions should give the researcher valid and reliable measurements.

1.6.4 Analysis of Data

According to Johanson (2002:155), bar graphs, figures and frequency tables are procedures usually used to analyse and report data. The author also mentions that tables are a quick way to analysed and report information, while graphs are used to show comparisons. De Vos, Strydon and Delport *(*2002:229) state that another type of frequency distribution involves calculating the data in percentages. The researcher uses percentages to interpret the data.

In this study, the services of a qualified statistician will be solicited for the analyses of data using SPSS (Statistical Package for Social Sciences) window or any other

appropriate software. Dawson (2006:124) defines SPSS as a common package used by social scientists at the present time, which has become increasingly user-friendly over the last few years. Babbie, Halley and Zaino (2000:52-53) also pronounce that SPSS is a powerful state-of-the-art statistical package that allows users to accomplish numerical tasks and procedures. Blaxter, Hughes and Tight (2001:205) support the aforementioned authors that SPSS is a comprehensive and flexible statistical analysis and data management system which enables the researcher to feed in raw data, to modify and organise them and to carry out a wide range of simple statistical and multivariate analyses. These range from listing the frequencies of different responses and calculating means, through cross-tabulation, correlation and regression analysis, analysis of variance and covariance, to cluster and factor analyses

SPSS can take data from almost any type of files and use them to generate tabulated reports, charts and plots of distribution and conduct complex statistical analysis. The bar charts, frequency tables and graphs plots allow the reader to see evidence collected by the researcher and the interpreted data that gives theoretical meaning to the results (Johanson, 2002:155). SPSS enables statisticians to make statistic analysis more intuitive for all levels of users. It also facilitates data management chores which are tedious and subject to error when done manually, makes the analysis process more transparent and accountable and supports analytic approaches which would otherwise be cumbersome (Blaxter *et al,* 2001:205). The above authors argue that using the computer for qualitative research can give studies more credibility and status because of the association between the computer and 'hard' data.

The researcher uses pie charts, tables and bar charts to provide readers with a clear picture of the data. These procedures help readers to see evidence collected by the researcher. After the presentation of each table, conclusions will be drawn from the information on each table. The information obtained from each table will

be summarized and interpreted data will provide a clear meaning of the results. The estimations will be made from open and closed questions that will be asked.

1.7 SIGNIFICANCE OF THE STUDY

The importance of this study is to make the Government of Lesotho aware of the difficulties/or challenges facing learners with physical and mental impairments and to sensitise those in authority to how such learners may be accommodated in the normal classroom. The necessity of this study lies in the fact that it will also assist teachers to become more aware of the needs of learners with physical impairments. It is hoped that this study will contribute toward the creation of strategies teachers can implement to assist and accommodate learners with physical and/or mental impairments in the classroom situation.

1.8 LIMITATIONS OF THE STUDY

The study focused primarily on teachers teaching physically and/or mentally impaired learners in a number of randomly selected primary schools in Berea and Maseru districts in Lesotho. The study was limited to some areas of these districts because of time, costs and accessibility constraints. There are a number of primary schools in Berea and Maseru Districts such as private, government and church schools. The study was planned to involve 22 primary schools only, from both districts.

1.9 STRUCTURE OF THE DISSERTATION

Chapter 1:

The aim of this chapter is to give a broad overview, background and introduction to the study, the problem statement and the objectives of the research study.

Chapter 2:

Chapter two focuses on a literature review of all the various sources relevant to the study.

Chapter 3:

Chapter three addressed the issues of methodology, data collection and the sampling strategies used in this study.

Chapter 4:

Chapter four focused on the research results/findings and the analysis and interpretation of these results.

Chapter 5:

Chapter five provides a summary and conclusion, as well as making some compelling recommendations that could be used for further research and application.

CHAPTER 2
LITERATURE REVIEW

2.1 INTRODUCTION

This chapter examines the literature that is drawn from various sources of information related to the topic under study. These sources included the Internet, journals, articles, books, newspapers and other references. Very often learners with physical and/or mental impairments are faced with unique challenges including discrimination, marginalisation, exclusion and a general ignorance of basic rights such as self-expression. It is necessary to identify and address appropriate teaching strategies for the inclusivity of learners with physical and/or mental impairments in mainstream classrooms. This is due to the fact that effective inclusivity allows learners the opportunity to learn and perform in the same way as other learners in the classroom. Teachers should attempt to provide appropriate strategies that will ensure that learners with physical and/or mental impairments are also accommodated or included in a mainstream classroom (Engelbrecht & Green, 2001:134-135). Before the researcher discusses the teaching strategies that ensure the inclusivity of learners with physical and/or mental impairments, it is important to highlight the situation in Lesotho with regard to special education.

2.2 SPECIAL EDUCATION IN LESOTHO

According to Mariga and Phachaka (1996:3) before the 1980s Non-Governmental Organisations (NGOs), churches and individuals were responsible for the special provision of education for learners with impairments in Lesotho. It was in this period between 1983 and 1992 where parents, impaired learners and their organisations began to seek national education provision for impaired learners.

Concepts such as individual dignity were spreading, gaining support and influence worldwide, with Lesotho also being influenced by this trend. It became an area of focus that vulnerable and marginalised learners needed to participate in a new educational dispensation, as well as needing to be emancipated to promote their own development.

The study of structures and guidelines on Special Education was undertaken in 1987 by Professor Mary from Canada. She initiated the development of a special education programme. It was between 1987 and 1988 that a special education policy included ministries' priorities, deliberations and programmes. This policy began to be an operational plan in 1990. However, since then, according to the (Ministry of Education and Training, 1990), Lesotho established a special education unit to implement inclusive education from 1989-1990. The establishment of the Special Education Unit was intended to support the attainment of education for all. To fully support all learners, the Ministry of Education and Training, 1990 was developed with the purpose of promoting the integration or inclusion of all learners in the regular school system to enable them to acquire appropriate skills and education (Mariga & Phachaka, 1996:3).

In order to support Special Education learners in the mainstream, the Special Education Unit with other Non-Governmental Organisations sensitised the public to the educability of Learners with Special Education Needs. Apart from that the Ministry of Education and Training embarked on a project of community based rehabilitation. The purpose of the rehabilitation was to equalise opportunities and the social inclusion of all learners with impairments. The project objective was to promote inclusive education, which is one of the issues that are in line with the United Nations' Convention on the rights of the learner 1989 in (Ministry of Education 1990), which states that all learners should not be discriminated against. The article reinforces the right of all learners to education irrespective of their impairments (Mariga & Phachaka, 1996:3).

2.2.1 Present situation in Lesotho with regard to special education

UNESCO in Lesotho (1995:145) in a review of the present situation in special needs education, states that there are three targets in the special education policy:

- the inclusion of special education in regular teacher training;
- the development of teacher training; and
- the inclusion of learners with special education needs into regular schools at all levels.

Apart from the above policy, special education is administered through the Special Education Unit located within the central inspectorate. In Lesotho, there is neither registration nor categorisation of young people with special education needs and Special Education is provided by organisations. Parents' involvement is limited because of the novelty of the programme. In section three parents/guardian voice, Gibson and Blandford (2005:25) indicate that a partnership with parents plays a key role in promoting a culture of cooperation between school, parents and educators. According to the White Paper 6 (2001:22), the school should receive educational support such as material resources and the professional development of staff members. Teachers need to receive special attention from the district support teams so that they can become beacons of an evolving inclusive education system. Some of the primary schools should be selected for conversion in to full service schools. The purpose is to mobilise community and parent participation so that all social partnerships and role players can develop these schools.

The existing schools for the physically and/or mentally impaired learners provide specific type of education, thereby creating an impaired sub-culture. Most of the impaired learners are grouped together and educated in residential schools; there are no resource centres in the country which serve the needs of impaired learners and special equipment for helping learners with impairments is lacking. There are fewer special facilities to cater for special needs, special schools are few and

scattered or situated far away from impaired learners' homes and none seem to be in rural areas where 85 percent of the population live, especially mentally and/or physically impaired learners. Most of the impaired learners are found in rural areas and do not attend school because their parents are ignorant, over-protective, and negligent or refuse to send them to school to be educated. As a result, these impaired children tend to be vulnerable to illiteracy (Ministry of Education and Training, 1990).

2.2.2 Factors contributing to the lack of ensuring effective inclusion of learners with physical and/or mental impairments in Lesotho

There are many factors contributing to the lack of inclusivity or the scarcity of accommodating learners with physical and/or mental impairments in the mainstream schools in Lesotho. According to the (Ministry of Education and Training, 1990), most regular teachers are not oriented adequately to cater for the physical and/or mental impairments of learners who may find their way in to the regular classroom, and this leads to their rejection. There are also no supportive services to assist with the instructions given by regular teachers and resource centres are not available to cater for special needs learners. This is not in line with the White Paper 6 (2001:29) that there should be support teams from districts to evaluate programmes, diagnose their effectiveness and suggest modification.

Moreover, there are no professionals to educate increasing numbers of physically and/or mentally impaired learners, and a paucity of knowledge on how to handle special equipment to help impaired learners. There is also a lack of disability oriented projects to help the large numbers of these types of learners. There are no personnel to disseminate information, and there is a lack of awareness with regard to the importance of special education (Ministry of Education and Training, 1990).

2.2.3 Characteristics of the inclusive classroom

According to the Quality Education programme (2009), an effective inclusive classroom is characterised by a teacher who uses effective strategies to keep learners on task, motivated, captivated and proactively engaged in activities. The teacher presents a variety of materials in a step-by-step manner. The American Association on Mental Retardation (Luckson *et al*., 2002 cited in Vaughn, Bos & Schumm, 2007:177), states that in an inclusive classroom the teacher increases learners' sense of belonging by giving them the same treatment as other learners. Additionally, there is the promotion of equality of opportunities and interaction with other classmates.

Wood (2002:100) further points out that the teacher should act in a manner consistent with a positive learning climate, and not view mentally impaired learners as mentally fragile. Nevertheless, the teacher should avoid threatening these learners because it can be difficult for them to learn effectively. Evans (2007:78) indicates that learners should be free to ask for help and subsequently receive it. Their efforts should be acknowledged, as well as their achievements. Different learning styles should be catered for and all types of ability valued.

In an inclusive classroom the teacher should exhibit self-confidence and builds it into the learners. Furthermore, learners must be recognised individually in order to enhance their self-confidence and self-esteem. The Quality Education programme (2008) indicates that there should be high expectations of what learners can achieve, adjusting instructions to individual needs and re-teaching where necessary.

An inclusive classroom is characterised by learners who feel that they are welcome, where the teacher embraces the understanding that every learner is unique and therefore learns differently (National Institute for Urban School Improvement, 2008). According to Digest (1995:1), an inclusive class teacher believes that learners can succeed if the school's principal understands the needs

of the learners. It is vital that special education staff are committed to collaborative practices and that special services are available from health, physical, occupational and speech therapists.

According to Cheminais (2004:114-27) and Florida Department of Education (1999:26) and the National Institute for Urban School Improvement (2008); Digest (1993); the inclusive school and classroom are also characterised by the following key features:

- Teaching and personal support are sufficiently available to all impaired learners.
- Teachers hold high expectations and believe that learners with impairments can succeed.
- Teachers create a cooperative environment and promote socialisation.
- Teachers understand that learners learn best when teaching is tailored to their abilities and interests.
- Appropriate materials and teaching aids and adapted accommodation are available.
- There is widespread awareness among staff of the particular needs of Special Education Needs pupils and an understanding of the practical ways of meeting these needs in the classroom.
- The teacher uses visual information such as charts and graphs to reinforce what is presented orally.
- The teacher lets the learners manipulate and explore concepts.
- There is equity of opportunities irrespective of individual impairments.

2.3 CHALLENGES WITH REGARD TO PHYSICAL MOBILITY MANAGEMENT AND POSITIONING

Physical management means assisting learners to move to different positions in the school environment. Engelbrecht and Green (2001:135) state that learners' mobility needs to reflect the means by which one moves from one location in the school to another, for example from the cafeteria to a classroom desk or a learning centre. Learners need proper physical management and positioning for their educational activities and everyday routines. Teachers should address each learner's needs according to the nature in which he or she moves. If the learner needs to use a wheelchair, then cushions, pads and straps will be needed to facilitate his or her ability to sit in the mid-line position with the ankles and knees. It is the responsibility of the teachers to monitor learners' braces. These mobility aids need frequent supervision during the school day.

It is stated in much of the literature that physical access to classrooms is a major concern for learners with mobility impairments. The physical arrangements of a room should be adjusted e.g. seating arrangements (Vaughn, Bos & Schumm, 2007:18). Learners must be helped to learn routes to and from classes that do not present barriers such as stairs, a curb, a narrow walkway, a heavy door or a lift door that may be blocking a ramp. Learners who tire easily or who use wheelchairs, braces, crutches, canes or prostheses may have difficulty moving about especially considering the constraints on class schedules. Occasional lateness or absence may be caused by service difficulties that are related to manoeuvring along crowded paths.

Wheelchairs need space to manoeuvre and class furniture should accommodate learners in wheelchairs, with teachers ensuring that wheelchair learners' wheelchairs fit under the table so that the learner is in the right sitting position. Engelbrecht and Green (2001) contend that proper physical management procedures enable teachers and physical assistants to handle and lift learners without hurting them. When seating learners with physical impairments, every

effort should be made to integrate them into the classroom. Assigning learners to a doorway, a side aisle or at the back of the room should be avoided. A wider aisle may need to be provided along with an adjustable table in line with a desk. Some learners prefer to remain in their wheelchairs instead of transferring to a regular learner's desk. Using a wheelchair some of the time does not mean a learner is a disability problem.

According to Wright and Bigge (in Vaughn, Bos & Schumm, 2007:203), teachers should modify the environment by changing the location of materialised equipment so that learners in wheelchairs can reach items independently. Work surfaces should also be modified; for example, raising a desk so that a wheelchair fits under it. Manipulation aid should also be modified, such as providing page turners to reduce dependency on others.

In order to improve the smooth accessibility of learners with physical and/or mental impairments, Keller (2005); Engelbrecht and Green (2001:136) suggest the following general strategies for accessibility:

- The teacher should arrange for library personnel to assist access to card catalogues, bookshelves, microfiche and other equipment.
- The teacher should consider the accessibility factor to the classroom so that each learner is able to get to class on time.
- The teacher should be familiar with the building's emergency evacuation plan to ensure that it is manageable for the learners.
- Learners in wheelchairs should be helped to move around the classroom safely.
- Resources should be clearly labelled.
- The classroom atmosphere should be calm.
- The classroom furniture and equipment should be at the right height.

- There should be a quiet and distraction-free area in the classroom for pupils.
- Written information should be provided in a range of multimedia formats.
- Extra time should be given to physically and/or mentally impaired learners to complete tasks set; teachers should be fully aware of how a pupil's impairments may impact on their learning and behaviour.
- Learners' misconceptions and misunderstandings should be dealt with sensitively and positively. The teacher should eliminate all unnecessary materials from learners' desks to reduce distraction.
- The teacher should allow learners frequent breaks.
- The wheelchair learners should always be monitored and there must be great care to ensure that learners who cannot sit properly are strapped safely into their wheelchairs.

2.3.1 Improving the teaching situation for the inclusive classroom

Special education media should be provided to learners with physical and/or mental impairment so that they can participate in the learning programme. Usually, learners experience problems in undertaking written work and special aids should be available so that they suit individual needs. According to Vaughn *at al*, (2007:38), teachers should work with other professionals in order to improve the teaching situation; for example, occupational therapists should be employed to provide valuable assistance to learners with impairments. Learners with physical and/or mental impairments tire easily and need an adapted programme in which they are afforded adequate periods of rest. Overloaded assignments to solve problems should also be avoided. A learner may be absent for certain reasons, so the teacher should explain to him or her what has already been covered. Arrangements with therapists are very important so as to plan the therapy in such a way that it makes as few inroads as possible into the learner's academic programme.

Reynolds and Domberk (2006) state that individuals with physical and/or mental impairments benefit from the same teaching strategies used to teach individuals with learning impairments. It is important to break each task into segments to avoid overwhelming individual learners with too much information. The teacher should adjust the pace so that learners have a chance to process the input. The amount of information should be reduced and be broken into segments (Vaughn *et al,* 2007:114). Once the learner completes one step, the next is introduced. Verbal directions and lectures are not the most effective teaching approaches, and are especially unrealistic methods for teaching physically and/or mentally impaired learners.

Learners do better in environments where visual aids such as charts, pictures and graphs are used as much as possible. Such visual components are useful for helping learners to understand what is expected of them. Using charts to map learners' progress is very effective; for instance, charts can be used as a means of providing positive reinforcement for appropriate conduct on task behaviour.

According to Keller (2005); Reinnolds and Donback (2006), learners with physical and/or mental impairments require immediate feedback in order for them to make connections between their answers, behaviours, questions and the teacher's responses. Feedback helps learners to become aware of what they are doing correctly and what needs to be changed, as well as assisting them to learn how to correct and detect their mistakes. A delay in providing feedback may interrupt the connection between causes and effect in the learners' minds and the point will be lost (Florida Department of Education, 2000).

2.3.2 Achievement of learners with physical and/or mental impairments should not be measured

Appropriate pace is a critical variable in teaching learners with physical and/or mental impairments. Cabriel and Warren (1993:119) write that teaching that assures automaticity or fluency of response before introducing new tasks can

minimise problems. The performance of learners with physical and/or mental impairments will also be less pronounced if achievement is assessed at later stages rather than at the early stages of learning. Learners with physical and/or mental impairments also need to be helped to learn to think and discover things on their own. By the teachers' promoting both inductive and deductive reasoning, by modelling and testing these skills, this is important for learners with impairments who commonly exhibit difficulties transferring previously acquired skills to new tasks. Learners with a lower intelligence quotient (IQ) will be less likely to succeed in an environment that assumes the automatic transfer of skills. Content that is presumed to be meaningful is more easily learned by higher (IQ) than lower (IQ) learners with mild impairments and the latter are less likely to form such connections with content that is meaningful.

2.3.3 Classroom adaptation for learners with physical and/or mental impairments

According to the Florida Department of Education (2000), the learning environment for the accommodation or inclusivity of impaired learners should involve changes to the physical features and organisation of the classroom to assist learners. Changes to the environment may include alterations to the physical settings and grouping arrangements. Mastroperieri and Struggs (2007: 63) state that the class teacher of physically and/or mentally impaired learners should prepare the class. He/she must describe the special needs and the roles of classroom peers in supporting the inclusive classroom and prepare the classroom to meet the mobility requirements of learners with physical and/or mental impairments. The main buildings of the school should be well equipped with non-slip surfaces, guide rails, ramps, lifts and automatic doors for learners who experience difficulties in getting around. Learners should move around the classroom easily and safely, the classroom should be destruction free area.

Apart from the above, the teacher should adapt instructions for the learners by scheduling extra readings, studying and instructional time when needed. Learners who experience difficulty in speaking require extra time to respond to teachers' questions. The teacher should provide sufficient response time and help learners to feel comfortable and not rushed while responding. In addition, the teacher should adapt evaluation methods such as testing and assessment modification for physically and/or mentally impaired learners.

In most cases, these learners have difficulty reading and writing independently; thus, the teacher should schedule their tests when a special education expert can read the test items and record responses (Mastroperieri & Struggs, 2007:87).

According to Engelbrecht and Green (2001:143) and Evans (2007:78) the following are suitable strategies for the environmental accommodation or inclusivity of physically and/or mentally learners:

- The teacher should seat learners in areas free from distractions so that the learners are able to pay attention.
- The teacher should eliminate all unnecessary materials from learners' desks to reduce distractions.
- The teacher should use a checklist to help learners become organised.
- The teacher should allow the learners frequent breaks.

According to Yanoff (2007:58) learners with physical and/or mental impairments usually experience behavioural, emotional and social difficulties because they possess limited social skills. They also lack self confidence and become more easily frustrated than their regular peers. In order to come up with strategies that ensure the inclusivity of such learners in an inclusive classroom, Mitchell (2008:105); Cheminais (2004:53-55) suggest that classroom teachers should:

- Communicate in a calm, clear manner and avoid confrontation.

- Convey to all learners that they are accepted fully as individuals, despite the difficulties they may have in learning.
- Be supportive and give learners a sense of belonging.
- Believe that all learners can learn and help learners develop a strong belief in their ability.
- Use deliberate silence, only starting lessons when every pupil is paying attention.
- Listen to the learners; always giving them a chance to explain the reason for their behaviour.
- Keep instructions, routines and rules short, precise and positive.
- Allow the learners to work at their own pace in order to process learning.
- Structure learning in small steps; break down tasks into small components.
- Present the same work in different ways to reinforce learning.
- Provide opportunities for routine learning repetition.
- Allow learners to present their work outcome in a variety of different ways.
- Give pupils opportunities to display their talents and experience success.
- Provide immediate, positive praise or reward for effort and achievement.
- Use real objects and artefacts to consolidate learning.

2.4 INVOLVING PARENTS IN THEIR CHILDREN'S EDUCATION

Swart (2008:100); Gibson and Blandford (2005:39-40) are of the opinion that family background support plays a profound role in the development of achievement. It appears that the informal education that a family gives as support to the impaired learner makes a significant contribution. The involvement of parents in the education of their learners should develop a sense of understanding learners' personalities and that the reaction between the school and the home

develops the greatest amount of support and stimulation. Family and teachers should mutually draw strength from each other's experience as caregivers and decision makers. To fully support learners with physical and/or mental impairments, there should be close interaction between the family and the school; parents' involvement should be carefully considered before planning an approach.

Parents can provide first-hand information with regard to learners' abilities, strengths and challenges. It is through parental involvement or insight that relevant information can be obtained for school sources, thereby providing a general picture of learners' needs and capabilities.

According to Everton in Mastropieri and Scruggs (2007:46), building a positive partnership with parents yields important benefits for learners' education. Teachers need to establish positive communication between the school and parents in order to strengthen a co-operative relationship. The teacher can learn a great deal from parents about their learners. Oshea and Oshea in Vaghun *et al,* (2007:52) assert that parents' involvement in their learners' education improves academic achievement. In addition to concerns about health, safety and academic achievement, parents can help with issues such as denial, guilt, dealing with the public, hurt feelings and stress. Hallahan and Kauffmann in Vaghun *et al,* (2007:52) stress that parents should embrace the opportunity to adjust and help with impairments in their offspring.

2.4.1 Methods for involving parents in school activities

According to the Department of Education (2005:3), parents should be involved in the education of their children such as assessment; placement in special education; direct involvement which may also include participation in training programmes. Professionals should build on roles that parents support their learners; successful parents' programmes should include modelling and the rehearsal of techniques being taught, and provision for direct parental involvement with identification and goal setting. Parents should be involved in all decisions

made about learners with special needs. Parents' involvement in learners' education has a crucial bearing on the learners' educational programmes. They have great deal of information about their children which may be useful to the teacher. Parents should be an integral part of the overall plan made for the learner (Dean, 1996:19-20: Gibson and Blandford (2005:39-40).

2.4.2 Parent conferences

Parents need conferences, programmes and classroom information, progress reports, the interpretation of their learners' academic and social needs and informal feedback. Through home programme implementation, parents can assist their learners at home by providing them with useful information through parent coordinated services from other parents, such as advisory councils, and parent-to-parent participation advocacy. Middlewood, Parker, Beer 2005:154; Hallahan and Kauffman (in Vaughn, Bos & Schumm, 2007:53) state that parents can assist intervention techniques through group training, and this intervention can be delivered during the learners' time at home and in a context that is more comfortable and secure for them. Parents' involvement can be an efficient way to deliver services (Ashamen & Elkins, 1998:59).

Parent conferences can be used as a teaching strategy. They can result in a learner's improved growth by sensitising the school to the family's values, expectations and activities. Teachers should be ready to provide parents with information which should include samples of a cumulative folder, observational records and comments from other teachers. Teachers also need to seek information from parents which will supplement the school records. Parents of physically and/or mentally impaired learners can bring a variety of talents to the classroom and share their experiences in dealing with impaired learners. Parents can serve as volunteers in the tutoring, interpreting, preparation of materials and supervision of learners, as well as working with other parents. Through working together, parents and teachers can gain information from one another and

physically and/or mentally impaired learners will become the ultimate beneficiaries (Ashamen & Elkins, 1998:59).

Swart (2008:99-100) asserts that partnership with parents promotes effective learning. The White Paper 6 (2001:50) further indicates that partnership with parents is an ideal situation which is beneficial to impaired learners because parents play a major role in their education. Partnerships established with parents can arm teachers with information, counselling, skills and also help teachers to participate effectively in the planning and implementation of inclusion activities. Thus, parents can play a more active role in the learning and teaching of their children despite their children's limitations.

2.5 TYPES OF SUPPORT SUITABLE FOR PHYSICALLY IMPAIRED AND/OR MENTALLY IMPAIRED LEARNERS

Powell (2003:64) opines that once learners have been accepted into a course, their needs should be identified and support arranged. Each individual learner needs a different support package. Oliver and Williams (2006) further contends that experts should be delegated to schools to advise and support teachers on relevant issues. Educational officials should visit the schools to give demonstrations on lessons in order that teachers may observe how to work with physically and/or mentally impaired learners. Furthermore, workshops could be arranged to enlighten teachers on matters related to physical and/or mental impairments. Powell (2003) expresses the opinion that support for impaired learners comes in three forms:

- Human resources;
- Technical aids; and
- Advice on teaching styles and useful strategies.

All three support forms maximise the learning opportunities of impaired learners. Giving support maximises a learner's ability to access the message of the teacher.

In the Department of Education (2005:23), support should no longer be seen as a focus on 'deficits' that have been 'diagnosed' in individual learners who are assumed to be in need of 'remediation' via individual attention by a specialist, but support should be defined as all activities which increase the capacity of a school to respond to diversity. Support is a means that teachers use to plan lessons in a manner that accommodates all learners. Support is a medium through which education content must pass to meet the needs of impaired learners. Support is provided when schools review their cultures, policies and practices to determine how supportive these are of individual learners' needs (Powell, 2003).

2.6 HUMAN RESOURCES

2.6.1 Note takers

According to Powell (2003:64), the role of the note taker is to channel the information given by the teachers. The responsibility of the note taker is to help the learners to concentrate. When dealing with impaired learners, the note takers must be aware of individual learning styles and give the learner the support that matches the style of learning.

Cooley (2007:31-32) opines that learners learn in a number of different ways; for example, auditory learners learn best from verbal or audio presentations. Tactile-kinaesthetic learners do well when touching and moving in some way. Therefore, teaching instructions should be aligned with the particular style of a learner for better understanding.

According to Keller (2005), in order to support orthopaedic or physically and /or mentally impaired learners, the following strategies can be used when teaching such learners:

- The teacher should accept the fact that disability exists. Not acknowledging this fact is not acknowledging the impaired person.

- The teacher should not patronise learners who use wheelchairs by patting them on the head. This is a sign of affection that should be
- Reserved only for small learners and it has been found that most of them do not like it either.
- The teacher should encourage learners who use crutches or canes to keep them within easy reach and make such a space available. If accidents occur, floors should be kept clear of liquids.
- If writing is difficult, the teacher should use a tape recorder.
- When talking to wheelchair learners for more than a few minutes, a teacher should sit down or kneel to place him- herself at that learner's eye level.

2.7 CURRICULUM MODIFICATION FOR LEARNERS WITH PHYSICAL AND/OR MENTAL IMPAIRMENTS

According to the US Department of Education (2000), in order for learners with learning impairments to have access to the general curriculum, high expectations for learning achievement should be promoted. Curricula for all should be focused on preventing difficulties in learning, producing and reducing disaffection and include learners with impairments. There should be systematic and appropriate assessment and instructional accommodations used, and learners should have access to a full range of secondary education curricula and programmes. The curriculum should be assessed before it can be implemented within the learner's individual school.

According to UNESCO (1998:25) the curriculum should delimit specific goals and objectives that permit a continuous and smooth progression in skills attainment. It is necessary that the curriculum be thoroughly understood by the teachers and whenever feasible, be designed by the teachers. The manner in which various components of the curriculum are presented to the learner should be monitored

closely to determine whether changes in presentation could facilitate improved progress.

Scott and Lucy (1991) maintain that the modification of materials and instructional approaches may be necessary to accommodate the individual needs of special needs learners. For example, teachers need to provide more visual materials for impaired learners and employ behaviour modification teaching strategies for certain groups of physically and/or mentally impaired learners. When modifying curriculum materials and instructional approaches, it is necessary to apply sound educational principles that help all learners, especially those who have special needs.

According to Scott and Lucy (1991); Westwood (2007;202-2003) the following are general instructional strategies which can be used when planning or organising educational programmes (curriculum) for special needs learners, especially physically and/or mentally impaired learners:

- The teacher should vary teaching techniques and make use of modelling, imitation, discussion, demonstration and other techniques.
- The teacher is supposed to reinforce appropriate behaviours that are in context with the desired learning outcomes. An adequate feedback system should be provided, whether it is verbal or nonverbal, oral or written. Lessons should be planned so that appropriate feedback and reinforcement are provided.
- The teacher needs to organise instructions to guarantee some degree of successful learning outcomes.
- Repetition is an important teaching technique for most learners and usually creates a positive momentum for teaching hands-on learning activities.
- The teacher is also supposed to keep steps small and should build on previously learned tasks to help learners develop a sequential and simple way of correcting problems which might occur. Special education teachers can correlate the teaching of related subject matter to technical production

activities. Additionally, remedial instruction in basic-subject skills should be provided.

- Special-needs learners such as physically and/or mentally impaired learners should be made to feel part of the education process, rather than 'separate' or 'special.'
- The teacher may re-teach some concepts to learner using simpler language and more examples.
- The teacher may give more assistance or less assistance to individual according to needs. Extension of work may be set for the most able learners, questions asked during the lesson may be pitched at different levels of difficulty.

2.7.1 Supporting curricula access

Support in the curriculum should be organised in such a way that a range of barriers against accessing the curriculum is identified and addressed. According to the Department of Education (2005: 23) the curriculum must address the following:

- The content of the learning programme should be optimal for physically and/or mentally impaired learners. Learners with mental impairments are required to cover fewer materials in the lesson and the activities they attempt are usually easier to accomplish. The nature of learning task set for the impaired learners should be matched with their learning rate and abilities. Differentiated content for assignments could be used as one way of meeting the needs of impaired learners.
- The language and medium of teaching and learning should be appropriate and suitable for mentally impaired learners.
- The curriculum should be designed in tandem with the learning style and pace of the learners.
- Special materials and equipment should be available in order to facilitate the learning of impaired learners.

In the White Paper 6 (2001:31-32) it is documented that the curriculum should be accessible to all learners, especially those who are physically and/or mentally impaired. Moreover, it should not create the most significant barrier to learning and to the exclusion of many learners, whether they are in special schools or ordinary schools. Nind, Sheley and Simmons (2003:66) are also of the opinion that the curriculum must be broad and balanced to accommodate or include physically and/or mentally impaired learners. The aforementioned authors believe that the curriculum should allow all physically and/or mentally impaired learners to participate fully in the life of the school. For example, learners should visit their local museum, galleries and theatres as a part of the curriculum.

The White Paper 6 (2001) further reveals that a new curriculum has to focus on the inclusion of the full diversity of learning needs. A curriculum of infusion must address all aspects of health and the social and academic life of the learner. The principle of curriculum infusion highlights the health promoting and developmental aspects of education. Support services should be integral to every level of the general curriculum. The development of the mental curriculum should provide a structure for creating an individual education plan for each learner with physical and/or mental impairments, and the introduction of a national curriculum should provide access to knowledge for all.

Furthermore, Westwood (2003) is of the opinion that learners with learning and developmental needs should:

- Be carefully controlled and sequenced with the curriculum content to be studied.
- Be provided with abundant opportunities for practice.
- Be taught how best to attempt new learning.

2.7.2 Curriculum adaptations

Quist, Nyark and Deku (n.d.) point out that curriculum adaptations policy should provide alternatives that schools for physically and/or mentally impaired learners can chose from. For example, the curriculum should be based on vocational rehabilitation. This curriculum should provide individuals with the opportunity to practise their skills and it should be in line with the following adaptations:

- Prepare modified materials or tests for individual learners as applicable.
- Teachers need to plan lessons requiring modification for individual learners with the general education teacher. For example, the use of taped tests and other forms of technology.
- Assist any learners in the general education classroom and provide assistance for multi-level instruction which allows for differential outcomes for learners.

According to Mitchell (2008:30), the curriculum in an inclusive classroom should be accessible to all learners, especially those with special needs. It should include activities that are age appropriate, but are pitched at a developmentally appropriate level.

2.7.3 Effective instructions and a useful curriculum

According to UNESCO (1998:26), for instructions to be effective, the following should be considered when formulating the curriculum, especially for physically and/or mentally impaired learners:

- Forecast the knowledge, skills and attitudes that will be useful when formal schooling ends.
- Instructions should begin where learners can earn the greatest benefit.
- The teacher should ensure a good instructional setting with its accompanying physical and emotional environment.

2.8 TOWARDS A COLLABORATIVE CLASSROOM

According to Booth and Swann (1997:14-15), for collaboration to occur among impaired learners, their teachers should create an environment in which learners can learn from and with one another. The teacher should manage the classroom in ways that encourage mutual respect, admiration, encouragement and support. There should be a co-operative atmosphere that supports all learners. Teachers should develop learners' ability to make effective use of the opportunities for collaboration which the environment provides. The teacher should accommodate or include physically and/or mentally impaired learners through creating a self-supporting framework which encourages and enables learners to operate independently. There should be the development of a range and quality of collaborative activity which learners are able to initiate for themselves, by directly structuring and facilitating a variety of collaborative experiences, modelling and strategies for learners to take on for themselves. The aforementioned authors believe that a self-supporting framework builds on the learners' existing collective resources, their knowledge, their experience, their social relationships, and their capacity to support and stimulate one another through shared interests and concerns.

2.8.1 Supportive relationships

It is known that some able-bodied learners have been known to reject their physically and/or mentally impaired counterparts; thus, the teacher should provide an environment conducive to effective communication between learners. The teacher should let learners know that their classroom is safe and the best place for them to be. Moreover, the teacher should intervene if learners are nasty to one another or put one another down (Booth & Swann, 1997:15).

2.9 PERSONAL INTERACTION WITH MENTALLY AND/OR PHYSICALLY IMPAIRED LEARNERS

2.9.1 A need for support teachers

It is clear from the literature that teachers need support in order to make learning easier in their classes. Teachers need support from the Department of Education including training in the curricula and in inclusive education. Teachers should collaborate with other professionals in making use of learners' abilities. Teachers of physically and/or mentally impaired learners require collaboration and a multi-disciplinary approach. School management should be supportive, innovative and sufficiently flexible to co-operate with teachers (Gulliford & Upton in Oliver & Williams, 2006:235). According to Vaughn *et al,* (2007:41), collaboration involves more engagement of professionals in both the planning and the implementation of an intervention; for example, the peer model can be developed to help the classroom teacher to solve problems by providing time and structure to do so.

Through collaboration, special education teachers can work together to enhance instructions for learners with impairments through co-planning and co-teaching. In co-planning, special education teachers broadly plan their overall goals and desired outcomes for the class and for learners with impairments. Teachers decide who will take the lead in the lesson that will ensure that learners' needs are met and provide individual or small instruction. There are benefits to collaboration because teachers find ways to solve problems so that teaching and learning can progress successfully in classroom. Collaboration affirms and empowers teachers who work with impaired learners (McNab cited in Farrell, Kershner & Hick 2009:148-149).

According to Hourcade and Bauwens in Vaughn, Bos & Schumm (2007:43), in co-teaching, special education and general education teachers are both in the classroom during the same lesson and both participate in the giving of instructions.

Sometimes the general education teacher works with the class as a whole and the special education teacher adapts assignments for special needs learners, accommodating their learning needs by working with small groups.

According to Bauwens and Hourcade cited in Meese, (2001:77) in co-teaching, regular and special teachers should participate in collaborative or co-operative teaching arrangements. In this joined teaching process, the purpose is to restructure the teaching procedure in which two or more teachers process distinct sets of skills, work in a co-operative and coordinated fashion, and jointly teach academically and behaviourally heterogeneous groups of learners in an integrated setting. Co-operative or co-teaching includes team teaching, complementary instruction and supportive learning arrangements (Vaughn, Schumm & Arguslles in Meese, 2001:76).

Hammeken (2000:36) is of the opinion that in order for the team to function successfully, team members should believe that co-teaching provides a more effective teaching environment which will benefit all learners and not only those with special needs. Team members should work together with a sense of professionalism, respect one another and possess a sense of humour. Members must listen to one another in their team teaching. Learners should receive instructions from the general education teacher; modification and instructional support are also provided to the learners within the classroom setting by the special education teacher. The special education teacher or paraprofessional provides reinforcement and re-teaching as needed.

Wood (2002:93) asserts that teachers of mentally impaired learners should teach them, whenever possible in the same school they would attend as if they were not mentally impaired. Learners should be taught skills that they will use frequently or outside school. In addition, teachers' focus should be on the development of the strengths and accomplishments of the learners. Lessons can be planned in such a way that they stress functional skills and concepts.

Furthermore, Phachaka and Mariga (1998**)** suggest that the teacher should model learners by means of performing the skill to be learned and let learners watch. After the teacher has performed the skill, the learner can therefore imitate. In addition to this, the teacher should use manual guidance (this means using one's hands to guide learners through activities); for example, holding a pencil.

2.10 GUIDELINES TO ASSIST TEACHERS OF PHYSICALLY AND/OR MENTALLY IMPAIRED LEARNERS

Oliver and Williams (2005:27) mention that in order for teachers of physically and/or mentally impaired learners to cope with the challenges and needs of these learners, the following strategies and approaches should be used:

2.10.1 The employment of additional staff

Oliver and Williams (2005) documented that psychologists, occupational therapists, and specialist physicians, as well as nurses and class aides can make an important contribution to alleviate the pressure on teachers of special education. According to the NEPI report (1992:60) the training of specialists such as school educational doctors and psychologists should be the first priority. These specialists should develop a more indirect mode of service delivery by focusing on prevention and interventions. These specialists can also work as frontline personnel to provide support services especially to physically and/or mentally impaired learners.

2.10.2 Support assistants

Support assistance plays an increasingly important role in the inclusion of all learners in a classroom. Glough and Lindsay (1991:110-111) contend that support assistants should work in the classroom to help impaired learners to cope with their work in their classroom. These support staff work in a variety of ways and become sensitive to the impaired learners, helping them in various ways, inside and outside the classroom. Thus, they ensure that learners are safe by moving

about the school, patrolling the corridors and grounds during lesson times, as well as break times.

Ainscow, Booth and dyson (2007:73) and Evans (2007:94) believe that teachers need to work alongside learners, providing motivation, encouragement and the development of learners' cognitive skills. Non-teaching assistants are major resources in integrating learners with impairments and assistants should work with all the learners in groups. Evans (2007:94) further indicates that teaching assistants should foster the participation of all learners in social and academic processes. They also help to raise the standards of all learners and help learners to be more prepared and organised to work.

2.10.3 Equal opportunities

According to Nind, Sheley and Simmons (2003: 63) the school should provide equal opportunities to physically and/or mentally impaired learners as for normal learners. Unbiased teaching for physically and/or mentally impaired learners should be an integral part of the provision for their development and has a central place in the curriculum. The above authors reinforce the fact that the aim of antiracist education is to provide resources and a curriculum that reflect one nationality and culture within the classroom, irrespective of individual impairments. The Department of Education (2005:53) states that there should be equal provisioning of additional resources for physically and/or mentally impaired learners.

Nind, Sheley and Simmons (2003) warn that in order to provide equal opportunities for physically and/or mentally impaired learners, teaching, assemblies and celebrations need to be planned with the diversity of the community in mind, especially considering impaired learners. The aforementioned authors believe that equal opportunities are at the heart of inclusion and that opportunities are not about treating everyone the same but rather, about meeting people's individual needs and celebrating each individual's strength. The authors

are careful to remind teachers teaching physically and/or mentally impaired learners that equality in their classes does not mean uniformity, but centres on acknowledging and valuing the difference between learners and letting things happen on their own.

2.10.4 The use of the microcomputer

Ware (1997:100) writes that some of the learners show few signs of being socially responsive or are so physically and/or mentally impaired that they have little opportunity of interacting with the environment. In such instances, the use of microcomputer technology can be useful as a mediator between the learner and his or her environment, as part of a wider intervention programme. The computer can motivate the learners' responses and thus guide the teacher as to the most appropriate level of development on which to focus.

Microcomputer technology is important because learners with very severe impairments can learn by using it. Micro-electronic aids enable learners to interact with their environment and can be used to assess their levels of understanding. The microcomputer can be activated in such a way that it monitors arm and leg movements to see if the correct responses are differently produced. The computer also summarises information and presents it on a graph to those parents so that they can see that their learners are indeed learning (Ware, 1997:104).

According Lewis and Doorlag (2003:190) the past few years have demonstrated that the learning ability of learners with physical and/or mental impairments can be enhanced through the use of skilled and sensitive computer technology. Initially, the computer takes the role of teacher and assistant; in this situation, the computer set tasks to which the learner must respond. Computer technology can emancipate the learner by removing and alleviating a performance block. It is apparent that the use of a microcomputer as a word processor could help learners overcome many of the limitations of the early mechanical writing aids. Learners need no longer experience the frustration of paper work, as the computer screen

facilitates easier writing, thus helping motivation. There are a number of word processing programmes which have been developed enabling physically and/or mentally impaired learners to write using computers. These programmes increase their communication skills.

2.10.5 Assistive technology and technology consideration

Assistive technology is defined as any item or piece of equipment, whether acquired commercially off the shelf, modified or customised, that is used to increase, maintain or improve the functional capabilities of individuals with impairments. Assistive technology devices are useful for increasing mobility, assisting with communication, improving daily living skills, enhancing learning and helping in the manipulation and control of the environment (Mitchell, 2008:206; Cook & Hussey cited in Vaghun, Bos & Schumm, 2007:176-177).

Learners with physical and/or mental impairments can benefit from a variety of technological applications. Technology can be used in a way that effectively enhances learning. It involves the use of assistive devices to help a learner communicate or produce work output e.g. modified keyboards, a computer with a visual display and a touch screen (Westwood, 2007:305). It can be used to facilitate the acquisition of new skills, the development of fluency, proficiency and the maintenance of skills over time. Technology helps learners to participate in classroom activities such as writing.

According to Mitchell (2008:206), assistive technology enables individuals to have control over their lives, by participating in and contributing more fully to activities in their schools and to interact to a greater extent with non-disabled individuals. Technology can be designed to remove barriers or provide practical solutions to everyday problems and assistive technology can help the individual without mobility to control his or her environment. For example, for a task such as turning on lights, a voice activated computer allows the learner to input data on a computer and receive output information. Technology can assist a learner with

poor speed to be able to communicate through the augmented communication system. Moreover, assistive technology, like micro switches, allows one to perform more complex tasks; for example, switches can be activated by means of sound, air, light or movement. It further helps individuals with cognitive impairment access to instructions and classroom materials.

According to Cavanaugh (n.d.) there is a need to increase the capacity for learner independence and participation in classroom activities and simultaneously, advance academic standing for learners with special needs, as well as providing them the ability to have equal access to their classroom environment (Rehabilitation Engineering and Assistive Technology Society of North America, 2000) states that technology assists learners in daily living, communication and augmentative communication tools, environment control, leisure time recreational adaptations, mobility aids, prosthetics and orthotics.

Technological devices help to meet educational needs based on developmental delay, and which in future, would overcome disability, eliminating the need for the assistive devices in an individual's future. A learner must have technology to be able to function: augmentative communication devices such as a speaking keyboard would be a good example of a personally necessary item (Rehabilitation Engineering and Assistive Technology Sociaty of North America, 2000).

2.10.6 Inclusion and assistive technology in the teacher preparation

A commitment to technology is also needed to ensure that all prospective teachers are able to use educational technology to help all learners to learn. Teachers should have the ability to plan and design effective learning environments and experience, supported by technology. Additionally, teachers should be able to design developmentally appropriate learning opportunities that apply technology to enhance strategies that support the diverse needs of learners. Teachers must also understand the social, ethical, legal and human issues surrounding a technological source to enable and empower learners with diverse backgrounds, characteristics

and abilities to be able to facilitate equitable access to technological resources (Vaghun, Bos and Schumm, 2007:227; Lewis and Doorlag, 2003:152).

2.11 COOPERATIVE LEARNING

According to Mitchell (2008:42) and Putman (cited in Hick, Kersner & Farrell, 2009), cooperative learning involves learners working together in pairs or in small groups to achieve academic goals. It is a strategy that provides opportunities for learners with impairments and builds relationships with their able-bodied peers. It focuses on collaboration which involves learners working together to achieve a common outcome and working in mixed ability groups ensuring that everyone masters the materials to be learned.

Co-operative learning provides opportunities for learners at different levels of achievement to work together (Ashamen & Elkins, 1998:161). It is through co-operative learning that physically and /or mentally impaired learners can practise social roles as they work to solve problems, learn new materials or create objects and documents. Co-operative learning provides support to slow learners who are physically and/or mentally impaired (Department of Education, 1999).

Wood (2002:220-221) further indicates that for co-operative learning to take place, there must be positive interdependence, individual accountability and collaborative learning which is characterised by heterogeneity and teacher intervention. Putman cited (in Hick, Farrell & Kersner, 2009) posits that in cooperative learning there is a feeling that group members should work together to achieve a common goal; it is ‘we’ as opposed to ‘me’ thereby encouraging cooperative skills. In cooperative learning, learners need social skills to succeed in work and life. The teacher should provide social skills instruction by defining the skills, demonstrating the skills and setting up opportunities for practising the skills. These skills should be matched with the developmental level and needs of the learners.

Cooperative learning promotes simultaneous face-to-face interaction, participating actively in discussing ideas, making decisions and engaging in negotiations. Cooperative learning, as compared to individualistic and competitive learning, increases the academic achievement and social acceptance of learners with impairments. Learners engaged in cooperative learning experience more interpersonal interaction between learners with and without disabilities than in competitive and individualistic learning, providing an ideal context for social skills development. Learners accept and support one another and resolve conflicts constructively. In order for cooperative learning to be effective, the teacher must adapt the environment so that objectives for the group's activity are clearly specified and the group tasks and learning activities are clearly explained. In cooperative learning, a group is monitored carefully to determine whether learners need assistance. Thereafter, an evaluation of each group is conducted by the teacher to determine if the goal was achieved. In the initial stages of cooperative leaning, groups should be given short tasks that can be completed easily. The teacher also needs to be available in order to model skills and provide guidance. It is stated that building a more favourable impression of impaired learners by encouraging non-impaired learners to see the whole individual, rather than the handicap, cuts to the heart of the problem, since the non-impaired learners will not view the impaired learners as a different. Cooperative learning provides an answer to the problem because it creates feelings of belonging, support and acceptance. Non-disabled learners learn that the individual is more than the disability; differences are not only accepted but also appreciated. Putman (cited in Kersner, Farrell & Hick, 2009)

2.12 PEER SUPPORT PRACTICES WHICH CAN HELP LEARNERS WITH PHYSICAL AND/OR MENTAL IMPAIRMENTS TO COPE IN AN INCLUSIVE CLASSROOM

Peer support refers to those instances usually planned and under supervision or guidance of a teacher where learners are directly involved in organising peer

functioning. The support may require learners to listen to others read or 'teach' some curriculum aspect. Another important component of teaching accommodation is the development of peer support and peer tutoring. Peers are the most available resource in general education classrooms. Non- disabled learners are often creative problem-solvers and strong supporters of learners with developmental impairments (Hendrickson York & Van der Cook in Vaghun, Bos & Schumm, 2007:176-177).

2.12.1 Support practices

According to Wood (2002:233), peer tutoring offers a number of advantages to both tutors and tutees. Peer tutoring promotes interaction between the learners by allowing them to work with others because they communicate directly and in a straight-forward manner. Tutors easily remember where the problem was when they were learning materials and can therefore explain better. Both tutors and tutees tend to sharpen their academic skills as a result of viewing the material and both parties gain confidence in the process of learning.

According to Reddy et al., 1999 in Wood (2002:233) peer tutoring improves the academic performance of learners in basic skills such as spelling, the recognition of sight words and improving mathematic facts. Peer tutoring can improve the level of thinking skills, such as algebraic problem solving. It can also improve skills and safety in social studies Peer tutoring provides clear directions, positive and corrective feedback, and trained peers can establish techniques for teaching reading.

Peer tutoring, if planned carefully, structured and supervised by teachers can be an effective technique for increasing academic learning. Peer support, can be used to help learners with impairments to function more fully in school life. It also helps learners to improve their academic work. Through peer support, both parties gain, both in giving support (tutors) and receiving it (tutees). Peer tutoring is more effective than teachers' tutoring. It provides opportunities for learners to

experience individualised classroom support which is always available, as it should be. The use of peer support can greatly enhance the success of learners with physical and/or mental impairments in general settings.

2.12.2 Adapt the physical environment

In order for learners with physical and/or mental impairments to move about adequately, their classroom should be arranged to meet mobility requirements with aisles, crutches and canes provided to accommodate or include learners using wheelchairs. The aisles should be kept clear of debris and monitored regularly.

The teacher needs to verify that everything is accessible, such as door knobs and water fountains. Keller (2005:5) prefers the use of raised platforms and ramps for smooth access in the environment and teachers are supposed to lower chalkboards and corkboards for easy usage for impaired learners. Carpeted floors may impede mobility, but bare floors should not be slippery after they have been polished. In their discussion, Scott and Lucy (n.d.) state that the accessibility issue of the modification of physical facilities, tools and equipment, may present challenges to teachers. It must be noted that accessibility should be the main concern when serving learners with physical and/or mental impairments. The classroom climate should be welcoming and inclusive, with high expectations for all learners.

Cheminais (2004) states that the principle of learning and teaching underpinning personalised learning with regard to physical and/or mental impairments should set high expectations and give every learner confidence so that he/she can succeed. The principle of learning should be established over what learners already know and build on that knowledge. Additionally, the structure and pace of the learning experience should be challenging and enjoyable. The inspiration of learning through a passion for the subject should be the top priority for impaired learners.

According to Keller (2005:20) a set of mitigating strategies can be used which are appropriate for particular learners, but some strategies may not work for every learner especially orthopaedically impaired learners. The teacher can bring to the learner's attention science role models with disabilities similar to that of the learner; for example the famous disabled physicist, Stephen Hawking. If the functional limitation involves the lack of arm use, then the use of Dragon-Dictate may be extremely useful for such things as computer aided drafting, design and other computer applications. There must be arrangements for library personnel to assist access to card catalogues, bookshelves, microfish and other equipment. Classroom accessibility must be considered so that learners are able to get to class on time.

2.13 ORIENTATION TO ENVIRONMENTAL DESIGN (CLASSROOM CLIMATE)

According to Mitchell (2008:105) the classroom climate is a multi-component strategy comprising the psychological features of the classroom. Wood (2001:100) asserts that the terms refer to the prevailing attitudes of learners and teachers toward the process of learning. The climate is a crucial determinant of successful teaching and learning which teachers tend to overlook. Classroom climate is a significant determinant of learners' achievement and teachers' effectiveness, as they learn and teach better when they have a positive perception of the classroom environment. The key principle of classroom climate is to create a psychological environment that facilitates learning; for example, personal development and growth will be enhanced. The positive climate of the classroom is related to the school environment and both settings should stimulate pride and response and discourage distraction. Teachers should remain vigilant about how learners with special needs are progressing regardless of the settings. Learners who are impaired require more structures and guidance than their peers. Therefore, main task of the teacher is to help these learners to learn how to manage and have control over their behaviour in less structured environments.

2.14 STRATEGIES THAT CAN HELP TEACHERS TO ADAPT INSTRUCTIONAL MATERIALS

Mastropieri, Vos and Struggs (2007:64) state that some courses present obstacles to the full participation of impaired learners; therefore, every effort should be made to integrate such learners by instructional modifications. The teacher should prioritise objectives for learners with impairments in an inclusive classroom and teach directly with these prioritised objectives in mind. The teacher should adapt the instruction by employing clear, organised presentations, providing concrete, meaningful examples and activities, provide frequent reviews and encourage independent thinking. He/she should communicate with families to further his/her understanding and obtain additional information on how learners work best. The teacher should adapt evaluation methods by using individual testing, portfolio assessments, tape or video recording.

2.15 ENHANCEMENT OF LEARNING IN THE CLASSROOM

2.15.1 Providing an optimal programme by addressing individual needs

Kishida and Kemp (2006:116) highlight the fact that most learners with impairments find it difficult to engage in planned activities. Thus, programmes should be modified by redesigning them to be briefer and include more systematic teacher intervention. Teachers should structure and design lessons to meet the needs of each learner; for example:

- The teacher should establish a positive learning environment that fosters high self-esteem. In other words, an environment that is most appropriate for the development of physically and/or mentally impaired learners.
- The teacher should have a positive attitude towards learners by developing care, empathy and genuine relationships.

- The teacher should encourage a supportive, flexible environment that can include or accommodate learners if they experience difficulty with social interaction; for example, working in pairs or participating in games.
- The teacher should have realistic expectations and provide the right balance between supporting learners and enabling them to reach their full potential.
- The teacher should plan activities based on the learners' each performing a task in turn.
- The teacher should encourage positive thinking, focus on what the learner has achieved and provide praise and encouragement.

Mitchell (2008:107); Westwood (2007:66 opines that there should be clear, consistent and essential rules and boundaries in an inclusive classroom. The rules should also be negotiated jointly by the children and the teacher and learners should appreciate why rules are necessary and should agree on the consequences of breaking the rules. Some learners with special education needs might have difficulty in comprehending and acting on social rules; therefore, the teacher should pay attention to setting up essential rules, such as teaching learners what acceptable and unacceptable behaviour involves, as well as providing opportunities for them to practise correct responses. Ideally, learners should arrive at rules through a process of negotiation that involves learners as well as teachers, the latter seeing their reinforcement as the responsibility of both parties. The teacher should, furthermore, keep such rules and expectations at a minimum to ensure an orderly learning environment, and recognise that classroom routines, rules and expectations make a significant contribution to the quality of the learning environment.

2.15.2 Material development for physically and/or mentally impaired learners

The concrete presentation of instructions and the assessment process are necessary for many learners with physical and/or mental impairments. There

should be an extrinsic use of graphic and visual information to assist learners with impairments to synthesise the materials instructions and the assessment process for performance assessment (Faculty Staff guide to the American Diability Act, 2000:1). The following strategies can be employed by the teacher for the presentation of materials:

- The teacher should modify expectations based on learners' needs.
- The teacher should give alternative assignments rather than long written assignments.
- The teacher needs to provide written and verbal direction with visuals if possible.
- The teacher should break long assignments into small sequential steps and monitor each step.
- Depending on the degree of impairment, the teacher should provide opportunities to practice skills in both environments.
- The teacher should consider alternate activities or exercises that can be utilised with less difficulty for the learners but have the same or similar learning objectives.
- At the appropriate level of communication, the teacher should review and discuss with the learners the steps involved in a research activity. The teacher should think about which step may be difficult for the specific functional limitations of the learner and jointly devise accommodations for that learner.
- The teacher should provide opportunities to practise skills in both normal environments versus contrived situations and natural environments, as appropriate.
- The teacher should allow learners to use tape recorders, computers, calculators and dictation to obtain and retain assignment success.

- The teacher should also limit the number of concepts presented at one time and provide incentives for beginning and completing material.

2.16 RENDERING OF EDUCATIONAL SUPPORT SERVICES

Consultation and support services should be offered to assist the integration of learners' needs with the resources available throughout the school to eliminate problematic barriers and ensure an accessible academic environment. Dean (1996:144) emphasises that specialists should be able to provide an independent view of the learners' needs. They should possess a thorough knowledge of good practices in other schools and must have access to resources to help learners. Their specialised training should enable them to contribute to a comprehensive assessment of the learners' needs. (Faculty Staff guide to the American Disability Act, 2000:23) indicates that learners are eligible to:

- Referrals and advocacy;
- Special equipment;
- Support services;
- Special equipment; and test proctoring.

2.16.1 Rendering of educational support services to increase access and generate opportunities that support learners

Hay (2003:135); Engelbrecht and Green (2001:18) agree that inclusive education is a reality in South Africa and that special education brings along major philosophical shifts for teachers and support staff. Hay (2003) is of the opinion that the success of the implementation of inclusive education greatly depends on the quality transformation of education support services. Knowledgeable professionals should support teachers' learning in the community which includes psychologists, psychiatrists, physicians, social workers, nurses and occupational therapists who are the real support services providers.

According to Swart (2008:100) resource personnel as in the foregoing discussion, play an important role in supporting physically and/or mentally impaired learners. Partnerships with these professionals benefit learners and promote effective learning. Hay (2003:136) further highlights the fact that support for staff members should focus on assisting learners in one inclusive classroom and not place learners in a separate setting. Prinsloo (2001:346) also recommends that learners should be accommodated in the mainstream classroom and should be provided with a supportive and effective learning and teaching environment. Westwood (2007:204) corroborates this by asserting that a collaborative consultation model should be adopted based on the premise that more is to be gained by classroom teachers working collaboratively with other professionals to reach solutions to their problems.

2.17 TEACHING STRATEGIES THAT CAN IMPROVE MOTIVATION AND REINFORCEMENT FOR LEARNERS WITH PHYSICAL AND/OR MENTAL IMPAIRMENTS

According to Farrel, Kershner, and Hick (2009:60) many learners with physical and/or mental impairments lack motivation and tend to withdraw from learning and playing with others. The lack of motivation often stems from low self-esteem and limited social skills. One needs to remember that learners are often fragile mentally and require a great deal of confidence boosting. The goal should be to help learners to develop a CAN DO attitude, which can set learners up for success. According to Vaghum, Bos and Schumm (2007:321), the following strategies can be used to improve learners' motivation: the teacher can create an orderly and safe learning community. He or he must avoid practices that tend to isolate and stigmatise at-risk learners such as mentally impaired learners. The teacher should let learners know their academic mission and the importance of what they are learning. Materials and tasks must be chosen at an appropriate level so that learners can be successful. One should develop assignments based on learners' interests.

There must be the creation or provision of a comfortable atmosphere in which learners are not afraid to take risks or ask for help. Activities should be developed that call for co-operation, rather than competition. He or she should present lessons and assign learning activities that are fun.

Mariga and Phachaka (1998); Westwood (2007); 70-71) asserted that the classroom setting needs to interest learners so that they participate as active members of the class. The teacher should find out what motivates learners and use these motivational factors as positive reinforcement for the successful completion of a task. For example, the teacher can use rewards because learners learn effectively when they are motivated. If social reinforcement such as praise, smiles and an overt approach are not effective, it will be necessary to apply more tangible rewards selected according to learners' personal preferences. The teacher can use tokens to reinforce good behaviour or sound academic work as class tokens serve as a means of providing an immediate concrete reward. It is important that teachers find out what interests learners and teach through their interests. All learners learn differently, so it is the responsibility of the teacher to find out how each learner learns and teach through modality.

McNamara and Moreton (1993:24) contend that praise is a very important tool for the teacher to use as it provides a statement which is treasured as a compliment that the teacher makes in his/her own words. Mastropieri, Vos and Scruggs (2007:210) state that praise increases motivation and effect because learners feel more valued if they are rewarded for achievement. It encourages positive feedback for learners' efforts and demonstrates that their work is being appreciated. Praise from teachers helps learners to be independent. McNamara and Moreton (1993:24) further indicate that praise also helps learners to ask for help from one another to support a co-operative ethos within the classroom, which is important for learners with special needs. Teachers should ensure that all learners are treated equally, regardless of their perceived capability and the teacher should find time to let learners know that they are doing well. Teachers

should also help learners to direct their own learning. Learners with mild mental impairments, like their counterparts in general education, tend to perform better when motivated to do so. Learners who are motivated and reinforced usually see the purpose of learning and as a result demonstrate better skills and performance.

It is also important to ensure that positive reinforcement is targeted and specific. The teacher should not give the learners vague praise, such as “Well done!” but she/he should tell the learners what they have done well; in that way, the learner will know that the praise is warranted and genuine. Instructional materials should motivate, invite and maintain attention novelty and active participation in learning (Gabriel & Warren, 1993:82). One of the best ways to motivate learners is to employ their interests in the curriculum. The teacher should always include the interests of the learners in their lessons, as trying to learn the interests of the learners is a powerful way of reinforcing core curriculum concepts (Cooley, 2007:31-32).

According to article three of the Declaration of the UNESCO (1998: 13), the teacher teaching learners with physical and/or mental impairments should be able to use the following competences:

- The teacher should use and interpret a wide range of individual assessment measures.
- The teacher should make and record objective observation of learners’ behaviour in a wide range of structured and unstructured situations.
- The teacher needs to design, implement and evaluate individual programme plans based on assessment and observation.
- The teacher should possess skills for working with parents, such as applying a range of counselling skills needed in the home.
- The teacher should be competent in working with other professionals and in learning and acquiring beneficial information for the learners.

- The teacher has to have a clear understanding of the general curriculum and the working capacity of the learners so as to make the special adaptations needed for developing and implementing programmes for handicapped learners.

2.18 MANAGEMENT FOR SOCIAL DEVELOPMENT AMONG LEARNERS WITH PHYSICAL AND/OR MENTAL IMPAIRMENTS

A key factor in the process of providing social development among learners with physical and/or mental impairments is management. To improve the standards of learners with physical and/or mental impairments, as far as their social skills development is concerned, there is a need to put in place effective management practices for all of those who work in the attended schools (Quist, Nyark & Deku (n.d.). Management should focus on the development of good social and relational skills in an environment where all learners feel that they can express themselves.

A teacher's competency should be seen as an important factor in management and in the social skills development in learners with physical and/or mental impairments. Teaching physically and/or mentally impaired learners entails a great deal of additional work and responsibility. Teachers should assume the role of class aids, nurses, social workers and therapists. A great deal of preparation should be undertaken by teachers as they plan adaptation activities and materials that ensure learners' participation (Oliver & Williams, 2006:232). Meese (2001:86) further indicates that some impaired learners require instruction in social skills while others require less intensive instruction and practices. These skills should be carefully constructed through an individualised programme. Teachers should choose skills incorporating the teaching procedures that follow.

The teacher should, for instruction, select only those skills that will maximise the learners' success such as age-appropriate skills which should be validated for success. Unambiguous and unequivocal statements regarding the skill to be learned and the importance of learning this skill should be provided so as to

improve interactions within peers. Skills should be modelled for the learners with modelling being conducted using video tapes, audio tapes or live demonstrations (Meadows, Neel, Parker & Timo, in Meese, 2001: 486).

2.18.1 Building social skills

Quist, Nyark and Deku (n.d.:142); Hollinger (cited in Meese, 2001:483), define social skills as the ability in a given social context to interact with others in specific ways that are socially acceptable or valued and at the same time, are personally beneficial to others. Ainscow, Booth and Dyson (2006:87-88); Walker and his colleagues (in Meese, 2001) view social skills as a collection of competencies that allows learners to initiate and maintain positive interpersonal relationships and to cope with different social situations and environments. According to Cooley (2007:37), learners with physical and/or mental impairments often have poor social skills. The author encourages teachers to build social skills in classroom settings in order to develop rapport and a sense of community among learners.

According to McNamara and Moreton (1993:83), learners with physical and/or mental impairments experience intense fear when asked to join peer groups. They also experience rejection and, as a result, are vulnerable to failure at school. These learners need to experience success and acceptance, together with an acknowledgement of their real feelings. They need a trusting environment and relationships where they feel accepted by their teachers and peers. In order to help these learners, the teacher should be genuine about the feelings that they display in the classroom. Teachers should encourage and respect them since these learners are always sensitive to genuineness. It is advisable to ensure that they feel they can share their feelings in safe and trusting environments. Cooley (2007) suggests the following for building social skills among impaired learners.

2.19 HELP LEARNERS TO DEVELOP CONFLICTS RESOLUTIONS SKILLS

It is the responsibility of the teacher to show learners that there are respectful and positive ways to deal with anger and other strong feelings. Learners should be

taught basic calming techniques. Teachers should also talk about the importance of expressing feelings and put in place a coping plan for times when learners feel on the verge of losing control. Teachers should show learners constructive ways to end disagreements and must also reinforce basic concepts of sharing and compromise. They should also provide learners with specific tools and cultivate a sense of decorum and appropriate etiquette that they can use to get along with others. However, it is important to take cognisance of the fact that learners with physical and/or mental impairments are often immature for their age. Their regular peers may take advantage of them and engage them in activities that are dangerous; thus, it is very important to teach impaired learners skills that they can use to resist peer pressure and make positive personal choices (Cooley, 2007).

2.19.1 Specific teaching activities to develop skills

According to Mather and Goldstein (2008:176), effective teachers recognise the number of interventions that can be used to create a positive school climate where learners' social and emotional growth is enhanced, and where learners are genuinely excited and motivated about learning. The teacher should take note that learners' success has as much to do with the classroom environment as to do with the attitudes that learners initially bring to the environment. The teacher should also accept learners as they are; usually, teachers fail to accept learners for who they are, responding to them as if they are a homogeneous group and thereby failing to establish particular and individualised expectations of learners. Consequently, these learners begin to feel that they are not accepted. The teacher must attempt to understand each learner's strengths, vulnerabilities and other factors that will assist him/her to learn.

Additionally, the teacher must help learners to cope with mistakes and failure. Usually learners worry about making mistakes and appearing foolish. Most impaired learners are typically more anxious about making mistakes than their classmates and as a result, they retreat from challenging tasks. Teachers should be aware of the comments they write on learners' papers as it is important to

provide positive and encouraging remarks to a learner (Mather & Goldstein, 2008:183-184). Providing opportunities for success and emphasising feelings of importance encourage the development of social skills, as well as setting up activities in which learners may practise these skills (Mariga & Phachaka, 1999:15).

2.19.2 Developing social skills among physically and/or mentally impaired learners

Quist, Nyark and Deku (n.d):141-142) state that one's progress in life whether at school or in later life depends upon one's ability to master and use social skills. Kaplan (1996, in Quist, Nyark & Deku, (n.d.):142) stress the fact that social skills should be taught and one of the goals of teaching should include the development of skills that will enable the individual to function in a school she or he attends. Social skills are critical in helping individuals with physical and/or mental impairments to navigate the complex vicissitudes of life. Research indicates that learners who get support from teachers show improvement in social skills acquisition and competence.

From their research, Quist, Nyark and Deku (n.d) remarked that there must be support for teachers in special schools in the form of incentives, in-service training and professional development which are essentially, the key factors to achieving the development of social skills in learners with physical and/or mental impairments. The above authors mention that learners should be prepared adequately to become productive members of society by equipping them with social skills.

2.19.3 Social skills training

Social skills development integration forms an interactive process of facilitating learning for learners with disabilities. When developing and designing social curricula for learners with physical and/or mental impairments, they should promote social competence, as well as social skills (Gabriel & Warren, 1993:80).

Social skills facilitate interpersonal interaction and maintain a degree of independence in daily activities and the acquisition of these social skills by impaired learners, helps them to use these skills at the right time and the right place by showing social perception, cognition and Judgement of how to adjust one's behaviour to meet different situations e.g. coping with frustrations and managing conflicts, accepting correction without anger, listening to others and show interest (Ainscow, Booth and Dyson, 2006:89; Gabriel & Warren, 1993:80).

According to an article by Longdom (n.d.), the development of social skills helps learners to participate in school activities. Social skills help learners to discover their strength and interests. They should participate in extracurricular activities and organisations which help to build social skills and to make friends. Through the encouragement of the teacher, learners who are shy can learn to interact with others. Gabriel and Warren (1993:71) posit that the development of social competence is a critical component of life adjustment. Social skills should be recognised as a key component to be included in intervention programmes for learners who are physically and/or mentally impaired.

2.20 CONCLUSION

In this chapter the researcher reviewed an extensive literature on teaching strategies that can ensure inclusivity of learners with physical and/or mental impairments in an inclusive or mainstream classroom. The researcher focused amongst other things such as i) developing social skills among physically and/or mentally impaired learners. ii) Rendering of educational support services to support learners' iii) the use of peer support practices in an inclusive class. iv) the use of computer such as technology to support learners. v). lastly, modification for the curriculum in order to suit the needs of disabled learners and involvement of parents in the education of their children.

The next chapter looks at specifically research methodology which was used in this study.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 INTRODUCTION

In the previous chapter namely, chapter one, the topic for discussion was introduced, the problem statement was defined and aim of the study stated. Chapter two focused mainly on the various sources in the literature review drawn from examples, journals, textbooks and the internet. In this chapter, the researcher reports on the research methodology employed in the research study, the population and the sampling size, sampling techniques and the data collection procedures which were employed in order to test the aims and hypotheses of this study.

3.2 RESEARCH METHODOLOGY

Before describing the methods employed in this study, it is important to first define what research is. Johanson (2002) points out that research is a way of seeing, a procedure used to view and re-view the world in order to understand it. Research is the systematic method used to collect data to answer questions. Mertens (2010) further defines research as one of many ways of knowing or understanding. Opie (2004:3-4) analysed that research is something that requires the collection of large amount of details from which results can be generalized and hypothesized and with an emphasis on objectivity rather than on subjectivity.

Research methodology is defined as a philosophy or the general principle which will guide ones research. It is a study of the logic or rationale underlying the implementation of the scientific approach to the study of reality (Dawson, 2006:14). Furthermore, Sikes (2004:17) supports the above author that methodology refers to the theory of obtaining knowledge and the best ways,

methods or procedures through which data will provide evidence for the construction of knowledge about whatever is being researched. The purpose of research methodology is to familiarise students with the scientific method as a way of studying the behaviour of the phenomenon (Duncan, 1998:1).

In this study, the researcher used a combination of both quantitative and qualitative methods to gather relevant data. Questionnaires, observations, extensive documentary search, as well as informal discussions with respondents serve as methods of data collection that will be used in this research study. Neumann (1994:324) and Denzin in Babbie and Mouton (2001:275) advocate the use of triangulation of methods as the combination of different methodological techniques which can assist researchers to overcome weaknesses in specific techniques. Babbie and Mouton (2001) view this technique as one of the best ways to enhance reliability.

The next section describes in detail the two most common methods used in research namely, the quantitative and qualitative approaches.

3.2.1 Quantitative research method

According to Sullivan (2001:21) and McMillan (2008:12), quantitative research means any type of research that uses numbers, counts and measures of things. Quantitative research relies on the measurement to compare and analyse different variables. It is this approach to research in the social sciences that is more highly formalised and more explicitly controlled, with a range that is exactly defined and which, in terms of the methods used, is relatively close to the physical sciences (Bless & Higson-Smith, 2000:37).

The quantitative research method allows the researcher to collect a lot of information within a short period of time using questionnaires (McMillan, 2008:1). In addition to this, the quantitative method gives the respondents the opportunity to fill in the questionnaires without any interference from the researcher. Quantitative data can also be analysed easily through tables; it is highly developed and is built

on applied mathematics. In quantitative research, researchers do not begin the data analysis until they have collected all the data and condensed them into numbers (Neuman, 2006:459). They manipulate the numbers in order to see patterns or relationships or to represent empirical facts in order to test abstract hypotheses with variable constructs. The quantitative approach contributes to improving the trustworthiness of the results of the study and the subsequent recommendations. Additionally, the quantitative method has no direct influence on what has been selected for study, because it cannot be influenced. This means that the researcher is unable to manipulate any of the phenomena that may influence subject performance (McMillan, 2008).

Sullivan (2001:20) argues that quantitative observation is a precise way of discovering and describing social phenomena. Social scientists can gain an objective and precise assessment of social life through numbers and counts involving how often things occur. The above author argues that "human experience has subjectivity to it – the very personal meanings and feelings that people have about themselves and what they do. These meanings can be captured very well through numbers or counting. They are better understood through narrative descriptions of people going about their daily routines or through broad ranging interviews.''

Quantitative researchers tend to rely more heavily on deductive reasoning, beginning with hypotheses and then drawing logical conclusions from them. Quantitative research measures objective facts and focuses on variables, rather than on interactive processes. Data are presented in a numerical way from precise measurement and data are analysed statistically through tables or charts. The quantitative paradigm is based on positivism which takes scientific explanation to be homothetic. Its main aims are to objectively measure the social world, to test hypotheses and predict and control human behaviour. Quantitative research uses the deductive form of reasoning. The quantitative researcher believes in an objective reality which can be explained, controlled and predicted by means of

natural laws. In terms of epistemology the quantitative researcher sees himself as detached and not as part of the object that he studies. The researcher can therefore be objective; he cannot influence the study object and is not influenced by it. In terms of methodology, the quantitative paradigm emanates from the physical sciences in that questions and hypothesis are stated and subjected to empirical testing to verify them (Leedy and Ormrod, 2005:96; De Vos, 1998:241-242).

Quantitative research generally involves the collection of data from large numbers of individual units, frequently with the intention of projecting the results to a wider population (Martins *et al.,* 1996 cited in Coldwell and Herbst, 2004:13). Numbers provide the universal language that can be easily understood and that gives some description of some aspects of most problems using numbers. Emphasis is placed on the collection of numerical data, the summary of those data and the drawing of inference from the data. De Vos (1998:115) mentions that quantitative research is highly formalized, as well as being more explicit and we cannot control and measure feelings, values and beliefs through the quantitative method, but we can resolve qualitative techniques (Coldwell and Herbst, 2004:17).

For the purpose of collecting the quantitative data, a semi-structured questionnaire was used as a measuring instrument.

3.2.1.1 Characteristics of quantitative research

In quantitative research the aim is to clarify features, count, and construct statistical models in an attempt to explain what is observed. The researcher knows clearly in advance what he/she is looking for. In quantitative research, data are in the form of statistics and numbers and all aspects are designed before the data are collected. The researcher uses tools such as a questionnaire or equipment to collect numerical data. Objectivity seeks precise measurement and an analysis of the target concepts e.g. surveys, questionnaires. Quantitative data are more

precise because one can test the hypothesis. The facts are value free, unbiased and measurable (Nell, 2007:1).

In quantitative research, the researcher tests specific hypotheses and statistical methods across the spectrum of natural and social research (Neuman, 2006:458). The researcher collects quantitative data based on precise measurement using structure and validated data. Quantitative research identifies statistical relationships and generalised findings (Nell, 2007:1).

The following section focuses on the next method namely**,** the qualitative approach.

3.2.2 Qualitative research method

According to McMillan (2008:272) and Sullivan (2001:20-98), qualitative research is described as a tradition of research techniques, as well as a philosophy of knowing. The term qualitative refers to a number of approaches that share some common characteristics. Qualitative research involves data in the form of words, pictures, descriptions, or narratives. Berg (2001:3) pronounces that a qualitative study refers to the meanings, concepts, definitions, characteristics, symbols and in the broadest sense to research that produces descriptive data; people's own written or spoken words and observable behaviour.

Qualitative research consists of a set of interpretive materials and practices that make the world visible. Qualitative involves studied use and collection of variety of empirical materials, life story, interview, artifacts, observational, historic, interactional, visual texts that describe routine problematic moments and meanings of individual lives (Mertens, 2010:22).Leedy and Ormrod (2005:96) state that in a qualitative study, the researcher formulates a theory by inductive reasoning; for example, observing situations and attempting to support those theory by drawing and then testing the conclusion that follows logically from it. The researcher sets aside his/her own beliefs, perspectives and predispositions and

the data collection techniques include open- ended questions which give an idea of the social settings.

In qualitative research as a general rule, information is considered qualitative in nature if it cannot be analysed by means of mathematical techniques (De Vos, 1998:15). It can be used to examine the feelings and motivations of users.

In using the qualitative method in this study, where the needs and difficulties confronting these learners are identified, an extensive literature study on the documented materials was used as the frame of reference and the primary source of data. This data was supplemented with data collected by the researcher from his informal discussions with some of the learners with either physical or mental difficulties. During discussion with the learners the researcher made tape recordings of the discussions and made notes of the sections that contained particularly useful information for future analysis and interpretation. But before the discussion with learners parents were requested to allow the researcher to conduct the study. Parents guaranteed that information obtained will not be used for any other purpose other than the study. Detailed characteristics of the qualitative approach follow below.

3.2.2.1 Characteristics of qualitative research

In contrast to the quantitative method, qualitative research uses qualifying words, or descriptions to record aspects of the world. According to Sullivan (2001:2) qualitative research involves data in the form of words, pictures, descriptions or narratives, as well as studying documents, diaries, journals, other written materials and non-written qualitative data, such as audiovisual materials or artefacts. Leedy and Ormrod (2005;95-96) further emphasise that qualitative research tend to rely more heavily on deductive reasoning, beginning with hypotheses and theories and then drawing logical conclusions from them. The last-mentioned authors also try to maintain objectivity in their data analysis, conducting predetermined statistical procedures and using objective criteria to evaluate the outcomes of these

procedures. They often formulate theory by inductive reasoning e.g. observing situations and attempting to support their theory by drawing and testing the conclusions that follow logically from it.

In qualitative studies the focus is on the control of all the components of the actions and representations of the participants; the variables are controlled and the study is guided by an acute focus on how variables are related. The researcher plans and executes this control in the way the study and its instruments are designed. Respondents or research subjects are usually not free to express data that cannot be captured by the predetermined instruments. In qualitative studies, the variables are usually not controlled because it is exactly this freedom and natural development of action and representation that the researcher wishes to capture; the purpose is to understand and also to explain in argument by using evidence from the data and from the literature about what the phenomena or data used are studying (Henning, Van Rensburg & Smith, 2004:3). Similarly, Neuman (2006:458) maintains that qualitative data analysis is less standardised and that qualitative research is often inductive; the researcher creates new concepts and theories by blending together empirical evidence and abstract concepts.

McMillan (2008:11-12) and Shaw (1999:13) further mention the characteristics of qualitative research by pointing out that the whole and the particular are held in tension. The researcher attempts to capture data on the perceptions of local actors from the inside through the process of deep attentiveness and of empathetic understanding. Members and categories are kept in the foreground through evaluation. The main task is to make explicit the ways people in a particular setting come to understand and account for taking actions and how they manage their day-to-day situations. Qualitative data are not so much about behaviour as about actions. This does not mean that behaviour is not important; behaviour should be attended to and with some exactness because it is through the flow of behaviour or more precisely, social actions that cultural forms find articulation.

In qualitative research, relatively little standardised instrumentation is used, especially at the outset. The researcher is the main instrument in the study, as qualitative field work is not straight forward. Most of the analysis cannot be done using mathematical techniques, but is done in words. Persuasion and judgement by reason are deeply involved and in qualitative evaluation, the facts never speak for themselves (Coldwell & Herbst, 2004:13).

In a qualitative study, the researcher studies behaviour as it occurs naturally and the data are collected directly from the source. Additionally, the researcher obtains a detailed narrative that provides an in-depth understanding of contexts and the behaviour of respondents. The focus is on why and how behaviour occurs, as well as on the participants' understanding meaning and its interpretation. The research design evolves and changes as the study moves forward. The researcher generates the hypothesis and grounded theory from data collected during field work. In qualitative research, behaviour is fluid, dynamic, situational, social, contextual and personal. The researcher examines the breadth and depth of the phenomena to learn more about them; he/she studies behaviour in its natural environment and collects qualitative data through in-depth interviews, participant observation, field notes, and open-ended questions. The researcher is the primary data collection instrument; presenting multiple perspectives which are rich, time consuming and subjective in nature. In qualitative research the individual interpretation of events is important e.g. the use of participant observation in in-depth interviews. The research design emerges during the early phases as the study unfolds. The reason the researcher uses the qualitative method is that he/she has the opportunity to consult the literature in cases where it is not easy to interview the respondents, such as learners with physical and/or mental impairments. Furthermore, the researcher is afforded the opportunity to observe the behaviour of the respondents and probe for further information (Nell, 2007:1).

3.2.3 Justification for using qualitative and quantitative methods

According to McMillan (2008:311), qualitative and quantitative methods provide more comprehensive data and also include multiple approaches to compensate for any disadvantage associated with using a single method. In addition, the qualitative and quantitative approaches allow for the investigation of different types of questions, as well as the examination of complex research questions. McMillan (2008) further indicates that qualitative and quantitative methods include triangulation to enhance the credibility of the findings. Moreover, the qualitative and quantitative methods provide reliable and precise measurements of the data collected, together with providing insight into the investigation.

However, the above mentioned two methods have certain disadvantages which the researcher needs to identify in order to conduct and interpret results from both the quantitative and qualitative designs. The researcher may require a more extensive data collection, as well as more time and resources. It is also difficult to combine approaches when writing reports and forming conclusions. Through` qualitative and quantitative methods approach the researcher discovers aspects that might have been missed if only a quantitative or qualitative approach had been used (McMillan, 2008:213).

3.3 RESEARCH DESIGN

The research design refers to the strategy or plan of carrying out the study. It is a detailed plan outlining how observations will be made and through it, the researcher describes how the participants will be involved with a view to reaching conclusions about the research problem (Coldwell and Herbst, 2004:36; and McMillan, 2008:11). Research design in short, specifies methods and procedures for the collection, measurement and analysis of data and always addresses certain key issues, such as who will be studied, how people will be selected, and what information will be gathered from or about them (Bless, Higson-Smith & Kagee, 2006:71; Sullivan, 2001:255).

In this study, the research design adopted for the purpose of addressing the research questions followed both the qualitative and quantitative approaches, and the data was collected in two phases. Firstly, for the quantitative data collection, a survey was used. Firstly, for the quantitative data collection, the researcher found it appropriate to choose the survey method for addressing the concerns of this investigation because it has the potential to reveal significant characteristics in the large population. The researcher distributed semi-structured questionnaires in a multiple Likert-rating scales to (N-211) randomly selected teachers teaching physically and/or mentally impaired learners of primary schools in the Berea and Maseru district of Lesotho. An extensive literature study was used as a frame of reference and the primary source of the data for the compilation of the questionnaire. A crafted questionnaire intends to find out whether teachers experience problems at their respective schools with regard to accommodating or including learners with physical and/or mental impairments.

Sullivan (2001:255) defines a survey as a data collection technique in which information is gathered from respondents by having them respond to questions or statements in order to determine the current status of that population, with respect to one or more variables. Sullivan (2001) further stipulates that a survey typically involves collecting data from large samples of people. Surveys involve presenting respondents with a series of questions to be answered which may address matters of attitudes and opinions, future expectations or virtually any other kind of information that can be elicited from people. Additionally, surveys also measure what people say about their thoughts, feelings, and behaviour. It involves collecting data from large samples of people; it is ideal for obtaining data representative of populations too large to be dealt with by other methods. A survey presents respondents with a series of questions to be answered through people's responses to questions or statements (Sullivan, 2001:255).

Secondly, for qualitative data, this phase included the use of informal discussion and the observation of physically and/or mentally impaired learners. The

researcher talked directly or informally to the learners in order to obtain first-hand information concerning the difficulties learners experience in their classrooms. The researcher also consulted the literature on documented materials for more details in order to address the research questions. The aim of using informal discussions is to get 'under the skin' of the learners to reveal their opinions and experiences in mainstream classrooms. The results obtained from this study will hopefully clarify the problems encountered by these learners.

3.4 RATIONALE FOR THE CHOICE OF THE STUDY

There is a wide-spread assumption that most teachers do not possess sufficient strategies to accommodate learners with physical and/or mental impairments in the mainstream schools in Lesotho. The researcher therefore found this perception interesting and worthy of research; therefore, he decided to pursue the subject by undertaking a detailed investigation. The objective is to make suggestions and recommendations that will assist in formulating better strategies that teachers can use to accommodate learners with impairments in their classes.

The next section looks at the population and sampling technique adopted in this study.

3.5 POPULATION AND SAMPLE SIZE

The following table below shows the breakdown of the schools of learners with physical and/or mental impairments in the Berea and Maseru districts of Lesotho, followed by more details clarifying the population and sample size of the study.

Table 3.1: List of participating schools (sampled population).

Name of the school	MI	PI	TOTAL
Seleso primary	16	15	31
Hoohlo primary	3	7	10
Maseru LEC primary	3	7	10
Itekeng primary	4	5	9
Masianokeng primary	0	1	1
Morija primary	12	4	16
Nyokosoba primary	2	1	3
Roma primary	5	1	6
Qoaling primary	10	6	16
St. James	10	5	15
St. Bernadette	9	1	10
Mpho community	9	3	12
T.Y. L.E.C.	1	3	4
Bale primary	1	5	6
Tsoellang primary	1	1	2
Mesapela primary	1	1	2
Sion primary	1	6	7
St. Cecilia primary	2	0	2
Bereng L.E.C. primary	2	3	5
Holy Family primary	2	1	3
Mothebesoana primary	1	0	1
Lekokoaneng primary	2	2	2

SOURCE: SPECIAL EDUCATION REPORT 2009: MASERU AND BEREA DISTRICTS STATISTICS.

PI - physical impairments MI - mental impairments

Bless and Higson-Smith (1995:87) post that population is the set of elements on which the research focuses, and the results obtained by testing the sample should be analysed. The target population consists of teachers teaching physically and/or mentally impaired learners in the Berea and Maseru Districts of Lesotho. The target population sample for this study consists of (N-211) randomly selected primary school teachers and (N-10) conveniently selected learners. The randomly sampled population originates from a total of 22 primary schools from both the Maseru and Berea districts which have learners with mental and/or physical impairments.

3.5.1 Delimiting the Population

Before the researcher decides how large a sample should be, he/she should find his/ her population and decide whether it is finite or infinite; the precision of the estimates he/she wishes to achieve; the confidence he/she needs to have in the findings being accurate or correct; the number of variables that have to be examined simultaneously; and how heterogeneous the population sample is. If the sample is too small, the results of the study may not be a generalisation to the population and may not be the same result as might be obtained from the entire population. If the sample is too large, the wrong decision can be made concerning the validity of the hypothesis (Gay & Dielb, 1992:140).

As indicated earlier, the population of this study involves (N=211) teachers of learners with physical and/or mental impairments in selected primary schools in the Berea and Maseru Districts of Lesotho. The sample was therefore obtained from the population. Bless, Higson-Smith and Kagee (2006: 99) caution that good sampling implies:

1. A well-defined population; and
2. An adequately chosen sample and an estimate of how representative of the whole the sample is; that is, how well in terms of probability the sample statistics conform to the unknown population parameters.

The major reason for studying samples rather than the whole group is that the group is sometimes so large that it is not feasible for study purposes and it would be practically impossible to collect data from, or to test, or to examine every element. Even if it were possible, it would be prohibitive in terms of economic factors such as money, time, costs, and other personnel or human resources. Studying the sample rather than the whole population is likely to lead to more reliable results because there would be less fatigue and fewer errors in collecting the data. Selection should be carried out in accordance with the necessities of the sampling theory; the data obtained should accurately pertain to the entire setting. The sampling theory is the scientific foundation of these everyday practices. It is a technical accounting device to analysed the collection of information, to choose, in an appropriate way, the restricted set of objects, persons, events and so forth from which the actual information will be drawn (Sullivan, 2001:186).

3.5.2 Sampling procedure

Sampling is a selection of the number of units for a study in such a way that the units represent a larger group from which they were selected. Sampling refers to the group of participants or subjects from whom data are collected. The purpose of sampling in quantitative studies is to obtain a group of participants who will be representative of a larger group of individuals or who will provide target responses (McMillan, 2008:111).

According to McMillan (2008:123) there are different ways of sampling; for example, simple random sampling, interval or systematic sampling, stratified sampling, and cluster sampling or multi-stage sampling. The sampling procedure used in this study is stratified random sampling.

3.5.3 Stratified random sampling

Stratified random sampling is the process of selecting a sample in such a way that the identified groups in the population are presented, which ensures that the sample reflects the population. The stratified sample is obtained by independently selecting a separate simple random sample from each population stratum. The

population can be divided into different groups based on some characteristics and variables. This sampling type, which is the most efficient, is a good choice when differentiated information is required regarding various strata within the population known to differ in their parameter. Stratified random sampling is a modification of either simple random or systematic sampling in which the population is first divided into homogeneous subgroups. Simple random sampling and systematic sampling, in their purest form, are seldom used in social science research because they are cumbersome for large populations. Random sampling is a technique for drawing samples in which each element in the population has an equal probability of being chosen for the sample. Random sampling treats target population as a unitary whole and each member of the population has the same probability of being selected (McMillan, 2008:113; Coldwell & Herbst, 2004:80; Sullivan, 2001:194).

In addition to the above, simple random sampling becomes a useful tool when used as part of other random sampling techniques, such as stratified random sampling. The principle of stratified random sampling is to divide a population into different groups called strata so that each element of the population belongs to one stratum; random sampling is performed using either the simple or internal sampling methods. This increases the availability of adequate lists and facilitates the selection of a simple random sample without decreasing the quality of the sample in any way (McMillan, 2008:123).

In this study the primary school teachers teaching physically and/or mentally impaired learners were identified randomly as the population of the study. Stratified sampling was used because it involves dividing the population into homogeneous groups; each group containing subjects with similar characteristics, so physically and/or mentally impaired learners and their teachers are the two subgroup populations. Learners and teachers are regarded as the subjects with common characteristics. Stratified sampling is suitable for this study because it permits the researcher to study the difference that might exist between the kinds of subgroups such as teachers and learners (Ary, Jacobs & Razavieh, 2002:167).

Advantages of stratified sampling

Stratified sampling, by preserving proportions even of very small samples, will allow for any small minority to be presented. If the population is very homogeneous, with no marked opinion difference between the sexes, simple random and stratified sampling will lead to approximately the same results. It permits great accuracy even for small samples, allows subgroup comparisons and is more representative than simple random sampling and as a result, needs fewer subjects. Stratified sampling also ensures adequate numbers of elements in each subgroup (McMillan, 2008:123).

In the Berea and Maseru districts there are a number of schools which have learners with physical and/or mental impairments, but this study focuses on selected primary schools teachers who are teaching physically and/or mentally impaired learners. The large population made it impossible to include all schools, all learners and all teachers in this study. The schools selected using cluster sampling, accommodate all the schools in the Berea and Maseru districts. The following section describes the data collection methods used in this study.

3.6 INSTRUMENTATION

Instrumentation refers to changes in the measures or procedures for obtaining data (McMillan, 2008:311). The instrument which was used to collect data is the questionnaire which is an efficient data collection mechanism when the researcher knows exactly what is required and how to measure the variables of interest. A questionnaire is a document containing questions and other types of items designed to solicit information such as perceptions, attitudes, beliefs, values, and perspectives appropriate for analysis. The questionnaire is a measurement procedure that usually contains questions aiming at obtaining specific information on various topics.

Questionnaires are used primarily in survey research and also in experiments, field research and other modes of observation (Phillips & Stawarski, 2008:1-2; Babbie, 1999:458; McMillan, 2008:311).

Whiskey (2001:147) mentions that the purpose of the questionnaire is to gather information about behaviours, activities and responses to events and usually consists of a list of written questions. The aim of the questionnaire is to gather facts and feelings about phenomena from the teachers of physically and/or mentally impaired learners. The questionnaires were used because the researcher wants to obtain data which are as objective as possible. Questionnaires preserve the anonymity of the respondents, thereby encouraging genuine and valid responses. Thus, in this study the purpose of the questionnaire were two-fold: firstly, to gather specific information with regard to teaching difficulties experienced by teachers teaching physically and/or mentally impaired learners in a mainstream class, and secondly, to discover first-hand, the feelings of these learners from themselves.

Based on the information in the literature review in chapter two, a self-designed and administered questionnaire was used as the main research instrument. The questions formulated in the questionnaire were based on issues discussed in the literature review. The questionnaire was thoroughly tested for content validity, thereby ensuring that the basic requirements for scientific research are achieved. Instruments should be pre-tested on a pilot group in order to check their accuracy.

Questionnaires are the most convenient means of obtaining data and allow the respondents to reveal their opinions without participants' privacy being violated, as questionnaires are completed individually. Sullivan (2001:256) is of the opinion that respondents should have the opportunity to ask the researcher to clarify anything that is ambiguous. However, a good questionnaire should not have to rely on such assistance.

As a researcher, it is essential to use questionnaires to obtain data because of the following advantages. According to Neuman (2006:199) researchers can send a questionnaire to a wider geographical area through the post because it is far cheaper and can be distributed by single researcher. Respondents can complete the questionnaires at their own convenience in their homes, at their own pace and return them to the researcher. Additionally, questionnaires are effective; the response rates are high for a target population who is well educated or has a strong interest in the survey organisation.

However, there are still certain disadvantages confronting the researcher which should be addressed. Some people do not always complete and return questionnaires; the biggest problem with posted questionnaires being a low response rate and no-one is present to clarify questions or to probe for more answers. Respondents, who complete questionnaires individually, are not able to be visually observed by the researcher for their reactions to the questions. Furthermore, questionnaires require a minimal degree of literacy and facility in English that some respondents do not posses; self-administered questionnaires are more successful only among those educated and motivated to respond. Most of the physically and/or mentally impaired learners do not possess these characteristics. Usually, in a questionnaire there is no opportunity to probe for more information in order to evaluate non-verbal behaviour and the answers which are provided in questionnaires are finite; thus researcher will not be sure if the answers are actually provided by the target respondent (Sullivan, 2001:300).

3.6.1 Constructing the questionnaire

Neuman (2006:277) states that a good questionnaire forms an integral whole. A questionnaire's design principles relate to the wording of the questions, how the variables will be categorised, scaled and coded in the general appearance. The language used in the questionnaire should be appropriate to the level of the respondents. Questions should be sequenced to minimise discomfort and confusion and should keep respondents' perspectives in mind. The researcher

weaves questions together so that they flow smoothly. Introductory remarks and instructions for clarification should be included, as well as the measurement for each variable with one or more survey questions. Good survey questions should give the researcher valid and reliable measures.

According to De Vos *et al.* (2002:147) a questionnaire should be characterised by the following: it should be clearly printed and neat in appearance; the questions should not be too long; difficult terms should be explained and directions should be clear and questions should be simple and deal with single concepts.

In this study each question contains one thought and respondents were also be given the space to give their comments where necessary. In the questionnaire, the researcher used multiple-choice and open-ended questions so that respondents answer the questions in a way that they choose. Closed-ended questions were used to ask the respondents to make choices among the set of alternatives given by the researcher.

The questionnaire in this research consists of three sections: Section A is related to demographic information; for example age, sex, work experience, qualifications, and level taught. Section B focuses on the challenges facing teachers of learners with physical and/or mental impairments. Section C pertains to the training of teachers teaching learners with physical and/or mental impairments in mainstream classrooms. The structure of a questionnaire is divided into a mixture of Likert-rating scales; for the items a two- and three-point rating scale consists of the following categories: 'Yes= 1', 'No=2' the three-point Likert scale consists of 'Always=1', 'Sometimes=2', and 'Not at all=3'.

3.6.2 Format and layout of the questionnaire

The format of the questionnaire is influenced by the way it is going to be administered; for example, if it is mailed or hand-delivered, as well as where and by whom it is going to be completed. The questionnaire asks the respondents to tick 'yes' or 'no', as well as to tick the appropriate degree to the statements, such

as ‘always’, sometimes and not at all. Each question contains one thought so that respondents would have the space to write down their comments if necessary. The researcher used multiple-choice and open-ended questions so that respondent answers the questions they choose. Closed-ended questions asked the respondents to make a choice from the set alternatives given by the researcher. According to Portney and Watkins (2009:331), a questionnaire should include a covering letter indicating clearly that the information will be treated with confidentiality. Permission to conduct the study in Maseru and Berea district was gained and together with brief instructions on how to complete the questions, a clearly defined space and method for the respondents to register answers to questions was constructed. Instructions on how to return the questionnaires and a final ‘thank you’ to the respondents for time and effort expended were completed.

The following subheadings discuss the measures taken to ascertain the reliability and validity with regard to the accommodation or inclusivity of learners with physical and/or mental impairments in mainstream classes.

3.7 VALIDITY

Validity suggests the truthfulness and how an idea ‘fits’ with actual reality; thus, validity is concerned with whether the researcher is measuring the right concept. Validity tests how well an instrument measures the particular concept it is supposed to measure. It is an overall evaluation of the extent to which theory and empirical evidence support interpretations that are applied in the given uses of the appropriateness of a measure for the specific inferences or decisions which are a result of the scores generated by the measure. It is the inference that is valid or invalid, not the measure. The instruments to be used should have an acceptable level of validity. The same instrument can be valid in one circumstance or for one use and be invalid for another (McMillan, 2008:144; De Vos *et al.,* 2002:166; Neuman, 2006:187).

3.7.1 Reliability

According to Neuman (2006:187) and McMillan (2008:151), reliability means dependability or consistency. Reliability is the extent to which the participant is free from error. It suggests that something is repeated under an identical or similar situation. If a measure has high reliability, there are relatively few errors in the scores and if there is low reliability, there are a great number of errors. The stability estimated of reliability is obtained by administering the measure to one group or individual writing in a specified period of time, and the re-administration of the same instrument to the group. The correlation of the two sets of scores is then calculated. This type of estimate is also called Test-Retest-reliability. What is being measured is the consistency of the subjects' performance over time. If the trait or skill being measured changes between the first and the second administration, the correlation and reliability will be low in errors.

To test the validity and reliability of this study, the researcher had to ensure that the wording of the questionnaire is simple and clear to the respondent. A researcher should avoid ambiguous questions in the questionnaire. In addition, the researcher should ask questions likely to be known by the respondents. During the pilot study, the researcher administered questionnaires to teachers teaching physically and/or mentally impaired learners by having them answer a given set of questions. The types of questions asked to teachers were used in the informal discussion with the learners with physical and/or mental impairments; thus, the findings from the combination of the two studies will provide clear evidence as to whether there is validity and reliability in the study.

3.8 DATA COLLECTION METHOD

According to Portney and Watkins (2009:728) and Mouton (1996:156) data can be collected in a variety of ways, in different settings and from different sources. Data are collected from each subject and recorded on a separate sheet or directly into computer program Data collection methods may include face-to-face interviews,

telephone interviews, psychometric testing and computer assisted interviews; questionnaires that are personally administered or sent through the mail; electronically administered or by observing individuals and events with or without videotaping. Thus, this section illustrates the techniques of data collection through qualitative (informal discussion) and quantitative (questionnaires) forms. During data collection, the researcher collects various kinds of empirical information or data; for instance, historical, statistical or documentary data. The first general principle in data collection is that the inclusion of multiple sources of data collection in research is likely to increase the reliability of the observation.

The following section explains the steps which were taken in order to gain access to schools and the procedures followed when collecting data.

3.9 PERMISSION TO CONDUCT THE STUDY AT SCHOOLS

In this study the researcher collected data by first gaining the permission of the Department of Education in the Maseru and Berea Districts of Lesotho. The researcher wrote a letter requesting permission to collect the information from the various schools. The letter explained the purpose of the study and the promise of confidentiality and securing the identity of the respondents and that the questionnaire would not include the name of the school or its participants. Immediately after obtaining permission, the researcher proceeded with the pilot study.

3.9.1 Pilot study

Jupp and Sapsford's (2008:104) pilot study is a small-scale trial carried out before the investigation and intended to access the adequacy of the research design and of the instruments to be used for data collection. Blaster, Hughes and Tight (2001:135) indicate that piloting is the process in which the researcher tests research techniques and methods which he/she has in mind to see how well they work in practice and, if necessary, modify the plans accordingly.

The pre-testing of a questionnaire is an established practice for discovering errors; similarly, the pilot study should be performed on a number of respondents from the population who form part of the sample. The purpose of a pilot study is to devise a set of codes or response categories for each question which it will cover. It is also to ensure that respondents will understand the directions provided, as well as the questions. The pilot study is further used to determine whether or not the answers provided are clear and easy to interpret and whether or not there are other technical changes that need to be made. It is necessary to ensure the highest possible degree of reliability and validity of the results (Jupp & Sapsford, 2008:104).

The respondents forming part of the pilot study asked the following questions (Bell, 2002:128):

- How long did you take to complete this questionnaire?
- Were the instructions clear?
- Did you have any objections to answering any of the questions?
- In your opinion, was anything important omitted?
- Was the layout of the questionnaire clear and attractive?
- Any comments?

For these reasons, the researcher then decided to conduct a pilot study.

When the skills transfer questionnaire is designed, special care, vagueness, ambiguous questions and the sequence of questions being logical will be considered. Portney and Watkins (2009:329) assert that the sequencing of questions affects the accuracy and rates of response. This means questions should proceed from the general to the specific; the format of the questions will vary depending on how the survey will be administered. Therefore, a pilot test of the structured questionnaire was carried out among one of the schools in Bloemfontein called Thswellang School. Ten respondents were chosen on the

basis of availability and geographical accessibility for participating in the pilot study. The above-mentioned school did not form part of the population sample of this study.

The purpose of this is to evaluate the relevance of the problem statement and to establish whether the wording is clear and unambiguous. The importance of the pre- test is to ensure that the questionnaire does indeed fulfil its intended purpose. As a result of the pilot study, the modifications of errors were made to improve clarity. After the completion of the pilot study, the questionnaire was presented to the study leader for final approval and thereafter, it was then be distributed to the 23 identified schools.

3.9.2 Translation into the vernacular

The questionnaires administered to the teachers were in the English language but the questions which were used in the informal discussion with learners were translated into Sesotho and later translated back into English. The transposed copy was re-translated into English by the same translator. The result comprised the items from the original English document, for reliability and suitability. Arising from this comparison, a number of amendments to the original English questionnaire was made. Fairclough (1992) in Mereko (2008:50) proposed that language use should be regarded as a form of social practice, rather than a purely individual activity reflex of situational variables. The procedure was designed to ensure that the translated versions were as unambiguous as possible. The amendment to generate this final version of the questionnaire was the translated versions composed by the translator during the pilot study. Arising from the comments and findings of the pilot study, final refinement was undertaken to selected items in various languages. These alterations were further ensured clarity and similarity of expression, thereby maximising the construct validity of the questionnaire.

3.9.3 Procedure followed with regard to data collection

Different data collection instruments are utilised in quantitative and qualitative research, such as observations, interviews and questionnaires. In this study, the researcher decided to use a questionnaire and an informal discussion as a questionnaire is probably best suited to conducting survey research that is of a qualitative and quantitative nature.

The gathering of information was both causal and longitudinal in nature involving collecting the necessary data before and after over a period of time, which took three weeks after the first collection was discharged. The researcher employed a survey research method in the form of explanatory surveys. Additionally, the researcher utilised a form of causal-comparative research which enabled him to explain the attitudes and behaviour of the respondents on the basis of data gathered at a particular point in time. The questions were completed in the absence of the researcher in order to give teachers enough time to complete the questionnaires, as well as to guarantee confidentiality and anonymity.

During the gathering of information, data was collected from primary schools through the use of self-completion questionnaires.

The logical orders of data collection proceeded as follows:

1. Visitation to the participating schools was preceded by a number of phone-call enquiries to request permission, firstly for a face-to-face appointment with the principal, to explain the intention of the study and secondly, to discuss the practical means of discharging the field work with minimal hindrances to the school's operation. The telephone directory was used to locate the contact numbers of these schools for the very first appointment. After contacting the school principal by telephone, the researcher decided on selecting teachers who were teaching learners with physical and/or mental impairments.

2. A list of teachers teaching physically and/or mentally impaired learners were requested from the principals. All the respondents were selected with the help of the principals as they were better acquainted with teachers teaching learners with physical and/or mental impairments. Other forms used included that were the stratified sampling method. Once the required number is achieved, the teachers who teach physically and/or mentally impaired learners were requested to complete the questionnaire. The questionnaires were left for teachers to complete and they were requested to hand them to the principal's office where the researcher will collect them at an agreed time with the principal.
3. The principal through the secretary was requested to collect the questionnaires from the teachers with the collection date being set by the researcher and the respondents.

3.10 PROCEDURES FOR DATA ANALYSIS

Data analysis involves making sense of the text and moving deeper into understanding the data, representing the data, and constructing an interpretation of the larger meaning of the data (Creswell, 2003:190). In this section, two forms of data analysis were reported: firstly, quantitative and secondly, qualitative data.

3.10.1 Analysis of quantitative data

Data obtained from the quantitative sections of the questionnaire were analysed and processed. The services of a qualified statistician were employed with the intention of assisting the researcher in an accurate procedure for analysing and interpreting the data and extracting meaning. These data was summarised using basic descriptive statistics and the results were computerised and statistically analysed by a qualified statistician, using SPSS for Window version 6.0, SPSS (Statistical Product and Service Solution) Window or any other appropriate software. SPSS is a commonly used package by social scientists at the present time and has become increasingly user-friendly over the last few years. It is a

comprehensive and flexible statistical analysis and data management system (Dawson, 2006:124).

SPSS can take data from almost any type of files and use them to generate tabulated reports, charts and plots of distribution and conduct complex statistical analysis. The charts and plots allow the readers to see evidence collected by the researcher and the interpreted data that give theoretical meaning to the results (Isaac, 2006:60). SPSS helps statisticians to make statistic analysis more intuitive for all levels of users. The use of the computer for qualitative research can give studies more credibility and status because of the association between the computer and 'hard' data**.**

3.10.1.1 Analysis of qualitative data

According to Patrick (2007:104) in order to analyse qualitative data from documented materials, such information should be selected on the basis of their relevance to the themes, such as strategies that can ensure the inclusivity of learners with physical and/or mental impairment in a mainstream class. The documented information was selected on the basis of it being fit to be subjected to Textually Oriented Discourse Analysis (TODA).

In order to make sense of these textual documents in context, a Textually Oriented Discourse Analysis (TODA) was used. The TODA Technique involves looking at the written text to be analysed as evidence of meanings to be gleaned (Faircough, 1993). The analyses of documented materials involved breaking down responses into smaller meanings – chunks, so as to interrogate and sift out the contradictory themes emerging from the responses and offer alternatives to the researcher.

The primary analysis of documents will be to transform the inequalities and oppressive social relations with regard to the inclusivity of learners with both physical and/or mental impairment in mainstream classrooms (Duncan, 1993). As far as the data collected through the informal discussion with the learners is

concerned, these data were transcribed from the tape recorder and then analysed as text in order to extract the meaning constructed by the physically and/or mentally impaired learners. The data was analysed using TODA. These were later transcribed verbatim with the focus being more on content rather than on form. This helps to reflect the respondents' beliefs, relate them to the tape and then make notes of the sections that contain particularly useful information and key quotations. A return to these sections of the tape for further analysis will be made with the focus being more on the content than on the form (Meulenberg-Buskens, 1997).

The tape analysis was used as a means of taking notes from playing back the tape from the informal discussion with the learners. The use of the tape recorder was to prevent the information from being forgotten. The researcher was listened to the tape recorder and make notes of the sections that contain particularly useful information and return to these sections of the tape for further analysis. When transcribing, the researcher of this study were also considered how the respondents' feelings and meanings could be communicated on paper (Carr & Kemmis, 1986; Mereko, 2008:47).

3.11 STATISTICAL TECHNIQUES

Statistics are mathematical procedures used to summarise and analyse numerical data. Because there are common statistical techniques which are frequently used in social science, the researcher deemed it essential to reflect on some of them which one can use to pursue doctoral studies; However most of them (statistical techniques) do not have direct bearing on this study, example; descriptive statistics, inferential statistics, Pearson product-moment correlation coefficient, Multivariate analysis of variance, multiple analysis of variance (MANOVA) and Scheffe's multiple comparison (Babbie, 1999:368; Sullivan, 2001 and Morolong, 2007).

3.11.1 Descriptive statistics

Descriptive statistics are an estimate that summarises a particular aspect of observation. It allows one to obtain a quick overview or 'feel', for a set of data without having considered each observation (Johnson & Elton, 2008:45). Descriptive statistical procedures enable one to turn a large list of numbers that cannot be comprehended at a glance, into a very small set of numbers that can be more easily understood. The purpose of descriptive statistics is to describe the raw data in a clear manner and this method enables the researcher to display the data in a structured, accurate and analysed way. Descriptive statistics are used to describe the main features of the sample and summarise data collected from the sample of subjects participating in the study (Descriptive statistics, n.d.).

3.11.2 Inferential statistics

Inferential statistics are procedures that allow one to make an analysis from sample data to the populations from which these samples are drawn. According to (Viljoen and Van der Merwe (1999), inferential statistics can be described as a statistical method that can be analysed to obtain universal deductions from the gathered results of a specific population and /or sample.

Inferential statistics would tell one what the chances are of obtaining, through random error, the difference between a population and a probability sample drawn from that population (Sullivan, 2000:441). The purpose of inferential statistics is to reduce the uncertainty to the point where a reasonably safe analysis can be made and the probability of a given amount of error estimated (Sullivan, 2001:439). The purpose is to use a probability theory to test hypotheses formally, analysed inferences from a sample to a population and testing whether descriptive results are likely, due to random factors or a real relationship. Another purpose is to understand the precise nature of description, relationship, and difference based on the data collected in the study (Macmillan, 2008:252). Moreover, the purpose of inferential statistics, null hypothesis, and the level of significance is to view the nature of populations and the real values of variables. The researcher then turns

to techniques allowing him/her to draw inferences about the population from a sample drawn from the population.

3.11.3 Multiple regression analysis

Multiple regression analysis provides a means of analysed situations in which the social researcher finds that a given dependant variable is affected simultaneously by several independent variables. Greenburg and Becon (2000) indicate that multiple regression analysis is employed to determine the extent to which several different variables contribute to predicting another variable. Multiple regression analysis predicts the challenges in the dependant variables in response to change in the independent variables. There is more than one independent variable in the model; this allows it to 'fit' a more sophisticated model with several variables that help to explain a dependent variable. Multiple regressions allow additional variables in the model and estimate their effects on the independent variable as well.

According to Neuman (2006:368), multiple regression analysis results tell the reader two things: firstly, the results have a measure called R-squared, which tells how well a set of variables explain a dependant variable. Secondly, the regression results measure the direction and size of the effect of each variable on a dependant variable. In this research, multiple regression analysis assisted in giving a picture of how the teachers view the accommodation of learners with physical and or mental impairments in mainstream classrooms and how the learners themselves feel in these environments.

3.11.4 Multivariate analysis of variance (MANOVA)

MANOVA is employed to calculate the difference between groups which are under study and the purpose in MANOVA is to test the difference in two or more vectors of means (Katz, 2006:121). MANOVA has the distinct advantage that all the groups are compared simultaneously with the appropriate variables. It enables researchers to examine relationships between dependent variables at each level

of the independent variables. MANOVA provides some control over the type I error; it can"tease out" group difference that may become masked with uni-variant statistical analysis but are discovered under conditions of increased power in the multi-variant situation. It can also measure several dependent variables in a single experiment, and there is also a better chance of discovering which vector is truly important. It can protect against errors that might occur if multiple ANOVAs were conducted independently. Additionally, it can reveal differences not discovered by ANOVA tests (Meyers, Gamst & Guarino, 2006:368).

Mostert (1996) identifies the following foundations on which MANOVA is based:

- The group must be normally distributed;
- The group must be independent;
- The population variance must be homogeneous; and
- The population distribution must be normal.

3.11.5 Scheffe's multiple comparison

According to Turkey (n.d.), Scheffe's multiple comparison method tests all possible contrasts at the same time. It also determines precisely where the difference lies between the groups, because in MANOVA, there is no way to determine such a difference.

3.11.6 The Pearson Product-moment correlation co-efficient

According to Pfeiffer and Olson (1981), the Pearson product-moment correlation coefficient is employed to determine the critical relationship between two variables; for example, how teachers view the accommodation of learners with physical and/or mental impairment in a mainstream classroom and how learners themselves feel when they attend mainstream classes.

The product-moment correction provides an objective measure of the direction and strength of the relationship between two variables (Sekaran, 2000). According to Greenberg and Baron (2000) the size of the product-moment correlation coefficient is an index of the extent of the (linear) relationship between two variables, and the sign of such a coefficient reveals the direction of the relationship: a positive sign indicating a direct relationship and a negative sign, an inverse relationship.

3.12 BIOGRAPHICAL QUESTIONNAIRE

The questionnaire completed by the teachers included school, grade, gender and age and the questions focused on the challenges faced by physically and mentally impaired learners. The researcher also asked questions that tested the training they have acquired with regard to disabilities.

Furthermore, the questions tested the teachers' experience with regard to previous experience of working with people with disabilities and their supervision based on the progress of impaired learners. Therefore, the questionnaire was of a personal nature. The respondent completed the questions alone.

3.13 LIMITATIONS OF THE STUDY

The study focused primarily on teachers teaching physically and/or mentally impaired learners in a number of randomly selected primary schools in the Berea and Maseru districts of Lesotho. The study is limited to specific areas of these districts because of time, costs and accessibility constraints. There are a number of primary schools in the Berea and Maseru Districts such as private, government and church schools. The researcher involved 23 primary schools from both districts.

3.14 ETHICAL CONSIDERATIONS

Ethics is typically associated with morality; with matters of right and wrong (McMillan, 2008:16; Babbie, 1999:398). Sullivan (2001:58) also contends that ethics refer to the way we treat people when we are observing the subjects of our research. McMillan (2008:16) cautions that respondents need to be given informed consent to participate; this means that they should be fully informed about the research for which the interview is going to be used. In order to do any kind of study, researchers should be aware of following established ethical guidelines.

McMillan (2008:17); Bless and Higson-Smith (2000:101) posit that the researcher needs to adhere to ethical issues when conducting research. The researcher should be as open and honest with the subjects as possible, and this usually requires full disclosure. To give an informed consent, one must have full information about the research topic and why and how participants have been chosen (Sullivan, 2001:590). Subjects should be protected from physical and/or mental discomfort, harm and danger. The right to privacy or confidentiality and the information provided by the respondents should be safeguarded, together with the identity of the people and the institution (Bless, Higson-Smith & Kagee, 2006:143; Neuman, 2006:413); Henning, Van Rensburg and Smith (2000:79); Coldwell and Herbst (2004:19) point out that the researcher remains accountable for the ethical quality of the enquiry, should take great care and when in doubt, ask for advice. Furthermore, the researcher should develop a good relationship with the people involved in the research.

In order to ensure that the issue of ethical consideration is addressed, it was indicated to the respondents and their parents (during schools meetings) that any information that would be shared with the researcher would not be used for any purpose other than this specific research study and that their privacy would be protected.

3.15 SUMMARY AND CONCLUSION

The research design intended to achieve the objectives of this study has been explained. Furthermore, the sample population, the research instruments used for data collection in the qualitative and quantitative statistical analyses have been explained and discussed. The next chapter deals with the presentation and evaluation of the results.

CHAPTER 4
ANALYSIS AND INTERPRETATION OF RESULTS

4.1 INTRODUCTION

In the previous chapter (chapter 3), the researcher explained the two research methods used in this study; that is, the quantitative and qualitative methods. The chapter further explained how the data will be collected and analysed. The main purpose of this chapter is to present the results of the study which was carried out in selected primary schools in the Berea and Maseru districts of Lesotho. The data was gathered in two ways, using a survey method in the form of a semi-structured questionnaire, as well as informal discussions**.** The researcher used questionnaires and informal discussions in order to obtain more comprehensive data and enhance the credibility of the findings. The findings are based on the following hypotheses of this study, namely:

Hypothesis 1

- There are challenges/difficulties faced by physically and/or mentally impaired learners within the teaching and learning milieu in the Berea and Maseru districts of Lesotho.

Hypothesis 2

- Most teachers in a normal classroom are not able to effectively deal with learners with either physical and/or mental impairments.

Hypothesis 3

- There are various teaching strategies which can be used to accommodate learners with physical and/or impairments.

4.2 THE STRUCTURE OF THIS CHAPTER

This chapter presents the results as follows: firstly, Section A: biographical data. Secondly, Section B: the views of the teachers teaching physically and/or mentally impaired learners. Thirdly, Section C: views on training received by teachers with regard to teaching physically and/or mentally impaired learners. Fourthly, Section D: additional data from open ended questions and informal discussion schedules and lastly, Section E: an additional literature review which addresses strategies teachers can use to include or accommodate learners with physical and/or mental impairments in an inclusive classroom. The data presented in this chapter represent the perceptions of the respondents concerning the subject under investigation.

4.3 POPULATION CHARACTERISTICS

The teachers of physically and/or mentally impaired learners, together with other learners were the population sample of this study from randomly selected primary schools in the Berea and Maseru districts of Lesotho. For the purpose of descriptive statistics, frequency tables and charts are used to present the results. The data from the open-ended questions and informal discussions were also transcribed.

As discussed in Chapter 3, the research data collection was as follows: (N=211) questionnaires were distributed among 22 primary schools. Of the (N=211) questionnaires, (N=149) were returned fully completed giving a response rate of 70% which is viewed as an excellent response rate (De Vos *et al.,* 2002:172). As stated previously, the researcher also collected information by means of informal discussions as indicated in Chapter 3. The informal discussion was held with five learners with physical and/or mental impairments. The purpose was to get an indication of learners' feelings with regard to attending mainstream schools. The data collected from the informal discussion were presented, discussed and

analysed, together with those of the respondents from the open-ended questions and were woven into the relevant sections.

4.4 DATA COLLECTION

In this study a self-constructed questionnaire was used to collect information. The researcher decided to use this kind of questionnaire so that he would be able to formulate the questions which address the topic under investigation. The self-constructed questionnaire helped the researcher to collect the relevant data from the respondents. The questions were constructed in such a way that they contained one thought, and the respondents were given the space to give their comments where necessary. The researcher also used multiple-choice and open-ended questions so that respondents could answer the questions the way they choose. Closed-ended questions were used to ask the respondents to make choices among the set of alternatives given by the researcher.

The questionnaire in this research consists of three sections: Section A; B and C is related to demographic information. Section B focuses on the challenges facing teachers of learners with physical and/or mental impairments. Section C pertains to the training of teachers teaching learners with physical and/or mental impairments in mainstream classrooms (see chapter 3, 3.6.1 paragraph 4).

The researcher was hopeful that it would be feasible to administer the questionnaire within the first week of 20 July 2009, as this coincided with the reopening of schools. In addition, teachers are usually not overloaded with school work in the first week. However, it was very difficult to distribute the questionnaires and collect them the same day. Consequently, the researcher had to distribute the questionnaires and make appointments for collection at a later date, once they were completed. To avoid confusion, the researcher clarified the contents of the questionnaire for the teachers.

It took about two weeks to collect the completed questionnaires due to problems encountered by the researcher. Some of these problems arose because of excuses such as questionnaires not being completed and others being misplaced. The principals were also requested to assist by reminding teachers to submit the remaining questionnaires.

4.5 STATISTICAL RESULTS

4.5.1 Section A: Biographical information of respondents

The information contained under this section focuses on: (i) respondents' gender, (ii) respondents' population group, (iii) respondents' age, (iv) respondents' highest qualification and (v) respondents' work experience as teachers.

Figure 4.1: Respondents' gender

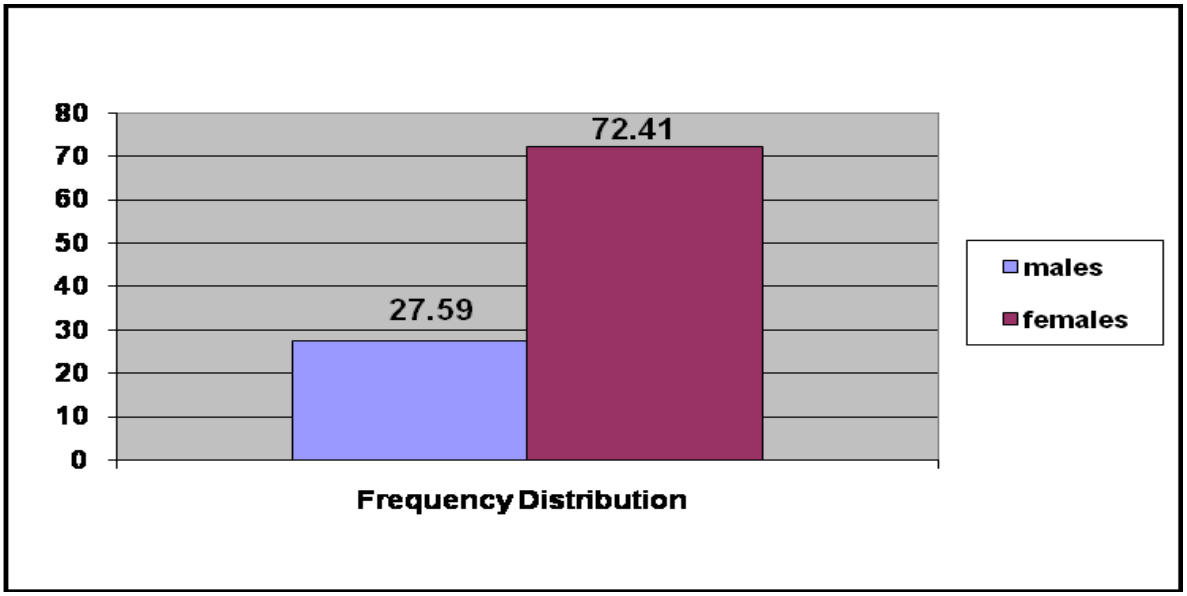
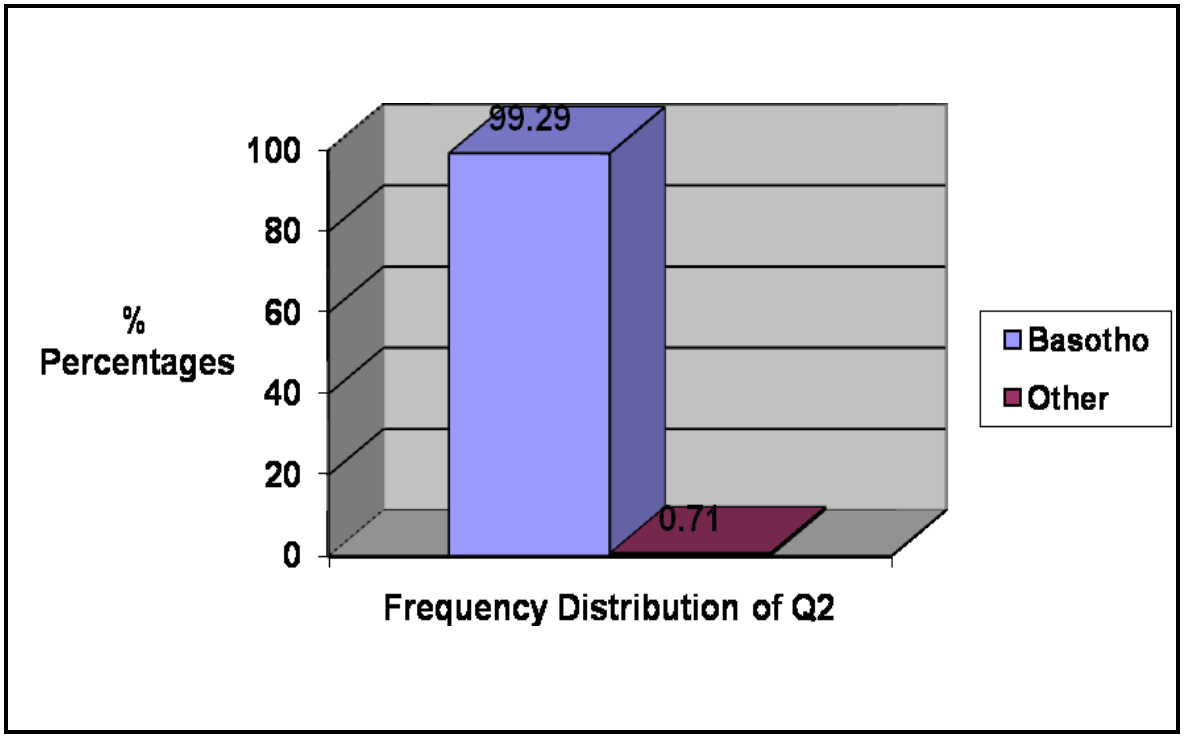


Figure 4.1 above, (Q1) indicates that (N=40) represents 27.59%) male teachers, while the rest of the (N=105) respondents that is 72.41% being female teachers. The majority of the respondents who took part in this study were female teachers. The main reason could be that male teachers do not have an interest in teaching learners with physical and/or mental impairments, because learners in such

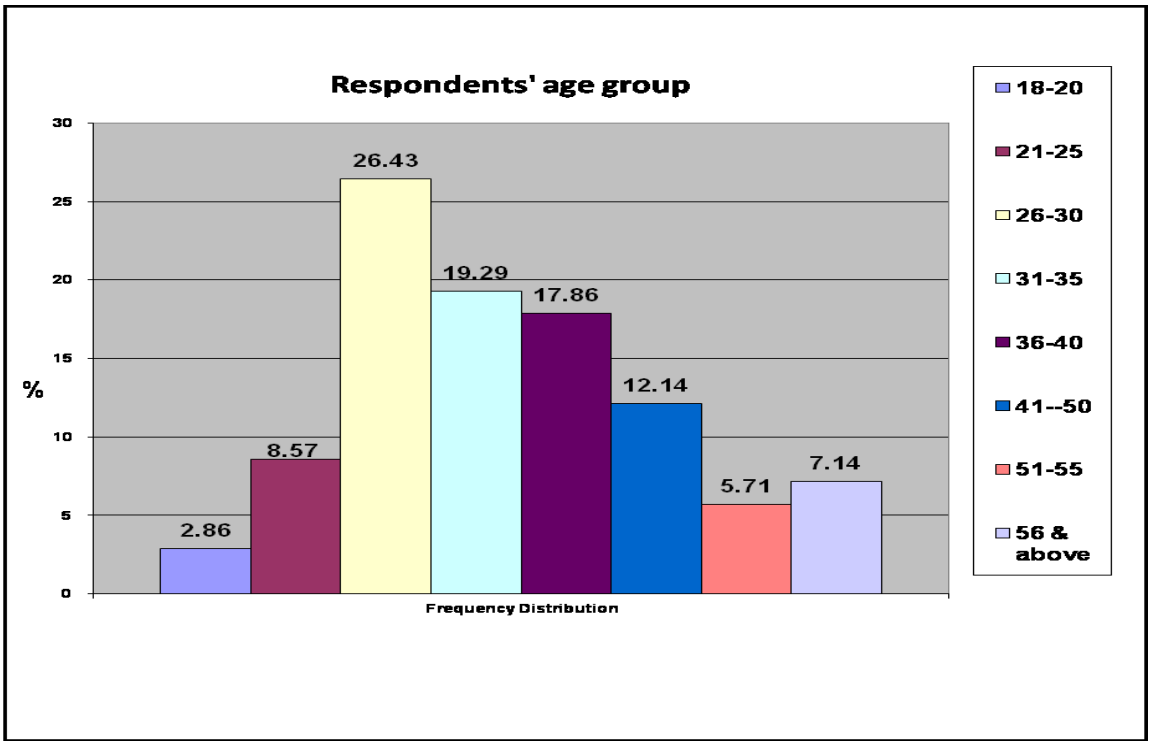
schools need extra attention and parental support, an area men are arguably not good at and which male teachers are reluctant to give. Another contributing factor could be that the female teacher population is larger than that of the males, even in normal stream schools.

Figure 4.2: Respondents' population group



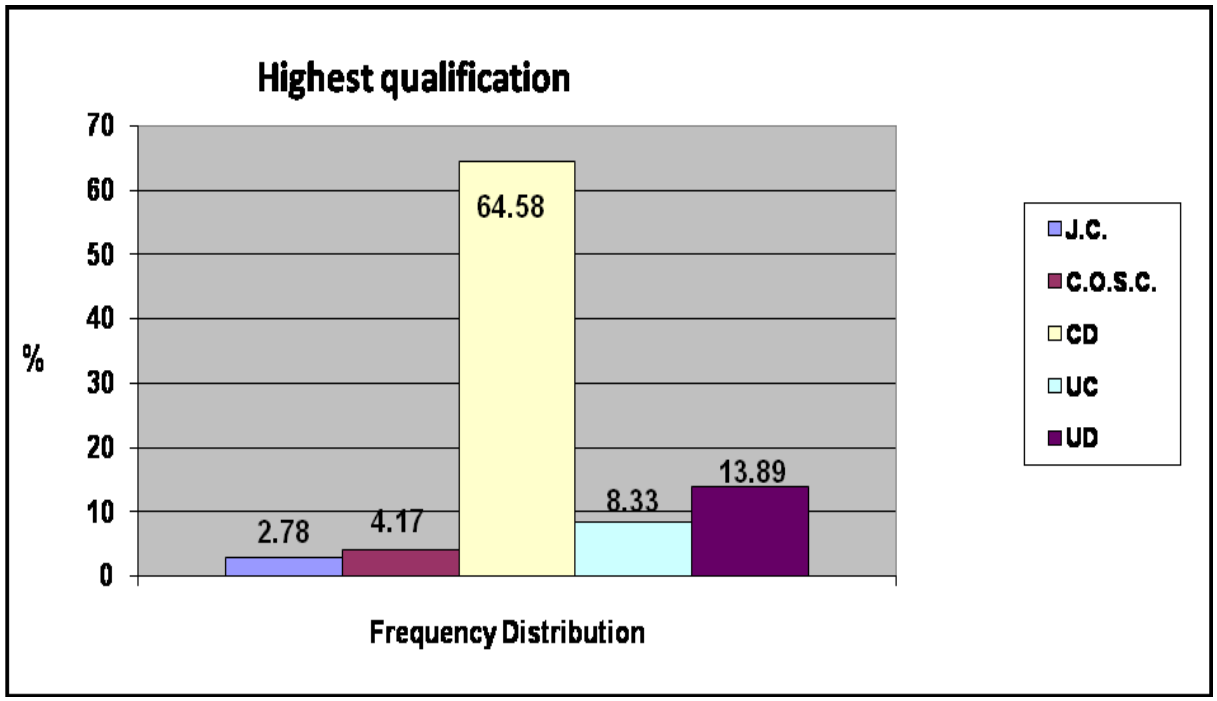
The information in Figure 4.2: (Q 2) above indicates that 99.29% (N=139) of the respondents were Basotho. This shows that most of the schools' teachers are Basotho. This can be advantageous to the learners, because instructions can be provided in the mother tongue language, which is easier for the learners to understand.

Figure 4.3: (Q3): Respondents' age group



The information in Figure 4.3: (Q3) above indicates that the majority of the respondents were mature educators who fall into the category of more than 30 years (26.43%), 35 years (19.29%), and 41years (17.87%). This implies that educators may have experience in teaching physically and/or mentally impaired learners and might have developed teaching strategies aimed at accommodating these learners.

Figure 4.4: (Q5) Highest qualification



J.C. - Junior Certificate

C.O.S.C - Cambridge Overseas School Certificate (an equivalent of R.S.A. grade 12)

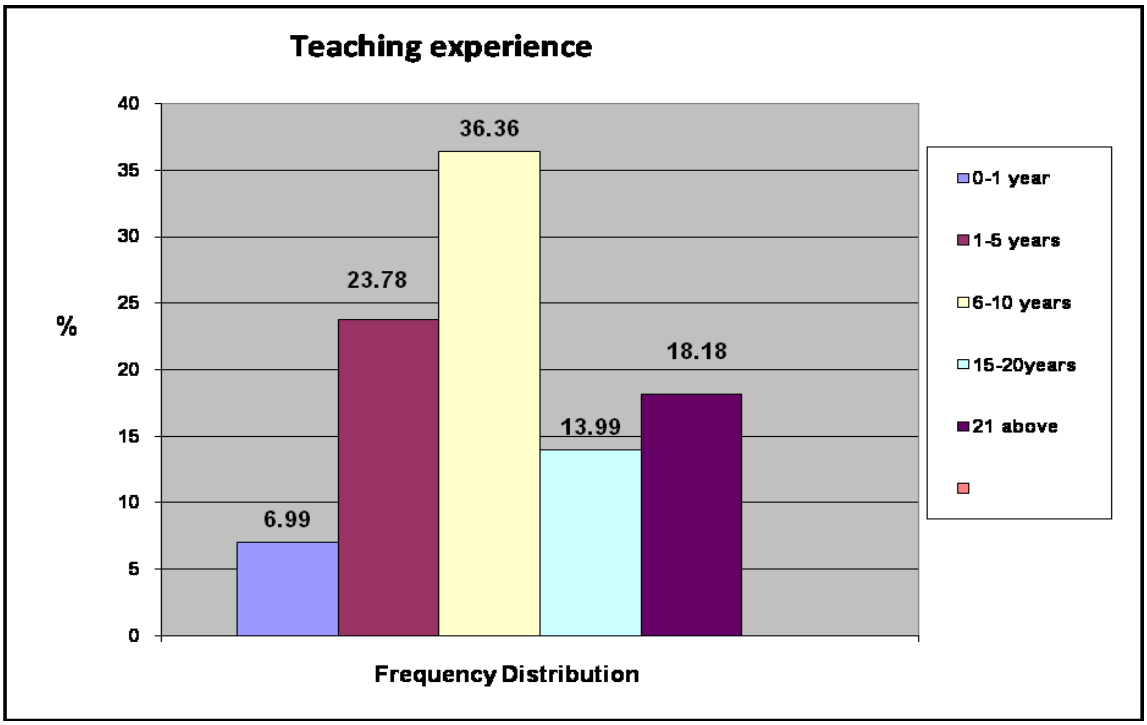
CD - College Diploma

UC - University Certificate

UD - University Degree

Figure 4.4: (Q5) above shows that 2.78 % of the respondents hold a Junior Certificate; 4.17% of the respondents have a Cambridge Overseas School Certificate; the majority of the teachers possess a college Diploma (64.58%); 8.33% of the respondents have a University Certificate and 13.89% hold a University Degree. This indicates that there are still some teachers who are not qualified, such as those with the Junior and Cambridge Overseas School Certificates. The majority of the teachers could easily understand and answer the questions in the questionnaire.

Figure 4.5: (Q6) Teaching experience



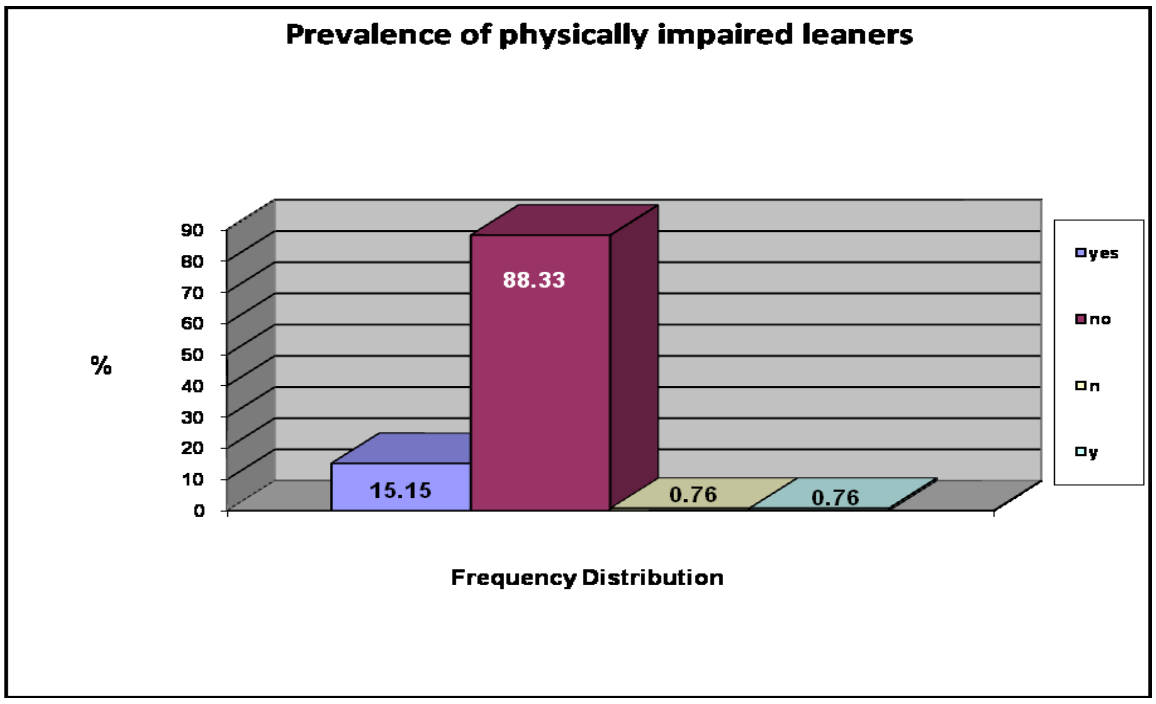
The respondents who took part in this study can be categorised as follows in terms of their work experience: teachers with less than a year's experience constitute 6.99% (N=10); and teachers with experience ranging between 1-5 years constitute 23.78%0 (N=34). Those with experience of 10 years constitute 36.36% (N=52). Teachers with less than 20 years teaching experience constitute 13.99% (N=20). Teachers with the highest experience in years constitute 18.18% (N=26) and may have established better methods of teaching because of their many years of experience. The next Sections B and C report on the findings of Hypothesis 2 namely:

- That most teachers in a normal classroom are not able to effectively deal with learners with either physical and/or mental impairments. Therefore, the specific objective is to highlight some of the difficulties confronting teachers teaching both able and disabled (that is, physically and/or mentally impaired) learners.

4.5.2 Section B: Findings from closed- ended questions

This section reports findings emanating from closed-ended questions, from Question 7 to 23 in Section B of the questionnaire. The purpose is to find out from teachers teaching impaired learners their conditions of work regarding these learners (Questions 2, 5, 8 and 10). The section also aims to find out how often they experience difficulties working with physically impaired learners. In Question 6 the purpose is to determine whether teachers have facilities for wheelchair learners.

Figure 4.6: (Q7) Prevalence of physically impaired learners

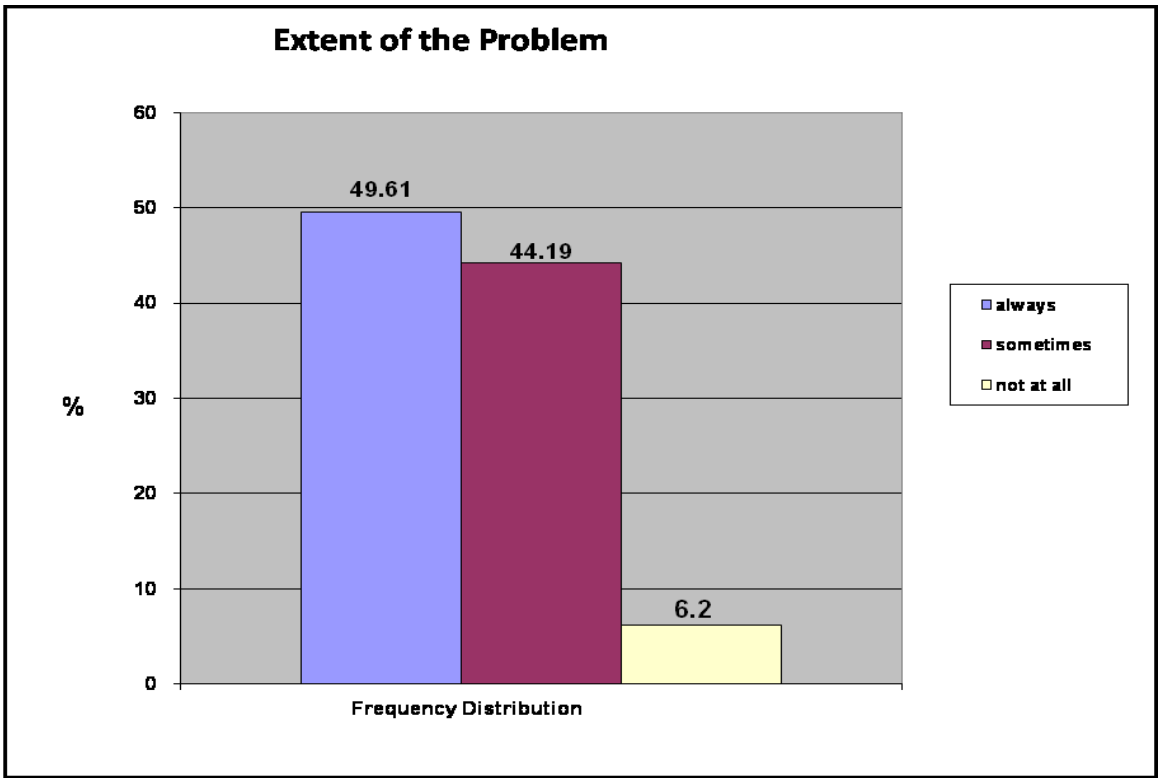


In Figure 4.6: (Q7) above, respondents indicated that 15.15% (N=20) have physically impaired learners in their classes but 83.33% (N=110) of the respondents were those who used to work or teach such learners, yet they currently did not have them in their classes. This is evidence that some of the mainstreams schools include and cater for physically impaired learners in their classes.

From these findings, one can deduce that a certain proportion of the mainstream schools in Maseru and Berea, to a certain extent, adhere to the principles advocated in inclusive education which is about acknowledging that all learners can learn and need support. These schools respect the fact that all learners are different in one way or the other and have different learning needs which are equally valued. In inclusive education, every learner regardless of his or her gender, social class and ability; has the right to basic education (Westwood, 2007:3; White Paper 6, 2007:3).

Westwood (2007:3) goes on to say that there should be a shift from relying heavily on medical intervention which tends to alienate special needs learners as it does not use a holistic approach in which these learners would be treated in their natural environment; thus avoiding the unintentional tendency of excluding them from the mainstream. What would be a more relevant approach is based on the social model. Here, the needs of the learners are addressed more holistically as they are integrated into the mainstream and their differences are recognised, respected and addressed without compromising the learners in any way. They are no longer kept in special schools to receive an adapted form of education as happened prior to the 1970s.

Figure 4.7: (Q9) Extent of the Problem



In Figure 4.7 (Q 9) above, of the respondents interviewed, 49.61% (N=64) agreed that they always experience problems working with physically impaired learners in their classes, whereas 44.19% (N=57) indicated that they sometimes experience problems when working with physically impaired learners. Eight (6.2%) pointed out that they never have problems working with such learners. This is an indication that learners with physical impairments have extra challenges and as a result, they need more attention.

It is clear from these results that teachers always experience difficulties when working with learners who have special needs. This means that both teachers and learners need support for learning to be successful. This issue is strengthened by the White Paper 6 (2001:47) that staff in the education support services should be trained for their roles as part of the district support teams in which they will be working in a resource centre to support the teachers. Wearmouth (2009:8) is also

of the opinion that the onus is on the teachers to find ways to support all their learners and integrate the newly acquired information with what they already know. The most obvious way of doing this is first by gaining the learners' confidence by convincing them that they need not be embarrassed to talk about the problems they experience. Teachers also have to have an idea of the individual levels of competence of the learners and should therefore have to be very tactful in how they approach them so that they do not offend any learner and run the risk of the learner clamming up.

Figure 4.8: (Q 12) Availability of facilities for learners

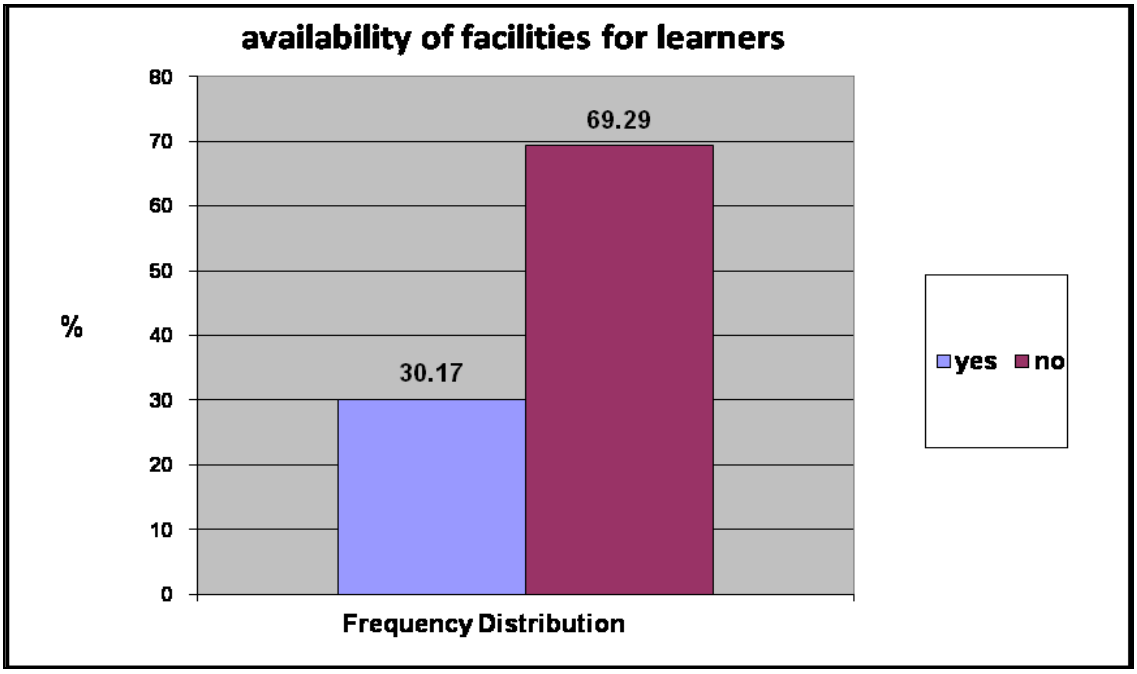


Figure 4.8: (Q12) above indicates the availability of facilities in mainstream classrooms: 30.71% (N=39) of the respondents showed that there are facilities for wheelchairs learners in their classrooms; 69.29% (N=70) indicated that there is shortage of facilities for physically and/or mentally impaired learners. This result indicates that special educational support materials are insufficient in order to meet the needs of impaired learners.

Learning facilities play a crucial role when working with physically and/or mentally impaired learners. Such learners need as many stimuli as they can get in order for them to be successful in their learning. Vaghumm, Bos and Schumm (2007:138-177) contend that, stimulating material manages to keep the learners captivated and engrossed in what they are doing, therefore enabling them to understand their task. Technology which is more inclined towards the education spectrum, can be used by teachers, as it would help them to be more efficient, thus facilitating the learning process as there would be sufficient and relevant activities available for all. It was further mentioned that the performance and independence of learners who need to use the keyboard in order to type their work and cannot do so, can be improved through the use of head pointers so that they can keep up with other learners.

Figure 4.9: (Q13) Prevalence of mentally impaired learners in the classroom

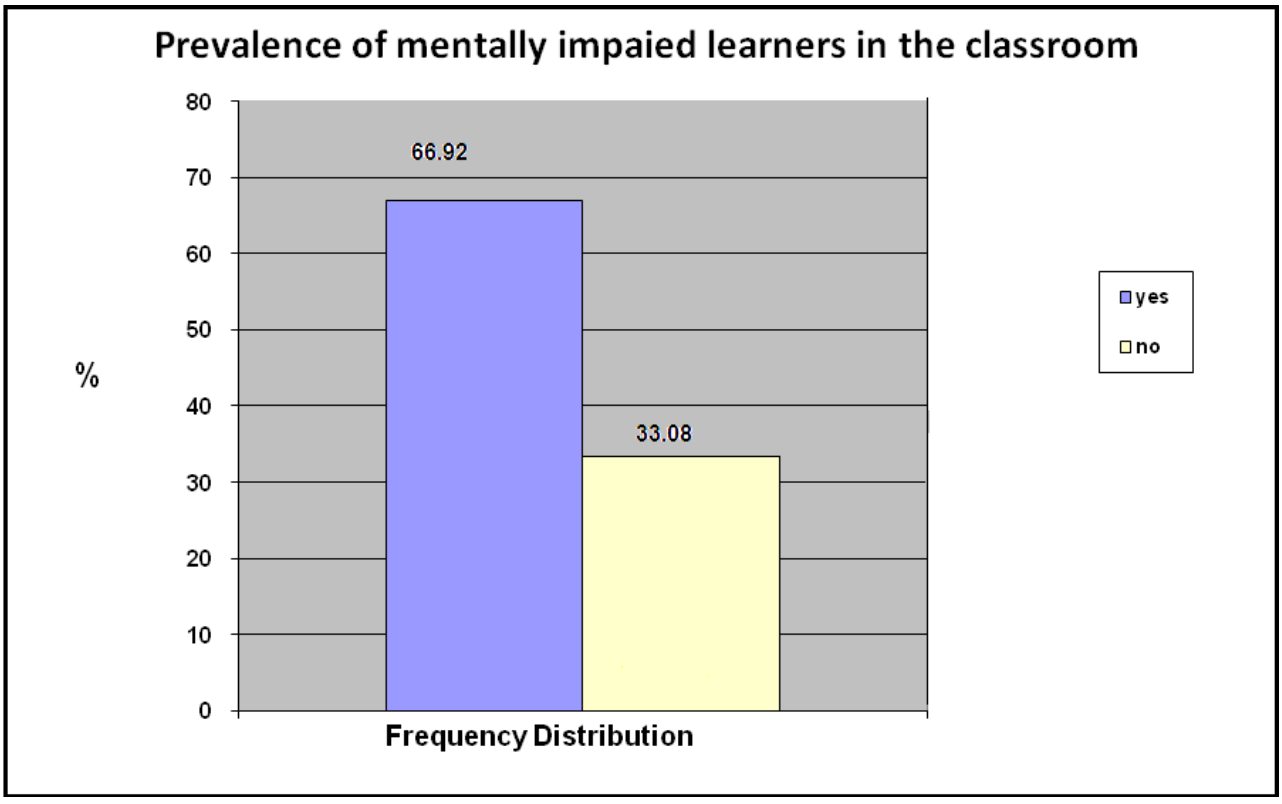


Figure 4.9: (Q13) above shows that 66.92% (N=87) of the respondents said that they have mentally impaired learners in their classroom.

However, 33.08% (N=40) indicated that there are no such learners in their classrooms. These results show that mainstream classes have learners who are mentally impaired.

Figure 4.10: (Q15) Problems of working with mentally impaired learners

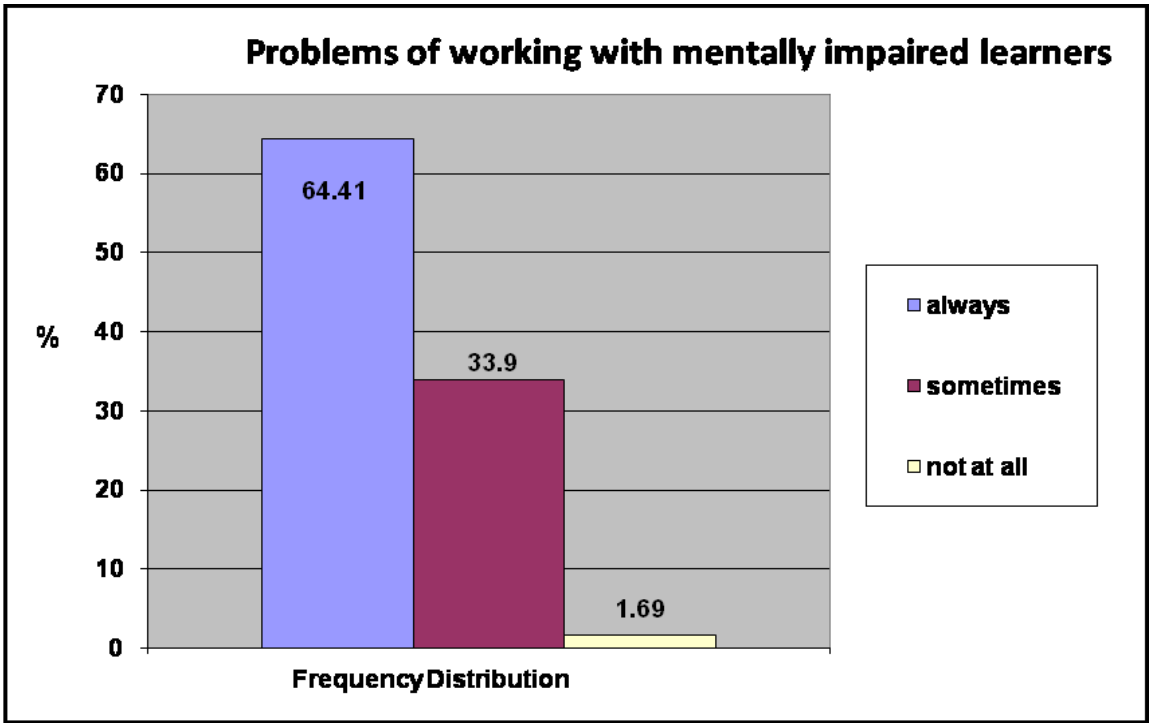


Figure 4.10: (Q15) above shows that of the respondents, 64.41% (N=76) indicated that they always encounter problems when working with mentally impaired learners; 33.90% (N=40) showed that they sometimes experience problems when working with mentally impaired learners and 1.69% (N=2) pointed out that they do not experience problems working with such learners. These results (64.41%) are evidence that teachers face problems when working with mentally impaired learners in mainstream classrooms.

Long-term commitment and dedication are inherent virtues that teachers, embarking on inclusive education, have to posses as it involves learners with

special needs (mentally impaired learners) who respond differently when exposed to the same stimuli as the learner without special needs. At times, mentally impaired learners may display unexpected and erratic behaviour and teachers have to know how to handle them because of their fragility due to their special needs.

Figure 4.11: (Q19) Additional methodology used with mentally impaired learners

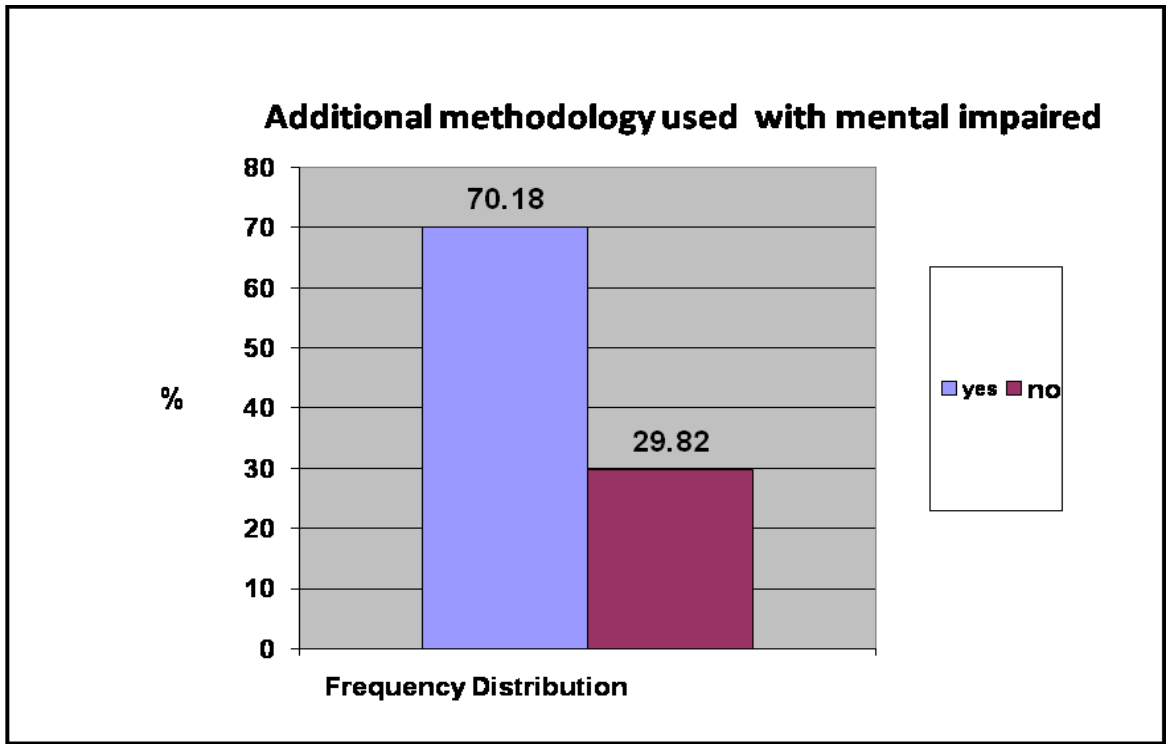


Figure 4.11 (Q 19) above shows that of the respondents, (N=80) (70.18%) indicated that they use additional methodology (extra teaching methods) when teaching mentally impaired learners and (N=34) (29.82%) showed that they do not use additional methods when teaching mentally impaired learners.

These results demonstrate that most teachers understand that they have to use additional methods with mentally impaired learners. One of the observations made is that learners with mental impediments experience more problems during the learning process. Teaching would be more beneficial if teachers employed

additional methods and strategies which would facilitate the acquisition of information by these learners. Some of the methods that can be used are cooperative learning and peer tutoring which are very similar in their approach. Cooperative learning, on the one hand, specifies the importance of positive interdependence and is designed to promote task-related contact wherein learners help one another, with the ideal situation being one in which able bodied learners help the disabled learners. On the other hand, the peer tutoring is a method where the key factor is trust among the learners. This method fosters a warm relationship among the learners and it is a known fact that learners are less weary of their peers and more sceptical of their teachers. This is two-way process because both groups of learners benefit from each other so much that the academic performance of all learners improves, as those with a higher aptitude are able to assist those with a lower one, thus reinforcing the learnt skills (Ayers, 2006:40-41).

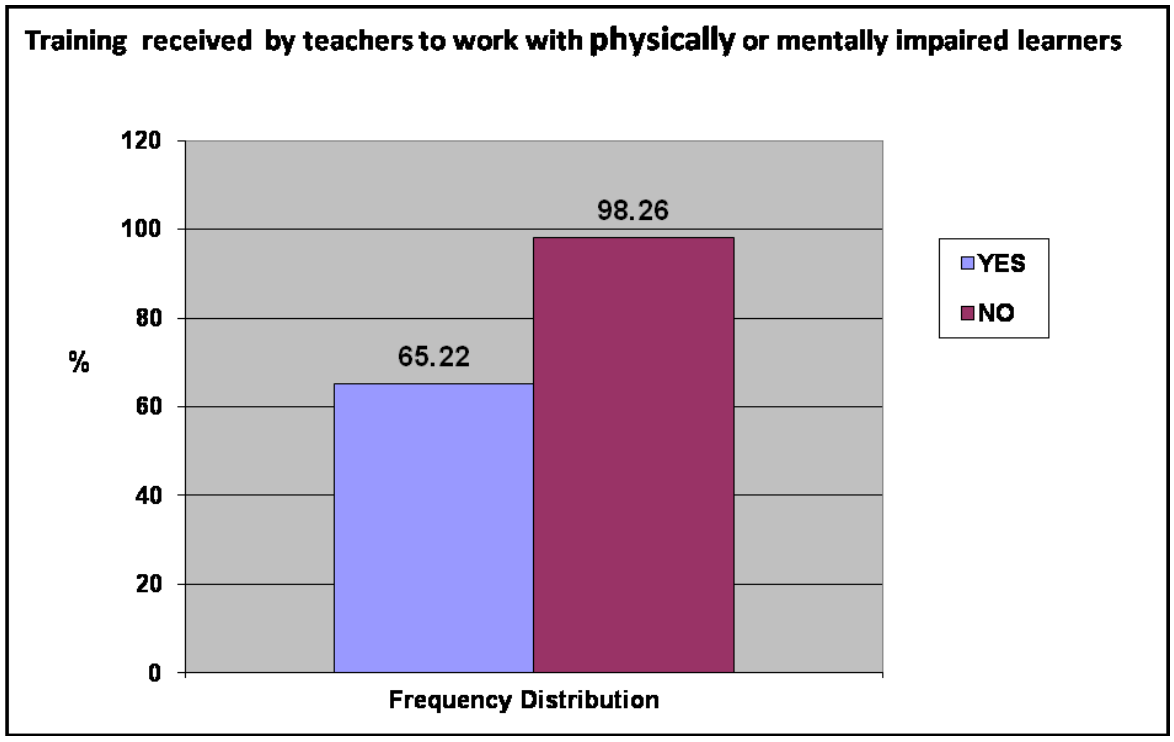
In the final analysis, it is worthwhile noting that the majority of the respondents experience difficulties when working with physically and/or mentally impaired learners in an inclusive classroom. It is clear from the results that some respondents encounter problems occasionally, while others always do. Furthermore, it can be concluded from these results that some impaired learners can learn in an inclusive classroom as they do not exhibit problems frequently. The following section also reports on the findings of Hypothesis two namely:

- Most teachers in a normal classroom are not able to effectively deal with learners with either physical and/or mental impairments. The specific objective is to highlight some of the difficulties confronting teachers teaching both able and disabled (that is, physically and/or mentally) learners in the Berea and Maseru districts of Lesotho. The source may be a lack of training with regard to working with such learners.

4.5.3 Section C: Training received by teachers with regard to physically and/or mentally impaired learners

In Section C of the questionnaire, the purpose was to discover whether teachers received training with regard to working with physically and/or mentally impaired learners. Training received by teachers with regard to impaired learners is crucial for success. This is because trained teachers can use appropriate strategies and extra methods in an inclusive classroom.

Figure 4.12: (Q 20) Do teachers receive any formal/informal training to work with physically and/or mentally impaired learners?



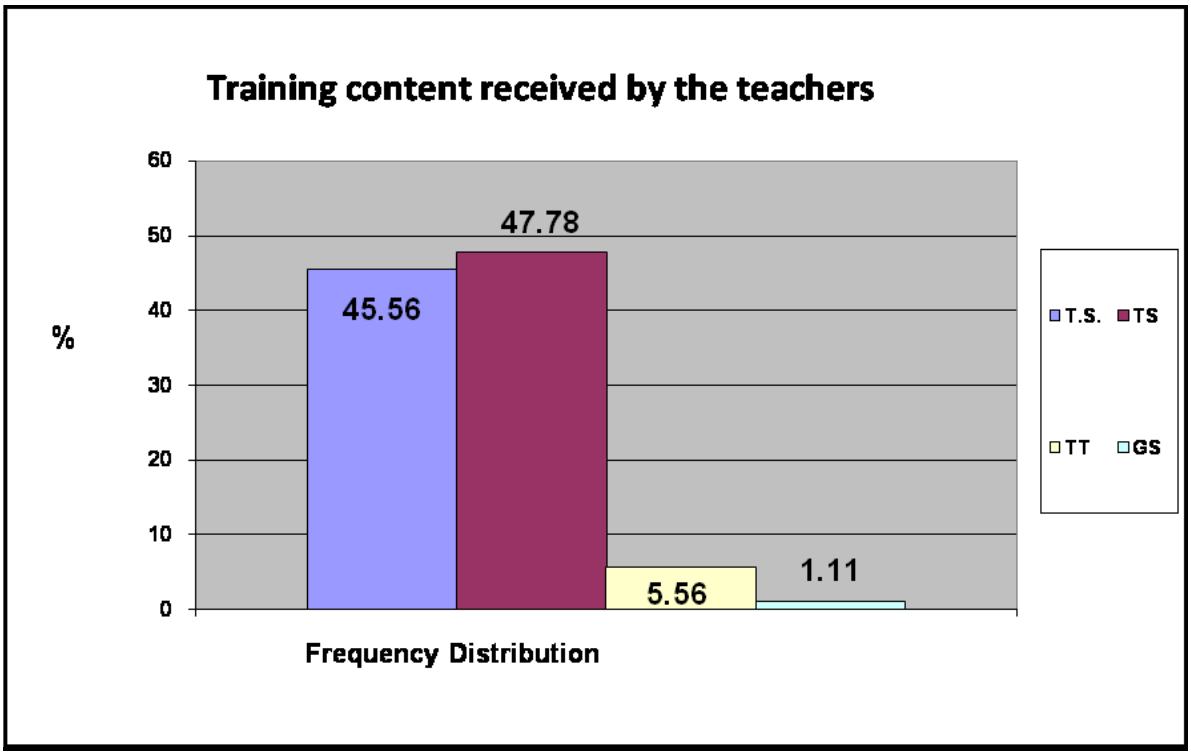
In Figure 4.12: (Q 20), of the respondents, 65.52% (N=75) indicated that they received training with regard to teaching physically and/or mentally impaired learners and 98.26% (N=100) showed that they did not receive any training with regard to working with physically and/or mentally impaired learners.

The results indicate that some teachers teach physically and/or mentally impaired learners without being knowledgeable on how to assist them and consequently, it is important to take this into consideration:

Professional staff development for classroom teachers

In the classroom, teachers are the primary resource for achieving the goal of an inclusive education and within the system of education. This implies that teachers should frequently improve their skills and knowledge and develop those relevant to including the physically and/or mentally impaired. Programmes should be structured in such a way that teachers acquire knowledge which will be responsive to individual learner's needs. It can be further mentioned that education support personnel at the district level would be more effective if they are orientated and trained for their new roles of providing up-to-date support to stakeholders such as teachers and learners. Training has to be structured in such a way that emphasis is placed on good teaching strategies, able to meet the needs of the learners and thus be beneficial to both teachers and learners (White Paper 6, 2001:18).

Figure 4.13: (Q 22) Training content received by the teachers



TS - training skills **TT** - teaching techniques

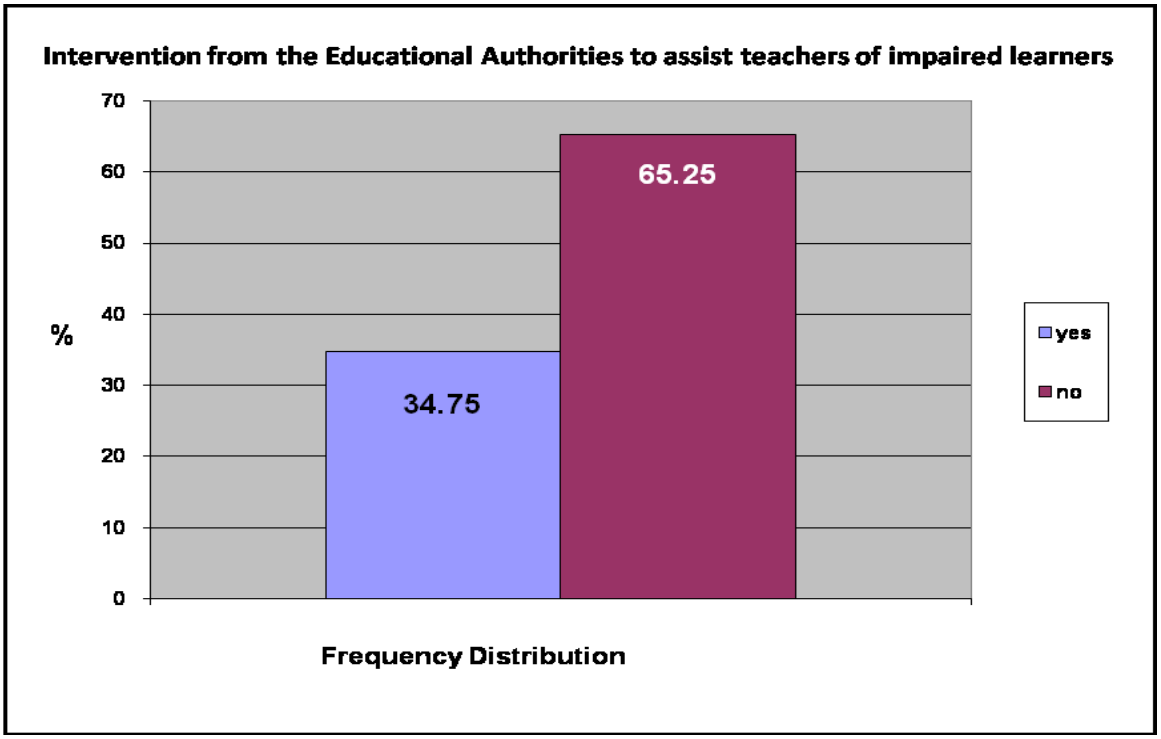
TS - teaching skills **GS** - general skills

In Figure 4.13: (Q 22) above, of the respondents, 45.56% (N=41) indicated that they received training providing them with teaching skills, whereas 47.78% (N=43) of the respondents pointed out that they received teaching skills; 5.56% (N=5) of the respondents received teaching techniques and 1.11% (N=1) received general skills.

The results imply that the majority of teachers have some basic skills with regard to the inclusivity of physically and/or mentally impaired learners. It is imperative that these teachers undergo periodic training that will keep them abreast of developments in the area of inclusive education. This could be achieved through frequent workshops which should be attended by all teachers.

In conclusion, it should be mentioned that some of the respondents received training with regard to the physically and/or mentally impaired learners. This type of training in teaching skills and techniques will provide teachers with strategies they can employ in order to accommodate these learners.

Figure 4.14: (Q 23) Intervention from the Educational Authorities to assist teachers to deal with learners in wheelchairs



In Figure 4.14 (Q 23) above, of the respondents, (N=41) (34.75%) indicated that they receive assistance from the authorities to help them (teachers) to deal with learners in wheelchairs. However, (N=77) (65.25%) of the respondents denied that authorities give teachers assistance on how to include learners in wheelchairs. Based on these results, it is obvious that more educational support services should be given in order to support teachers and learners in the inclusive classroom.

The White Paper 6 (2001:28) clearly states the role of the educational authorities in that they need to put in place variables which will strengthen the education support service, thereby reducing possible barriers in the quest for education and training. These support services would be instrumental in refurbishing the kind of education offered by creating support teams which would come from head offices. The primary function of these support teams would be to provide an overview of

the current system and subsequently introduce programmes that are effective and modified to cater for the physically and/or mentally impaired learners.

In order for the Government of Lesotho to have strong support services, they need to improve and increase the capacity of the existing schools. The long-term solution would be for the Government to build centres such as colleges and tertiary institutions which could provide training in early childhood and basic adult education. This would help overhaul the education system and would be more relevant and suited to address a wider spectrum of learning difficulties and also accommodate a range of learning needs. A short-term solution would be to provide schools with special teachers and/or teaching assistants who could provide one-on-one support to learners with special needs so that they too may benefit from the curriculum, until such a time that it is modified (Ayers, 2006:43).

The following section focuses on the qualitative research findings emanating from open-ended questions in the previous Sections B and C.

4.5.4 Section D: Qualitative research findings

In the Sections B and C, quantitative research methods were used to obtain an overview regarding the challenges facing teachers and both able-bodied and disabled (physically and mentally impaired) learners. Results from the quantitative research show that teachers encounter challenges when working with both able and disabled learners in an inclusive classroom.

The analysis of the qualitative data showed that there is a discrepancy amongst teachers due to the training they received. On the one hand, there were those teachers who although had undergone the relevant training still faced challenges. However, the training did make it easier for them to overcome such hurdles (Section C). On the other hand, those teachers who did not have the relevant qualifications were unable to work effectively with learners who were physically and/ or mentally impaired (Section A; Fig 4.4 Q5).

This section is a critical analysis of the views, perceptions and experiences of teachers who teach both categories of learners in the mainstream classroom.

4.5.4.1 Selection of participants

The first sampled group of respondents was teachers of physically and/ or mentally impaired learners who completed the questionnaires. The second group consisted of physically/ and or mentally impaired learners selected to participate in an informal discussion. When selecting the group, it was important to conduct and complete the study within the specified time frame. Other factors that were considered were the financial implications, the accessibility of the schools, the preparedness and availability of the participants for the informal discussions and additional resources pertinent to the study.

4.5.4.2 Data analysis and interpretation

As far as the data collected through the informal discussion with the learners were concerned, these data were transcribed from the tape recorder and then analysed as text in order to extract the meaning constructed by the physically and/or mentally impaired learners. The data were analysed using TODA. These were later transcribed verbatim with the focus being more on content rather than on form. This helped to reflect the respondents' beliefs, relate them to the tape and then make notes of the sections that contained particularly useful information and key quotations. A return to these sections of the tape for further analysis was made with the focus being more on the content than on the form (Meulenberg-Buskens, 1997).

The tape analysis was used as a means of taking notes from playing back the tape from the informal discussion with the learners. The researcher listened to the tape and made notes of the sections that contained particularly useful information and returned to those sections of the tape for further analysis. When transcribing, the researcher of this study considered how the respondents' feelings and meanings were communicated on paper (Carr & Kemmis, 1986).

The questionnaire used for data collection had both close-ended and open-ended questions. Some of the latter required that the participants should express their views on inclusive education in the classrooms.

4.6 RESPONSES FROM OPEN-ENDED QUESTIONS FROM TEACHERS

4.6.1 (Q7) Do you have wheelchair learners in your class?

4.6.2 (Q8) If yes, please explain challenges with which you are confronted when working with these learners.

Question 4.3.2 (Q8) is the follow up from Question 7 (Section B) to find out challenges confronting teachers when working with wheelchair learners in their classrooms. Respondents had to explain the challenges they are facing if they marked 'YES' in Question 7 (Section B).

Most of the respondents explained that they experience problems when working with wheelchair learners. Respondents were of the opinion that wheelchair learners need extra support and a lot of attention. They further indicated that the difficulties they encounter are caused by the inadequate structure of their school environment because it is not designed for wheelchairs.

These data, gathered from respondents, confirm that the environment plays a key role in the teachers' experience when working with impaired learners. The findings prove that there is also sparse knowledge among teachers on how to include learners with physical and/or mental impairments in inclusive classrooms. It can also be deduced that some of the respondents have little experience in working with physically and/or mentally impaired learners. The following statements serve as a summary of the feelings of most of these teachers about their frustrations with facilities. One participant opened the discussion as follows:

"Working with wheelchair learners is difficult because classes are over-crowded and buildings have stairs, so working with them is not an easy task."

Similarly another teacher maintained that:

"It is very difficult to work with them unless one is given training. They need a lot of my time; for instance, I have to be there always to assist them."

One participant also elaborated in this way:

"It is difficult to work with them especially when changing classes. Classrooms are not designed to accommodate or include them. Classes are over-crowded and buildings are not accessible to them, so movement is difficult." Our classes are full, so there is no space and it is not easy for them to move freely around the class."

Most of the participants seemed be dissatisfied about the way other learners behave towards these impaired learners.

Another participant expressed herself as follows:

"They isolate themselves because some learners tease them and they do not pay attention to the class work. It is not easy for them to participate in class activities."

On the other hand, another participant had different ideas from the afore-mentioned participant, complaining about the behaviour of these disabled learners towards able learners. She put it in this manner:

"They beat others in class and sometimes refuse to write. They also want to be noticed, yet this makes them uncomfortable. Sometimes they are difficult to discipline due to behavioural problems. They turn out to be rebellious in class sometimes."

Another participant concurred:

"We do not have equipment to provide for their needs in my class. It is difficult to work with wheelchair learners because the facilities are inadequate. They hardly participate in activities such as sport, drama and other related activities."

One participant put it this way:

"I spend most of my time focusing on them without attending to the other learners and this delays progress. "They also need too much of my time which is very tough for me to dedicate myself exclusively to them in an over-crowded class."

From the responses given, it is evident that the lack of facilities to support learners who are mentally and/or physically impaired creates challenges for teachers. Teaching cannot be effective as long as there is inadequate or no equipment for the afore-mentioned learners. According to the White Paper 6 (2001:30-33), it is essential to accommodate the full range of learners' needs through the provision of the necessary infrastructure and also an on-going strategy of professional development of the teaching staff. Furthermore, an ideal situation would be one wherein the learning process and access to education are free of problems due to adequate resources for learners.

Teachers also complained of inadequate space and poor accessibility which are usually a result of overcrowded classes. According to Frederickson and Cline (2007:194), the interior of the classroom and the furniture should be arranged in such a way that there is free mobility of all learners. According to these authors, the teacher learner ratio should be such that there is no overcrowding in the classrooms.

4.6.3 (Q13) Do you have mentally impaired learners in your class?

4.6.4 (Q14) If yes, please explain challenges with which you are confronted when working with these learners.

Question 4.5.4: (Q14) was intended for the respondent to explain the challenges teachers face when working with these learners if he or she marked 'YES' in Question 13 of Section C.

Respondents indicated that it is not easy to cope with mentally impaired learners' disabilities and as a result, the care of them tends to be difficult. Respondents expressed their views that there are considerable problems which they experienced when working with physically and/or mentally impaired learners because of their exceptional characteristics. Respondents expressed their views as follows with regard to the personal challenges facing teachers:

One participant put in this way:

"They experience difficulty in understanding academic concepts; their attention span is very short and as a result, they disrupt our classes."

One participant mentioned the difficulties she encounters when working with mentally impaired learners and commented:

"Owing to a lack of material, it is difficult to work with the mentally impaired learner. My work becomes difficult because they are slow to follow instructions. Sometimes, they give me a hard time because we work on targets and it seems as if I waste others' time on them."

Another participant concurred:

"Physically and/or mentally impaired learners need special attention because sometimes they turn to bullying others. Most of them do not achieve the expected skills because I am not trained to work with such learners."

It is clear from the above findings that learners with mental difficulties experience problems in acquiring the basic skills. These difficulties are the results of many factors, such as an unsuitable environment which could be the result of a rigid teaching style and inaccessible curriculum-related materials. It is therefore crucial that the teachers receive the relevant training as it will equip them with the skills needed to be able to instil a sense of self-worth in the learner\ and thus improving the learners' academic abilities and restoring the learners' confidence.

What is evident from the responses given by the teachers is their dissatisfaction about working with mentally impaired learners. The best way to change the attitude of the teachers is that they should undergo intensive specialised training which could be offered by both the Lesotho College of Education and the National University of Lesotho. By so doing, teachers would be equipped with the necessary skills on how to accommodate and include these learners in mainstream teaching. They would, for instance, know that they need to have frequent breaks during teaching, because these learners have a short concentration span and that instructions should be given slowly and repeated. Inclusive education advocates that teachers should always be patient because these learners tend to display characteristics which are not within the normal parameters of the average learner.

According to Evans (2007:560), due to the emotional and social needs of these learners, teachers should be flexible and creative in their teaching and also establish a support network for the learners. This can be achieved if the teachers are able to instil self-confidence in the learners which will enable the latter to have a better understanding of themselves, thus reducing instances of erratic behaviour. Once their self-esteem is boosted, learners can successfully deal with problems such as victimisation.

4.6.5 (Q15) Do you experience problems when working with mentally impaired learners?

4.6.6 (Q16). Please explain why you say so.

In Question 4.3.5: (Q16) the respondent had to explain why he/she said that he/she experienced problems when working with mentally impaired learners if he or she marked ‘Always’ or ‘Sometimes’ in Question 15, Section B.

There are a number of reasons which were given by respondents, including problems teachers experience when working with mentally impaired learners. The general feeling of the respondents was that disabled learners’ problems were

exacerbated by their natural retardation which inhibits them from acquiring concepts.

Respondents remarked as follows with regard to their personal challenges, when working with mentally impaired learners. One participant generalised in this manner:

"*Since they have a short attention span, they rarely sit still in class and as a result, they make learning and teaching difficult."*

Another participant in similar vein expressed her feeling like this:

"Mentally impaired learners deserve their own individual attention and it is challenging to work with them; they need a lot of patience. Sometimes they seem not to grasp anything at all. They need a great deal of attention which is difficult in mainstream schools. I do not know how to work with them since I am not trained in how to handle them."

Another participant added that:

"They always cause disorder in the class; they interrupt others when teaching and learning is going on. They are restless; they move around the class shouting and disturbing the class."

One participant indicated that mentally impaired learners experience problems with regard to their academic work by saying:

"Their pace of learning is very slow and they need a lot of motivation. They may understand the concept today; tomorrow they have forgotten it."

Teachers should be able to empathise with mentally impaired learners. This would put the former in a better position to understand the difficulties to which the latter are subjected. They need to bear in mind that these learners may display disruptive and disturbing behaviour. Such behaviour could be a culmination of the

frustrations the learners experience and therefore need additional support (Frederickson & Cline, 2009:411).

It is important when teaching such learners that teachers should always remember to give instructions at a slower and more accommodating pace. Apart from that, teachers need to align themselves with support agencies and to also establish systems of peer support in which learners help one another (Evans, 2007:75).

4.6.7 General comments from teachers with regard to inclusivity of learners with physical and/or mental impairments

The purpose of this question was to find out from the respondents their views with regard to inclusivity or the accommodation of physically and/or mentally impaired learners in mainstream classrooms.

Most of the respondents mentioned that there is a need for the training of teachers so that they can cope with special needs learners such as those who are physically and/or mentally impaired. It is clear from their responses that there is limited knowledge in relation to teaching physically and/or mentally impaired learners. Respondents expressed their feelings like this concerning the training of teachers:

One respondent pointed that:

"It is important to train teachers on how to deal with learners with special needs because most of the teachers in the mainstream do not know anything about the inclusivity of these learners."

Another respondent further added:

"Special education should be compulsory for all teachers so that they will be in a position to deal with physically and/or mentally impaired learners; both mainstream and special needs teachers should be provided with special education."

One participant emphasised:

"The Lesotho College of Education (LCE) should train all teachers with regard to special needs learners and in-service training should be provided for teachers who are already teaching."

Another respondent concluded:

"There should be workshops on how to equip teachers with the necessary skills on how to handle physically and/or mentally impaired learners."

4.6.7.1 Professional development of teachers

It can be concluded that from the above responses that teachers want to be provided with more training regarding the inclusive approach to teaching and learning. The best way the Lesotho College of Education can do this is to improve the skills (through in-service programmes and workshops) of teachers especially those who did not get the relevant training. It is imperative that everyone who ventures into the teaching profession should also undertake studies in special education for impaired learners. This reinforced by the White Paper 6 (2001:18) that teachers need to improve their skills and develop new ones. The purpose of developing teachers is to keep them abreast of the new approaches that focus on problem solving and developing learners' competencies rather than on their shortcomings.

The broad sphere of support services within the education spectrum should be in compliance with the more specific ones offered at district level by offering relevant support through training to all teachers. The focal point of the training should be the learners' development. Teachers have to be equipped with strategies on how to identify and address barriers within the learning process and how these strategies can best be used to overcome obstacles in the system that impede the learners' learning.

One participant pointed out:

"Wheelchair learners should have their special teachers and all facilities should be available. It is through a rich learning environment and special equipment that we can accommodate or include these learners. There should be teachers who are trained to use assistive devices, for example computers."

Another participant recommended:

"Our Government must ensure that schools are provided with special facilities for such learners. Special needs learners, especially those who are severely affected, should be put in one place so that their needs can be adequately provided for."

Learners with a deformity of either one or both hands would benefit if the relevant technology could be made available to them so that can do their work and facilitate their participation in the classroom. Such facilities would alleviate any additional frustrations experienced by the learners because they would be able to be more active in class (Mitchell, 2008:206). According to Ainscow, Booth and Dyson (2006:73), specialised teachers such as teaching assistants and mentors can be employed to help use these special facilities at schools and be of assistance to special needs learners.

The next part in this Section D seeks to address the first hypothesis which reads thus:

- There are challenges or difficulties faced by physically and/or mentally impaired learners within the teaching and learning milieu in the Berea and Maseru districts of Lesotho.

4.6.8 Responses from informal discussions with physically and/or mentally impaired learners

According to Kauffman and Hallahan (2000:436) learners with impairments are associated with poor academic performance. Factors such as frequent absenteeism and medical attention may contribute to under-achievement. The

researcher believes that due to these factors teachers expect less from these learners. Thus, the specific objective of this section is to investigate the difficulties facing learners with physical and/or mental impairments in the aforementioned two districts.

4.6.8.1 (Q1) What are the challenges you experience in your classroom?

The majority complained that their classrooms are not inclusive or accommodative because of the poorly accessible facilities. Respondents complained that their classrooms do not meet their needs as wheelchair learners. Learners also seemed to experience serious barriers because they lack access to classroom facilities, such as being able to get books which are kept in lockers and are too high up to reach. The following are some of the responses regarding accessibility in the classroom. One participant complained:

"We do not access the lockers and the blackboard because they are placed too high up for our wheelchairs. What I do not like most is that I depend on other learners to do things for me because I do not have access to class equipment. "

Teachers have to ensure that classroom facilities are accessible to all learners. All barriers encountered in the learning process, such as materials being placed too high, should be changed (Evans 2007:77). To create an environment conducive to learning, certain barriers should be eliminated, such as the furniture being rearranged.

Another participant further emphasised:

"The class structure is very poor because it is impossible for me to go to every corner. This makes it difficult for me to hand in my work to the teacher; some learners always help, but it is very painful. There is also no space for my wheelchair to move around the classroom; tables are placed too close to one another and there is no time for me to clean the blackboard like other learners."

Safe mobility and accessibility in classrooms should be possible for all learners (Evans, 2007:76-77). It is therefore important that teachers should ensure that the learners' environment meets the needs of the learners by making the necessary changes to the classroom.

Another participant explained:

"The doorways do not allow my wheelchair to pass through them and the steps are too deep as well as slippery. The door handles are also too high for wheelchair learners to open; if it happens that the door is closed by mistake, I have a problem because I need others to come to open for me."

In order to ensure the easy access and mobility of wheelchair learners, adequate space is needed in institutions of learning. School buildings and classroom doors should be redesigned in such a way that doorways are wide enough for use by learners in wheelchairs. Furthermore, doors should be easily locked and unlocked (Westwood, 2007:40; Evans, 2007:76).

Another respondent elaborated*:*

"My wheelchair does not fit well under my table because my table is too low and small. This makes it difficult for me to write class notes as the desks are designed for only those who are not in wheelchairs. "The windows are too high and we do not manage to open them when it is hot."

According to Evans (2007:76-77), classroom furniture and equipment should vary in height to accommodate wheelchair learners and the windows need to be at a level where such learners are exposed to fresh air.

4.6.8.2 (Q2) What is your relationship like with other learners who do not use wheelchairs?

Respondents had mixed feelings about their relationships with other learners who do not use wheelchairs. Some learners complained about poor relationships with

other learners, while others pointed out that they interact well with them. They revealed their feelings as follows:

One participant put it like this:

"Some do not help us, while others really enjoy helping us but to tell you the truth, they do not help because they hate us; it is because of their upbringing".

Another participant said:

"Some learners mock us just because they know that we cannot do anything; other learners do not want to do group work with us because sometimes we are slow in understanding some concepts. Our teachers work hard to teach them to respect us because we are human beings like themselves."

4.6.8.3 (Q3) What is your relationship like with your teachers?

Most of the respondents expressed their satisfaction and appreciation with the way their teachers work with them. Learners' responses include the following. One respondent said:

"Most work co-operatively with us, yet there are some who do not co-operate with us."

To support the above statement another respondent postulated:

"They also teach other learners to respect us (wheelchair learners)."

According to Dawning (2008:221), learners without disabilities need to know how to assist their classmates when necessary. The former, should for instance, know how to push the latter safely if he/she is in a wheelchair which invariably means that the latter should know how to apply the brakes of the wheelchair. It is crucial that teachers should foster a warm relationship with learners, especially those who have disabilities, should be approachable and should also give the learners their unwavering support. These teachers need to be the bridge to a better

understanding of one another among able and disabled learners. This will enable all learners to be more accommodating as they will realise that there is no real difference between them.

4.6.8.4 (Q3) Do you manage to take part in sport such as athletics and soccer?

The overwhelming majority of respondents were damning about the accessibility of their recreational places and described them as very poor. According to the respondents, accessibility is not consistent across different areas of the grounds. They stated that accessibility is mostly unsatisfactory in areas where learners need to play. Their comments were as follows:

Concerning playground accessibility, one respondent expressed bitterly:

"Most of the time we are just spectators because our school grounds are so rough that they do not allow wheelchair mobility. In most of the places, there are stones and grass which do not allow wheelchairs to move."

Another one seconded this opinion*:*

"The paths to the playing grounds are not smooth and it is difficult for us to move in such places; after rainy days we experience more problems because our wheelchairs sink in the mud."

One participant with similar sentiments was concerned about the shortage of space for playing and pointed out:

"Our ground is so small that it does not allow us to play all the sports that we are interested in; the ground is made for certain sports such as basket ball only.

The physical environment plays an important role in every child's learning process and contributes to the child's acclimatisation in their environment. When designing recreational facilities, accessibility for all, especially impaired learners should not be compromised. Evans (2007:78) indicates that all schools need to upgrade the

physical environment by implementing the necessary changes so that all services provided by the school are accessible to all learners. In other words, not only the classroom, but also the playground, sports field, dining hall and toilets need to be reachable to the disabled learner. These places should be comfortable, welcoming, attractive and accessible.

4.6.8.5 (Q4) Do the teachers give you enough time to complete your school work?

Respondents complained about the lack of fairness by some of the teachers. They stated that they are not given enough time to complete their work during examinations and tests; as a result, they fail and continuously repeat classes. Learners with physical and/or mental impairments tend to be the victims of time; this is because teachers do nothing to ensure that they have extra time available to finish their work. Learners came up with the following complaints on time management.

One participant had this opinion:

"I have a problem of a hand deformity. As a result, I need more time to write, but the teacher does not take this into consideration; once others finish writing, our teacher just stops us even before I finish and he takes my answer sheet before I finish writing."

According to Nieman and Monyai (2006:63), learners should be helped to manage their time and be organised. Since impaired learners struggle to use their time effectively, the teacher should help them with time management so that they can get maximum benefit during the learning process. This could be made easier to achieve if their work is broken up into small chunks (Vaghumm, Bos & Schumm, 2007:77). Wearmouth (2009:15) furthermore believes that learners with special needs should be given more time to solve problems, more time to practise skills and adequate examples from which to learn. It takes the learner with special

needs longer to acquire skills, to understand what has been said and to construct an appropriate response (Vaghumm, Bos & Schumm, 2007:113).

Another respondent complained bitterly:

"Most of the time my work is not marked because I do not manage to complete work in time; as a result, I usually fail my examinations. I find it of no use to come to school because my work is sometimes not considered."

Generally, learners with impediments are frequently absent from school. In such instances, teachers need to give them the necessary support by helping them to catch up with their school work (Nieman & Monyai, 2006:59).

Learners blamed their teachers about the limited time they are given and one participant pointed out:

"I do not have time to ask questions in class and the lesson ends before I have understood. The teacher also goes too fast when teaching. When I ask questions, it's as if I am wasting others' time. Some learners try to explain what we have done, but it is sometimes not easy."

Repetition is essential for learners with impediments. The teacher should remember to repeat instructions all the time. He or she should not rush when presenting a lesson (Nieman & Monyai, 2006:59).

From the above results, it can be concluded that environmental accessibility is a major difficulty in schools for the physically and/or mentally impaired learners in terms of their classrooms and recreational places, such as sports grounds. It should also be emphasised that there is generally, poor relationship between disabled and able learners. There is also limited time for the former learners to complete their work. This last section of the chapter seeks to address the third hypothesis which states that there are various teaching strategies which can be used to accommodate learners with physical and/or mental impairments.

4.6.9 Section E: Strategies that teachers can use in an in inclusive classroom

In this study the purpose is to identify ways or strategies teachers can use to accommodate learners with both physical and/or mental impairments in an inclusive classroom. The researcher decided to review the literature in order to discover relevant documented and approved strategies that teachers can use in an inclusive classroom. The strategies teachers can use are in relation to the following: spelling, mathematical problems and written language expression. These areas were singled out because learners with physical and/or mental impairments struggle mostly with them.

4.6.9.1 Spelling

There are various strategies that can improve learners' performance in spelling. According to Stakes and Hornby (1996:63), spelling is regarded as one of the most important language aspects in acquiring proficiency in communication (Anderson, 2002:84). A high value is placed on the ability to spell words correctly because spelling takes time; it begins with misspelling (Browne, 2007:108). This is because the choices students make as they spell words are important indicators of their knowledge of both phonics and spelling e.g. learners who spell phonically might spell money as *mune*. Some learners, especially those with mental impairments, experience problems with spelling. Stakes and Hornby (1996:63) indicate that spelling is made difficult by the way it is taught. Learners are asked to write when circumstances are not purposeful. Spelling difficulties are caused by society as a whole which overemphasises the importance of correct spelling in written work and takes little or no account of the real-life situation.

4.6.9.2 Principles of effective spelling instruction

According to Vaughn, Bos and Schumm (2007:388-289), teaching spelling patterns is more important than teaching regular subjects. The authors assert that

learners should always be exposed to a common word pattern, such as suffixes and prefixes.

Vaughun, Bos and Schumm (2007:289) indicate that the teacher should teach learners only a few words a day, since mentally impaired learners forget easily; for example learners should practice 3-5 words per week. Learners should be encouraged to spell these words all the time. Words should not be practised incorrectly because it is hard to unlearn incorrect spelling (Underson, 2004:85). Hammeken (2000:81) further indicates that the spelling words should be relevant to the learner. Spelling words can be increased when the learner reaches mastering level. Apart from this, the period given to learners to study words should not be too long (Mastropieri & Scruggs, 2007:315). Moreover, teachers should provide sufficient practice and feedback; mentally impaired learners should practise words each day. Learners should work co-operatively with others and provide feedback (Vaughun, Bos & Schum, 2007).

4.6.9.3 Written expression

Written expression refers to handwriting, spelling and composition. One of these may be a problematic area for learners with impairments. Nevertheless, adaptations can be made in order to promote success in inclusive classrooms (Mastropieri & Scruggs, 2007:313). According to Stakes and Hornby (1996:37), competent handwriting is important for learners at all levels in school, but some learners are not able to write legibly because of a lack of fine motor skills. Learners with impairments exhibit extreme difficulty in writing, a condition referred to as dysgraphia. Dysgraphia is a written language disorder in mechanical writing skill. It is noticeable in poor writing by learners (Vaughn, Bos & Schumm, 2007:390). Some learners find it difficult to copy from the chalkboard or overhead projector. Another problem is related to forming letters from memory which makes handwriting problematic (Mastropieri & Scruggs, 2007:13). Weintraub and Graham 1998, (in Vaughn, Bos & Schumm, 2007:390) indicate that poor handwriting is characterised by the following:

- The learner's formation of letters is very poor;
- There is poor consistency in letter size;
- Learners find it difficult to use correct letters where necessary, such as capital letters;
- Learners do not leave enough space between letters; that is, little or no space between letters; and
- There is no consistency in writing letters; that is, letters are not consistently cursive or slanted.

Vaughn, Bos and Schumm (2007:390) are of the opinion that handwriting problems can be handled and corrected. There are two major components one needs to focus on when teaching handwriting: legibility and fluency.

4.6.9.4 Legibility

Legibility is one of the most essential factors of handwriting. Poor letter formation is the main hindrance against achieving legibility. Vaughn, Bos and Schumm (2007:391) mention that teachers should point out critical attributes by comparing and contrasting letters. The teacher should use physical prompts and cues; for example, the teacher should guide the learner's hand by providing arrows for directions. The letters should be reinforced and there should be provision for corrective feedback for letters that need self verbalisation whereby learners pronounce the letter formations aloud and then say them again to themselves while writing. Moreover, letters should be written in different colours. They can also be written on large pieces of cards.

One of the best strategies to enhance legibility is to provide a moving model, through which learner's form letters and words, instead of simply copying them from board (Vaughn, Bos & Schumm, 2007:392). For example, the teacher should choose three letters and write each letter on the chalkboard, then sound the word e.g.c-a-t and blend the sound to read the word. The teacher should help students

to identify the letters of the word starting with C, followed by the other letters. To provide a moving model, the teacher should be near the learner as he/she forms letters or words and guides the learner through the process.

4.6.9.5 Fluency

Stakes and Hornby (1996:71) mention that the teacher should include exercises which help learners in fluency such as practising large rhythm patterns on paper. The size of the paper needs to be commensurate with the needs of the learners, moving from large to small paper with practice. The teacher should use finger tracing as a useful exercise. Children should be introduced to the letter shapes and have experience of tracing textured letters with their fingers e.g. writing letters in the air or on sand. Children should be introduced to letter shapes and experience letters with the fingers by tracing their texture. Vaughn, Bos and Schumm (2007:392) are of the opinion that after learners have begun to master basic letter forms and their writing has become legible; the next step is to learn to write quickly. This can be done through timed writing and journal writing.

4.6.9.6 Mathematics

Most learners with mental impairments should receive special individual education services for mathematics because difficulties manifest themselves in different ways, such as reversals in numbers (Hammeken, 2000:91). Most learners find it difficult to master mathematics because of poor memory, general strategy use, literacy, communication, specific process and strategies associated with mathematical problems and low motivation. Learners with mental impairments exhibit most or all of the above difficulties, such as procedures and reasoning in mathematics. Mentally impaired learners experience difficulties in mathematical concepts. In other cases, they lack the computation skills to complete problems (Vaughun, Bos & Schumm, 2007:400).

4.6.9.7 Strategies for teaching mathematics in an inclusive setting

There are different ways teachers in an inclusive classroom can help learners to do well in mathematics. Teachers should be models of the subject; this means that the teacher should show an interest in and have a positive attitude towards mathematics by providing a number of opportunities for success. Teachers can motivate learners by emphasising that the mastery of mathematics is essential for success in other subjects. Teachers need to determine what really motivates their learners in their specific subjects, instead of assuming learners are motivated by the same things that motivate teachers (Pasomentier and Jane, 2006:36); Reddy 2003:91). It can be motivating for the learners to select real-world problems that address issues of importance; additionally, it is helpful for learners to chart their own progress because success is the best motivation. Learners should also be equipped with tools and calculators in order to support their efforts. On occasions it is essential to encourage learners to work with partners (Vaughn, Bos & Schumm, 2007:406).

Mastropieri and Scruggs (2007:328) recommend the components that can be used in designing effective instructions for learners with impairments. First of all, the teacher should focus on 'big ideas'. This means that concepts should be generalised, rather than focusing on individual details. Learners should be taught strategies that are neither too broad nor too specific in mathematical operations and problem solving. Strategies need to be communicated in a clear manner, with learners being provided with practice and review exercises to promote retention.

Hammeken (2000:91) emphasises that when teaching basic mathematical skills, the teacher should use concrete manipulative materials. Learners should manipulate materials and demonstrate their operation by using concrete materials, For example, the teacher can use a graphic presentations chart such as problem solution charts, concepts maps, tree diagrams and flow charts (Pasomentier and Jane, 2006:77). The development of learners with mental impairments can be facilitated by progressing from concrete to abstracts facts, for example.

Furthermore, mathematics acquisition can be improved by reinforcement, mnemonics and cognitive strategy training (Mastropieri & Scruggs, 2007:328).

Hammeken (2000:91) encourages teachers to introduce mathematical concepts into real-life situations and make mathematics come alive as students exercise their computational and social skills. This provides students with real-world skills they CAN use in their daily lives (Gregory & Chapman, 2008:17). This helps learners to understand the reason for the concepts. The teacher should also brainstorm and create a list of ways in which mathematics is used every day. The use of diagrams and the provision of a dictionary of mathematical terminology are very important.

4.7 SUMMARY AND CONCLUSIONS

This chapter has addressed the research results of the study: the gender, population group, highest qualification and work experience of the teachers dealt with. The findings from the specific objectives of the study were presented. Additionally, responses from both open-ended questions and informal discussions were analysed. Finally, different views from the literature sources were discussed.

The next chapter (5) will focus on a summary, recommendations and conclusions of the study.

CHAPTER 5

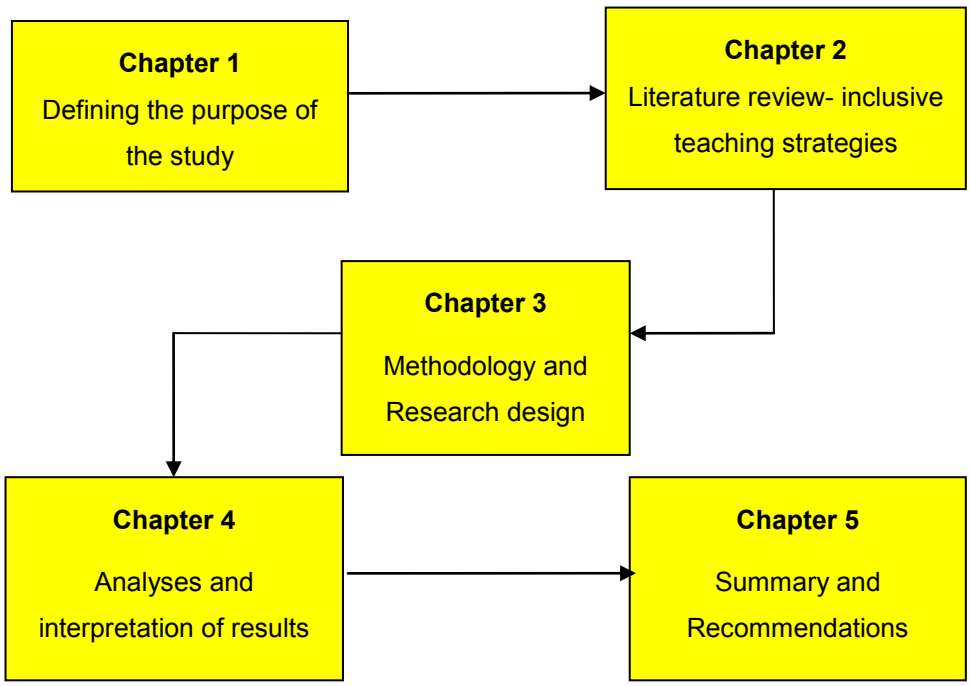
SUMMARY AND RECOMMENDATIONS

5.1 INTRODUCTION

In the previous chapter, interpretation and analyses of the research results were documented and a few observations were made. With the intention of addressing the problem statement and aim of the study, which is 'to investigate teaching strategies that ensure the inclusivity of learners with physical and/or mental impairments in the Berea and Maseru districts of Lesotho'.

In this final chapter, recommendations for future research are made based on the findings of the study.

Figure 5.1: Summary of the sequence of chapters of the study



It will also be pointed out how the objectives of the study, both theoretical and empirical, were achieved. This chapter begins with a reflection of a brief overview of the sequence of the entire study as indicated in Figure 5.1.

Focusing briefly on each chapter provides a broad synthesis of the entire study.

Chapter One: Introduction

The fundamental purpose of this study was 'to investigate teaching strategies that ensure the inclusivity of learners with physical and/or mental impairments in the Berea and Maseru districts of Lesotho'. So, the overview was based primarily on the identification and formulation of appropriate aim and objectives, hypotheses and problem statement. The objectives of the study were divided into primary and secondary research objectives, and the objectives and hypotheses of the study were grounded on the literature survey.

Chapter Two: Literature Review – Teaching Strategies that ensure Inclusivity

The literature review was devoted to a comprehensive review of the literature related to this construct. This included amongst others, a definition of the concept of Inclusive Education, local and international documentary successful stories on its application and implementation in the mainstream classroom.

Chapter Three: **Research design and Methodology**

The purpose of this chapter was to design a research methodology for answering the research question. Research elements covered included population and sampling techniques, data collection and analyses strategies. The research design followed in the study was quantitative and qualitative in nature, in a form of a semi-structured questionnaire and informal discussion with the respondents.

Chapter Four: **Analysis and interpretation of research results**

Following from Chapter three above, basic inferential statistical procedures were conducted to test the hypotheses of the study. While qualitative data was first

reduced to manageable patterns, after which certain themes and patterns will be identified and reported on. As the views and opinions of participants are sought in a natural setting.

Chapter Five: Synthesis, conclusions and recommendations

The results of the study were used not only to report on the teaching strategies that ensure the inclusivity of learners with physical and/or mental impairments but also to make substantive recommendations for future research as well as recommendations that can assist Lesotho authorities in addressing this challenge meaningfully.

To address the primary aim of this study, the following hypotheses were then formulated:

Hypothesis 1

- There are challenges faced by physically and/or mentally impaired learners within the teaching milieu in the Berea and Maseru Districts of Lesotho.

Hypothesis 2

- Most teachers in a normal classroom in Lesotho are not able to deal effectively with learners with either physical and /or mental impairments.

Hypothesis 3

- There are various teaching strategies that can be used to accommodate learners with physical and /or mental impairments.

5.2 REFLECTIONS ON THE FINDINGS OF HYPOTHESIS 1

The recommendations in the following section are based on the analysed and interpreted data in the previous chapter. This part addresses the first hypothesis which states that there are challenges faced by physically and/or mentally

impaired learners within the teaching milieu in the Berea and Maseru Districts of Lesotho. This hypothesis has two recommendations namely:

(i) To improve physical accessibility ; and

(ii) To examine the role of educators and the importance of including physically and/or mentally impaired learners in the mainstream.

It is evident from the research findings that most of the schools in the Berea and Maseru Districts adhere to the principles of inclusion which acknowledge that "integration is all about getting learners to fit into a particular kind of education system or including them into this existing system" (White Paper, 6; 2001:17). This issue is supported by the findings in Section B, Figure 4.6 (Q7) and 4.10 (Q13) which indicate that most of the mainstream schools include physically and/or mentally impaired learners in their classrooms.

It is clear that the above-mentioned districts adhere to the principles of integration; however, it is evident from the qualitative research findings obtained from the open- ended questions (questionnaire) and the informal discussions there are still challenges facing physically and/or mentally impaired learners in an inclusive classroom (see section D, 4.3.2: Q 8) to (4.3.4: Q14) and (4.3.5: Q4).

The responses from informal discussions with physically and/or mentally impaired learners prove that environmental accessibility within the schools is very poor. It was also found in Chapter 4 (4.3.10: (Q2)) that some of the respondents complained about their poor relationship with learners without special needs, because wheelchairs are not able to manoeuvre around the class. Learners found it difficult to hand in their work to the teacher because of inaccessible areas (4.3.9 (Q1)).

From the open-ended responses (see 4.3.2: Q8) most of the respondents (teachers) explained that they experience problems when working with wheelchair learners. Respondents were of the opinion that wheelchair learners need extra

support and a lot of attention. They further indicated that the difficulties they encounter are caused by the inadequate structure of their school environment because it is not designed for wheelchairs.

It is clear from the findings that learners experience problems within the teaching and learning milieu in Lesotho, meaning that the findings confirm hypothesis one which states that there are challenges faced by physically and/or mentally impaired learners within the teaching and learning milieu in the Berea and Maseru Districts of Lesotho.

5.2.1 Recommendation 1

(a) Improve physical accessibility

"Improved physical accessibility refers to the elimination of architectural barriers such as stairs, heavy doors, and narrow lavatory stalls that confront individual with physical impairments" (Ntaote, 2003:46).

The Government of Lesotho should ensure that all learning areas of physically and/or mentally impaired learners are accessible to them. The school buildings such as classes, toilets, and school halls should be easily accessed by wheelchair learners. This means that all the transfer points should be designed with a low and flat level platform which permits disabled persons to move from one point to another.

The classroom should be designed in such a way that it is inclusive of all learners. For example, classroom furniture such as desks and tables should be low enough for the wheelchair to fit under them. Doors should be designed so that they are wide enough for a wheelchair to pass through freely. All classroom windows need to be at the right height so that learners in wheelchairs can open and close them. Furthermore, it is recommended that the Ministry of Education should address the overcrowding of classrooms, as learning cannot take place effectively where learners battle for space.

(b) Access to the playground

Designing the playground for inclusive play helps and benefits all learners. This means that:

- Grounds should be resourced to meet the needs of all learners. They should be commodious where learners are supported and encouraged to play.
- Grounds should be designed to ensure the safety of all learners, where obstacles can be overcome and learners are provided with safe areas in which to play.
- Paths to the grounds should run through and connect to all playgrounds.
- The environment for play should be slip resistant, stable and firm.
- The pavements should allow to and fro movement across the grounds and be raised so that wheelchairs are able to move around easily during the rainy seasons. All the sloping paths and rest areas should be provided with occasional seats.

5.2.2 Recommendation 2

(a) Role of educators and the importance or reason to include physically and/or mentally impaired learners in the mainstream

It is a reality that most of impaired learners' needs are not met because of their exclusion and marginalisation from the mainstream learning system. Their different learning needs originate from a range of factors such as the physical, mental, neurological and other differences in intellectual ability. Another reason for the lack of inclusion in the mainstream is caused by the inadequate training of teachers who are the primary resource for fulfilling the task of inclusive education (White Paper 6, 2001:17-18). Consequently, the following recommendations should be taken into consideration with regard to these learners' inclusion in mainstream classrooms.

If classrooms are to become inclusive or heterogeneous, all inclusive education teachers need to become familiar with Special Needs Education. This means that educators of physically and/or mentally impaired learners should be aware of learners who are mentally fragile, as well as monitoring the feelings of these learners. Educators should not harm learners psychologically but protect their well-being. In Section D (4.3.10: (Q2)) and (3.3.11: (Q3)) learners complained that there were some learners and educators who did not co-operate with them. Educators should never feel guilty or react negatively towards impaired learners. Motivation, self-confidence and a positive attitude are critical factors that need to be instilled in disabled learners. This can support and help learners to develop a sense of self-esteem and cope with everyday challenges.

Moreover, teachers should engage in linking and communicating with the relevant professionals involved in the therapy and the educational planning for impaired learners. There is a need to provide specific information with regard to problematic behaviour such as moodiness, restlessness and fatigue in disabled learners. This will alert able-bodied learners about the needs and difficulties facing disabled learners, so as to avoid any animosity between the two groups.

It is further recommended that teachers should know the activities that should not be performed by physically and/or mentally impaired learners in their learning areas. They should not expect less of these learners; by doing this, they encourage them to do well in every task. Disability conditions should be discussed with the rest of the class members at an appropriate time in order to clear up any misconceptions about impairments. This will help classmates to understand their disabled classmates' physical conditions and the implications associated with-educational and social experiences. Additionally, teachers should provide information to their impaired learners on how to access resources so as to promote independence, as far as possible.

5.3 REFLECTIONS ON THE FINDINGS OF HYPOTHESIS 2

This part reflects on and applies to the second hypothesis which reads thus: most of the teachers in a normal classroom are not able to deal effectively with learners with physical and/or mental impairments. This hypothesis consists of the following recommendations which are explained in detail later:

i. Training programme for the teachers of learners with special education needs;

ii. Additional methodology;

iii. Learning facilities for physically and/or mentally impaired learners;

iv. Intervention by authorities to assist teachers;

v. Establishment of support teams by Government of Lesotho;

vi. Role of the National University of Lesotho and the College of Education to support special education in Lesotho;

vii. Establishment of school support teams; and

viii. Involvement of parent community.

Findings in Section B, Figure 7 (Q9) and 4.11 (Q15) indicate that teachers experience problems when working with physically and/or mentally impaired learners in an inclusive classroom. It is also evident in Section C, Figure 4.14 (Q20) that most teachers work with impaired learners with insufficient knowledge on how to deal with them. The reason for failing to deal with these learners is a lack of the necessary special education training. This evidence became clear when some teachers expressed their dissatisfaction about working with physically and/or mentally impaired learners; the reason being the disruptive behaviour portrayed by these learners (See section D, 4.3.6).

In order to alleviate these problems, the following recommendations need to be taken in to consideration:

5.3.1 Recommendation 3

(a) Training programme for the teachers of learners with special education needs

In order to meet the needs of physically and /or mentally impaired learners, teachers should undergo periodic training that will keep them abreast of the latest trends regarding the inclusivity of such learners. Training should help teachers to understand that learners with impairments are just like others in their classes. Teachers have to treat impaired learners in the same way they treat other learners. Those who are working with these learners should be aware of their feelings; they do not have to react negatively or feel guilty about the behaviour portrayed by these learners. These kinds of learners need to be motivated all the time; therefore, we should not expect less from them.

Moreover, teachers need to be involved in inclusive education-changing initiatives such as the development of inclusive schools. These changes should compel all managers to develop inclusive educational programmes to empower teachers to gain a new understanding of teaching and learning, as well as becoming familiar with the new skills to accommodate and include learners with impairments.

Apart from the above, the issue of collaboration in the literature is seen as an important part of an inclusive school (see 2.8.1 in Chapter 2, line 5 and ff.). Many of the authors, such as Sillford and Upton in Oliver and Williams (2006:235); Vaughun, Bos and Schumm (2007:41) recommend the initiative of a team approach in order to meet the needs of learners with special education needs. These teams should work collaboratively and develop training programmes which will alert teachers to acquire specific knowledge which is responsive to special learning needs.

Furthermore, teachers should also be encouraged to further their training and knowledge in the area of Special Needs Education; this can be done either formally or informally via reading and attending conferences. Training should focus

on learners with special education needs in general training skills, teaching skills, and teaching techniques as indicated in Section C, Figure 4.15 (Q22). In addition, the re-skilling of teachers should be taken into consideration; this means that there should be frequent workshops to help equip teachers with remedial strategies that can be used in their classes.

Additionally, the Lesotho College of Education and the National University of Lesotho should also embark on an initiative to train teachers with regard to Special Needs Education; in-service training should also be provided for teachers who are already teaching. The training should be compulsory for all student-teachers so that they will be in a position to deal with physically and/or mentally impaired learners, even if they teach in mainstreams schools.

5.3.2 Recommendation 4

(a) Additional methodology

It is evident that teaching learners with impairments requires a different approach or methodology. They do not learn like learners without special needs, so special provision is essential. This will be beneficial for the facilitation of the acquisition of information by impaired learners. It was indicated in Figure 4.12 (Q19) that some teachers do not use additional teaching methods in order to meet the needs of all learners.

The following are some of the recommended teaching methods that can be employed by teachers in order to meet the needs of impaired learners:

(i) Cooperative learning method

Cooperative learning involves learners working together in pairs or in small groups to achieve academic goals. It is a strategy that provides opportunities for learners with impairments and builds relationships with their able-bodied peers. It focuses on collaboration which involves learners working together to achieve a common outcome and working in mixed ability groups ensuring that everyone masters the

materials to be learned. Co-operative learning provides opportunities for learners at different levels of achievement to work together (Ashman & Elkins, 1998:161; Putman, (cited in Hick, Kersner & Farrell, 2009).

It is through co-operative learning that physically and /or mentally impaired learners can practise their social roles as they work to solve problems, learn new materials or create objects and documents. It provides support to slow learners who are physically and/or mentally impaired (Department of Education, 1999).

(ii) Learner- centred

The teacher creates a learning environment that resembles, as much as possible, one in which learners can learn. Learners establish learning goals, develop and choose learning strategies and evaluate their own progress. It encourages learners to take responsibility for their learning. Learners discover real-world situations (Home, 2010).

(iii) Peer tutoring method

Peer support refers to those instances usually planned and under the supervision or guidance of a teacher where learners are directly involved in organising peer functioning. The support may require learners to listen to others read or 'teach' some curriculum aspect. Peers are the most available resource in general education classrooms. Non-disabled learners are often creative problem-solvers and strong supporters of learners with developmental impairments (York & Van der Cook in Vaghumm, Bos & Schumm, 2007:176-177).

Peer tutoring provides clear directions and positive and corrective feedback trained peers can establish techniques for teaching reading. If planned carefully, structured and supervised by teachers, peer tutoring can be an effective technique for increasing academic learning. Peer support can be used to help learners with impairments to function more fully in school life. It also helps learners to improve their academic work (Miranda, 2009).

5.3.3 Recommendation 5

(a) Learning facilities for physically and/or mentally impaired learners

As shown in Figure 4.9 (Q12) learning facilities play a crucial role in the education of physically and/or mentally impaired learners as they work as stimuli to learners. It is clear from the findings that some teachers teach these learners without using sufficient facilities. This is confirmed by teachers when they mentioned that there is lack of materials and it is also difficult to work with impaired learners (see Section D, 4.10.2).

As a result of these findings, it is vital that sufficient material support be available in an inclusive classroom. There should be the provision of quality facilities which can be accessed by all learners according to their impairments. Materials need to be adapted through the help of resource personnel in order to suit the needs of all learners, e.g. textbooks, worksheets, exercises, blackboard notes, computer software, apparatus or equipment and blocks for counting in mathematics for learners with motor difficulties.

5.3.4 Recommendation 6

(a) Intervention by authorities to assist teachers

The task of ensuring effective teaching and learning for physically and/or mentally impaired learners and their teachers requires an integrative approach. This means that in an inclusive classroom, education support should be geared towards providing support as an ongoing process. The main purpose of this support is to alleviate the learning problems of impaired learners and to enhance the well-being and academic success of all.

With regard to interventions from the education authorities to assist teachers to deal with learners in wheelchairs, the results from Figure 4.16 (Q23) prove that most of the teachers are not given assistance in terms of supporting learners in an inclusive classroom. Education authorities such as subject advisors and school managers should put in place strategies which will strengthen the education

support service, thereby reducing possible hurdles in the quest for education. The support should originate from the district head office; the primary task of the authorities being to help teachers provide modifications and introduce suitable programmes for physically and/or mentally impaired learners (Engelbrecht & Green, 2007).

In terms of increasing the numbers of learners with Special Education Needs (LSEN) further research is necessary, especially by those involved in working with special needs learners. The focus of the research could be on how mainstream schools should become inclusive. It is for this reason that the researcher is proposing the following model for the purpose of achieving this goal.

Figure 5.2: Proposed model for effective inclusion

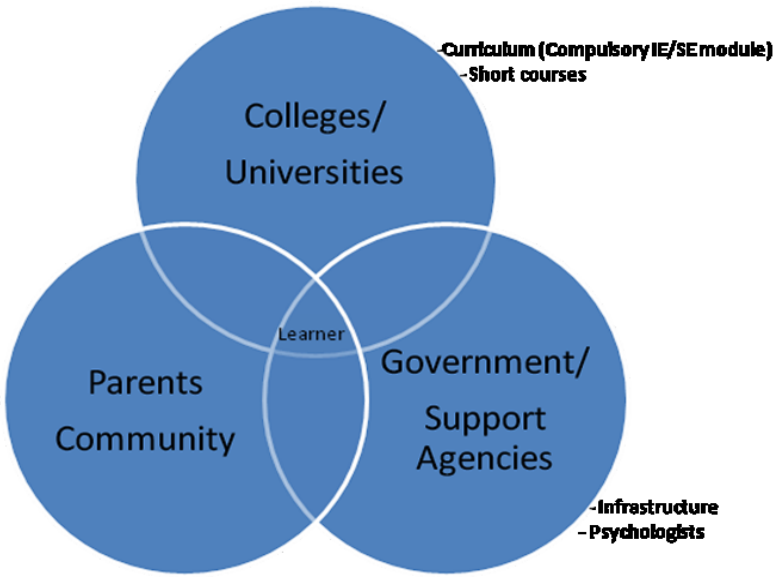


Figure 5.2 depicts the recommended model by the researcher. This model indicates all the stakeholders involved in the education of the learner should work as a team. Their involvement plays a vital role because the learner will be supported. Example:

(a) Colleges and Universities

These institutions (Lesotho College of Education and National University of Lesotho) are responsible for curriculum designation. (More specific details concerning the role of these tertiary's follow in 5.3.5, recommendation 7).

(b) Government and Support Agencies

These stakeholders should formulate support teams in order to enhance support in inclusive schools. More recommended roles of these agencies follow in 5.3.6, recommendation 8.

(c) Parents Community

Parents' organizations such as advisory councils, health and safety should play crucial role in the education of their children. The role of these organizations is explained more in 5.3.7, recommendation 9.

5.3.5 Recommendation 7

(a) Role of the National University of Lesotho and the Lesotho College of Education to support special education in Lesotho

In order to cater for the inclusion of special needs learners in a mainstream school, the Lesotho College of Education and the National University of Lesotho should design the curriculum programmes that ensure that the curriculum prepares the teacher for the total development of learners with physical and/or mental impairments (Ntaote, 2003:62). It can be further suggested that all student teachers should be provided with training that addresses special needs learners. Teachers who are already teaching should attend short courses, such as monthly workshops that help them to deal with special needs learners. The purpose of these courses is to re-skill teachers who did not receive special education training, yet are compelled to teach inclusive classes. Apart from this, the above-mentioned tertiary institutions need to design and organise the curriculum in such a way that

a range of barriers against accessing the curriculum is identified and addressed, for example:

- The content of the learning programme should be optimal for physically and/or mentally impaired learners.
- Curriculum programmes should be structured in such a way that teachers acquire knowledge which will be responsive to the individual learner's needs.
- The language and medium of teaching and learning should be appropriate and suitable for mentally impaired learners.
- The curriculum should be designed in tandem with the learning style and pace of the learners (Department of Education, 2005:23).

5.3.6 Recommendation 8

(a) Establishment of support teams by government of Lesotho

Support teams are central to service delivery for the fulfilment of Inclusive Education in mainstream schools. The Government of Lesotho should establish support teams in 10 districts of Lesotho; the purpose being to enhance support in inclusive schools. It is recommended that each district should have special schools to remedy the situation. To date, such schools are available only in Maseru and the Butha-Buthe districts in Lesotho.

It is further advisable that teams should support education institutions in addressing learning difficulties experienced by physically and/or mentally impaired learners. The team may consist of members from the district and the regional office to represent the different experts with their specialisations and focus on individual therapies. These teams would work within individual schools with their role being to identify learners, teachers and school needs in order to address modifications. The purpose of the team members is to empower teachers to develop preventative measures, promote strategies and build skills to address specific problems in the classroom situation. They should help teachers to become

familiar with the unique educational needs of physically and/or mentally impaired learners.

In addition, orientation should be provided for both teachers and the classmates of those with disabilities. The team needs to facilitate referrals and work together to help teachers to find solutions in their respective classrooms. Members should meet regularly to assess progress made (Engelbrecht & Green, 2007).

It can be further recommended that other support agencies, especially specialists, such as educational psychologists, therapists and remedial teachers are not supposed to carry individual roles, but work as a team in order to come up with solutions before a crisis arises. For example, the school psychologist should be involved in counselling learners and their parents when they have problems in school. Psychologists should also be involved in the assessment of learners' personalities and intellectual abilities in order to suggest the correct placements and modifications.

Physical therapists should also be involved in the developmental screening of impaired learners to detect for delays or abnormalities in perceptual motor development. Through the collaboration of these agencies, accurate suggestions can be made as to whether the learner is fit for mainstream school or home-based care.

Apart from the above issues, it is further recommended that the infrastructure should be used to improve the functional capabilities of individual with impairments. The Government of Lesotho should supply schools with infrastructure that is designed to remove barriers or provide practical solutions to everyday problems. For example; assistive technology can be used to help the individual without mobility to control his or her environment. Mechanical devices such as adapted typewriters, book holders, and page turners can be obtained to aid in using academic materials for learners with physical impairments. For a task

such as turning on lights, a voice activated computer can be used to help learners to input data on a computer and receive output information.

Added to this, the Lesotho Government should supply infrastructures that can be used in such a way those they assist a learner with poor speed to be able to communicate through an augmented communication system. In addition, assistive technology such as micro switches can be used to perform more complex tasks; for example, switches can be activated by means of sound, air, light or movement (Ntaote, 2006:63).

5.3.7 Recommendation 9

(a) Involvement of parents' community

Individual parents and their organisations play a crucial role in the education of their learners. Parents should serve as volunteers in the teaching, interpreting, and preparation of materials and the supervision of learners, as well as working together as parents. Through home-based programme implementation, parents can assist their learners at home by providing them with useful information through parent coordinated services from other parents, such as advisory councils, and parent-to-parent participation advocacy (Ashamen & Elkins, 1998:59). Concerning health, safety and academic achievement, parents should help with issues such as denial, guilt, and dealing with the public, hurt feelings and stress (Oshea & Oshea, (in Vaghumm, Bos & Schumm, 2007:52).

5.4 REFLECTION ON THE FINDINGS OF HYPOTHESIS 3

The recommendations in this section address the third hypothesis which states that there are various teaching strategies that can be used to accommodate learners with physical and/or mental impairments. The recommendation focuses exclusively on the teaching strategies teachers can use to accommodate impaired learners.

Recommendations regarding this hypothesis are based on the findings emanating from the sources in Chapter 4, Section E. It is a proven fact that learners with impairments struggle with spelling, handwriting and fluency. This section seeks to come up with recommendations teachers can use to help impaired learners to overcome learning challenges with regard to the afore-mentioned aspects.

5.4.1 Recommendation 10

(a) Teaching strategies

In terms of spelling instructions, the teacher of physically and/or mentally impaired learners should not present too much information to learners; a few words should be taught per day, for example. Learners should practise the words until they have internalised them. Learners can practise words through reading them aloud from the blackboard. The teacher can also write them on cards and put them on the learner's desk. Learners should take word cards and read to each other, with the process done repeatedly, until the words are understood.

Apart from the above, when teaching learner handwriting for the correction of letter formation, the teacher should guide the learner's hand by providing arrows for letter direction and while doing this, the learner should pronounce such letters. Such letters should be written in different colours, such as on large pieces of cards for display around the class where the words could be read everyday.

Another strategy used to enhance handwriting is to provide a moving model from which learners' form letters using clay and sand. In this situation, the teacher helps learners to model word-letters to form new words. For example, the letters **c-a-t** are formed using clay and then these letters are joined to make the word **cat**. Another teaching strategy is for the teacher to take learners outside and then help them to form and draw the same word in the sand, then pronounce the word and sing it.

A further strategy is to model fluency by providing learners with exercises to practise the rhythm patterns of words on paper. Learners should be introduced to letter shapes and to trace their texture with their fingers; the next step would be to write such letters in the air. Learners can be encouraged to close their eyes while writing the words in the air, as well as pronouncing and singing them.

5.5 RECOMMENDATIONS FOR FURTHER STUDY

5.5.1 Qualitative and quantitative research

This study can be further replicated by employing another way for informant nomination; teachers and able learners could be interviewed. Private schools using different approaches could also yield different insights into the problem. Further research can also involve the attitudes and feelings of parents and special needs educators towards the integration of impaired learners into mainstream school.

There is a need to conduct a similar investigation throughout Lesotho to find out the situation in other districts.

5.6 CONCLUSION

In Lesotho, integration can be regarded as one of the most important factors in the development of the education of learners with physical and/or mental impairments. It is therefore crucial that all stakeholders commit themselves to the task of developing and supporting impaired learners to acquire basic education. There is a need to modify the curriculum and employ teaching strategies so that special education needs are met. Resources need to be controlled in ways that support vulnerable or at risk learners. Lastly, all of those responsible for the education of impaired learners should work collaboratively, in order to implement the policy that all learners have a right to quality education.

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MINISTRY OF EDUCATION AND TRAINING

P.O BOX 47 MASERU 100

22nd March 2011

The Principal

.....

Maseru

RE: PERMISSION TO MR. MATEUSI CLEMENT MAPHAPHI TO UNDERTAKE A STUDY

Dear Sir/Madam

Mr. Mateusi C. Maphaphi is currently a student of the Central University of Technology (RSA) pursuing his Masters of Education – Inclusive Education. In fulfilment of his study programme he is due to undertake a research study. The aim of his study is to investigate teaching strategies that ensure the inclusivity of learners with physical and / or mental impairments in the Berea and Maseru Districts of Lesotho.

He has therefore been granted permission to undertake the said study.

Please assist.

Yours Faithful

T. Moneri
Senior Education officer

SENIOR EDUCATION OFFICER
P.O Box 47
30 MAR 2011
Tel.: 22322755
MASERU - LESOTHO

Appendix 1

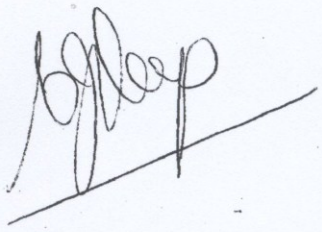
Tel: 22313709 *22322755*

TO WHOM IT MAY CONCERN

This is to state that the dissertation submitted by Maphaphi Clement Mateusi (St. no. 209049596) has been proofread by me, according to the tenets of academic discourse.

Mrs Carol Keep MA (English), B Ed, SOD
Contact Numbers: 051-4445373 / 0725080936
Email: mkeep@mweb.co.za

24 November, 2010.



Appendix 2

Central University of Technology
Private Bag X20539
Bloemfontein
9300

Dear Respondents

RE: REQUEST TO COMPLETE A QUESTIONNAIRE

You are kindly requested to complete this questionnaire for my masters in education studies - Central University of Technology.

The title of the dissertation:

EXPLORING TEACHING STRATEGIES THAT ENSURE THE INCLUSIVITY OF LEARNERS WITH BOTH PHYSICAL OR/AND MENTAL IMPAIRMENTS IN THE BEREA AND MASERU PRIMARY SCHOOLS IN LESOTHO

There are no right and wrong answers, so indicate what you really think.

The questionnaire is **completely anonymous** and data gathered in this survey will be treated with the **strictest confidentiality** and presented only in summary form without the name or affiliation of the respondent.

Please respond to all questions with your first reaction

For any further clarity, please do not hesitate to call me: (0027) 0780052911

(00266) 59686712

Thanking you for your support.

.....

MC MATEUSI

Appendix 3

QUESTIONNAIRE

SECTION A: BIOGRAPHICAL DATA

For office use only

Please tick with an X in the appropriate block(s). | | | | 1-3

1. Gender

(a)	Male	1	
(b)	Female	2	4

2. Population group

(a)	African	1	
(b)	Coloured	2	
(c)	Indian	3	
(d)	White	4	
(e)	Other: Please specify	5	5

3. Age

(a)	18 – 20	1	
(b)	21 – 25	2	
(c)	26 – 30	3	
(d)	31 – 35	4	
(e)	36 – 40	5	
(f)	41 – 50	6	
(g)	51 – 55	7	
(h)	56 and above	8	6

For office use only

4. Job Title

_____ | | | 7-8

_____

5. Highest qualification

(a)	Junior Certificate	1
(b)	C.O.S.C.	2
(c)	College Diploma	3
(d)	University Certificate	4
(e)	University Degree	5
(f)	Other: Please specify	6

	9

6. Work experience as a teacher

(a)	0 – 1 year	1
(b)	1 – 5 years	2
(c)	6 – 10 years	3
(d)	1a – 15 years	4
(e)	16 – 20 years	5
(f)	21 and above	6

	10

SECTION B: CHALLENGES FACING TEACHERS

For office use only

Please tick with an X in the appropriate block(s).

7. Do you have wheelchair learners in your class?

(a)	Yes	1
(b)	No	2

11

8. If yes, please explain challenges with which you are confronted when working with these learners.

_____

_____

12-13

9. Do you experience problems working with wheelchair learners in your class?

(a)	Always	1
(b)	Sometimes	2
(c)	Not at all	3

14

10. To what extent do you experience difficulties in working with learners with wheelchairs?

(a)	Always	1
(b)	Sometimes	2
(c)	Not at all	3

15

11. Please explain challenges with which you are confronted when working with these learners.

_____

_____

16-17

For office use only

12. Are facilities for wheelchair learners available?

(a)	Yes	1
(b)	No	2

18

13. Do you have mentally impaired learners in your class?

(a)	Yes	1
(b)	No	2

19

14. If yes, please explain challenges with which you are confronted when working with these learners.

_____

_____

20-21

15. Do you experience problems when working with mentally impaired learners?

(a)	Always	1
(b)	Sometimes	2
(c)	Not at all	3

22

16. Please explain why you say so.

_____

_____

23-24

For office use only

17. To what extent do you experience difficulties in working with learners in wheelchairs?

(a)	Always	1
(b)	Sometimes	2
(c)	Not at all	3

25

18. Please specify why you say so.

_____

_____

26-27

19. Do you use any extra methodology when teaching mentally impaired learners?

(a)	Yes	1
(b)	No	2

28

SECTION C: TRAINING RECEIVED BY TEACHERS WITH REGARDS TO PHYSICALLY/ MENTALLY IMPAIRED LEARNERS

Please tick with an X in the appropriate block(s).

20. Did you receive any formal/informal training with regard to mentally impaired learners?

(a)	Yes	1
(b)	No	2

29

For office use only

21. If yes, explain.

_____

_____

30-31

22. Did the training you received provide you with the following content?

(a)	Training skills	1
(b)	Teaching skills	2
(c)	Teaching techniques	3
(d)	General skills	4

32

23. Is there any assistance from authorities to help you to deal with learners in wheelchairs?

(a)	Yes	1
(b)	No	2

33