

12-1-2010

Teaching strategies utilised by non-special education teachers in inclusive further education and training classrooms

Shauwn Quinton van Staden

Cape Peninsula University of Technology, guilaj1@telkomsa.net

Recommended Citation

A dissertation submitted in partial fulfilment of the requirements for the degree of Magister Educationis (Education Management) in the Faculty of Education at the CAPE PENINSULA UNIVERSITY OF TECHNOLOGY, 2010.

This Text is brought to you for free and open access by the Theses & Dissertations at Digital Knowledge. It has been accepted for inclusion in CPUT Theses & Dissertations by an authorized administrator of Digital Knowledge. For more information, please contact barendsc@cput.ac.za.

CANDIDATE:	Shauwn Quinton van Staden
STUDENT NUMBER:	205213456
DEGREE:	Magister Educationis (Education Management)
SUPERVISORS:	Dr Cina Mosito and Prof. Rajendra Chetty
TITLE:	Teaching strategies utilised by non-special education teachers in inclusive Further Education and Training classrooms

TEACHING STRATEGIES UTILISED BY NON-SPECIAL EDUCATION
TEACHERS IN INCLUSIVE FURTHER EDUCATION AND TRAINING
CLASSROOMS

by

SHAUWN QUINTON VAN STADEN, B.A., B.Ed.

A dissertation submitted in partial fulfilment of the
requirements for the degree of
Magister Educationis
(Education Management)

in the

Faculty of Education

at the

CAPE PENINSULA UNIVERSITY OF TECHNOLOGY

SUPERVISORS: Dr Cina Mosito and Prof. Rajendra Chetty

CAPE TOWN

DECEMBER 2010

DECLARATION

I, Shauwn Quinton van Staden, hereby declare that the contents of this dissertation represent my own original work, and that the dissertation has not previously been submitted to any other institution of higher education for academic examination towards any qualification. Furthermore, it represents my own opinions and not necessarily those of the Cape Peninsula University of Technology. I further declare that all sources cited or quoted are indicated and acknowledged by means of a comprehensive list of references.

.....
SHAUWN QUINTON VAN STADEN

DECEMBER 2010

ABSTRACT

The Policy Document, Education White Paper 6 (Department of Education, 2001) states that all learners irrespective of their barriers to learning and development, have a right to be educated in ordinary schools, together with their peers. The inclusion of learners who are deaf/hearing impaired in mainstream Further Education and Training (FET) classrooms means that these learners are no longer being taught by special educators who are trained to cater for their special needs. In this study the learners are taught in regular classrooms by non-special education subject teachers who have had no formal training in how to teach learners with special needs specifically learners who are deaf/hearing impaired.

A qualitative exploratory design with multiple methods for data collection (questionnaires, informal discussions, non-participant classroom observations and video footage) was employed in this study. A non-random purposive sampling which consisted of three non-special education subject teachers who teach two learners who are deaf/hearing impaired in the Further Education and Training phase at two mainstream educational institutions participated in the research.

The aim of this study was to explore the kind of strategies these teachers use when they mediate learning in classrooms where there are deaf/hearing impaired learners. The study

has indicated that while the educators might express a lack of confidence in their abilities, they do cater for the needs of deaf/hearing impaired learners who experience barriers to learning albeit in different ways.

DEDICATION

To my late father, Gordon van Staden, with love and in gratitude for laying the stable foundation and encouraging me to build on it.

ACKNOWLEDGEMENTS

To Almighty God who granted me courage, strength and patience to complete this dissertation successfully despite all the obstacles.

I would like to express my sincere appreciation to the following people and institutions for their assistance and valuable contributions to this study:

- My supervisors, Dr Cina Mosito and Professor Rajendra Chetty, for their invaluable expertise, guidance, advice, comments and motivation throughout this study.
- Ms Jenny Perold, Speech and Hearing Clinic at Tygerberg Hospital
- Principal and Staff of Mary Kihn School for Partially Hearing Children, Observatory
- Ms Carol Mestern (Audiologist) Dominican-Grimley School
- Ms Adele Ebrahim (Occupational Therapist) for sourcing information, encouragement and support
- Principals and participating educators
- Parents of participating learners who are deaf/hearing impaired and the participating learners who are deaf/hearing impaired
- My mother, Evelyn van Staden, for her continuous love, support and words of encouragement during my study.
- Mr Anthony Guilfoyle, for assisting with video recording and analysis of video data, typing and editing of this dissertation. Also for listening so patiently to my joys and frustrations and who helped me to keep a sense of perspective throughout this study.
- Family and intimate friends who provided moral support always comforted me with words of encouragement when I needed it in times of despair.

TABLE OF CONTENTS

	PAGE
DECLARATION	iii
ABSTRACT	iv
DEDICATION	vi
ACKNOWLEDGEMENTS	vii

CHAPTER 1

ORIENTATION TO THE STUDY

1.1	Introduction and background to the research problem	1
1.2	Aim of research	2
1.3	Research question	3
1.4	Research design	3
1.5	Key concepts	4
	1.5.1 Teaching strategy	4
	1.5.2 The deaf learner	5
	1.5.3 Hearing impaired	5
	1.5.4 Hard of hearing	5
	1.5.5 Deafened	5
	1.5.6 Cochlear implants	6
	1.5.7 Non-special educator	6
	1.5.8 Inclusion	6
	1.5.9 Inclusive education	6
	1.5.10 Mainstream	7
	1.5.11 Inclusive classroom	7
1.6	Organisation of the study	7
1.7	Conclusion	9

CHAPTER 2

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1	Introduction	10
2.2	Chapter organisation	11
2.3	Background of inclusive education	12
	2.3.1 Salamanca Statement	12
	2.3.2 Historical perspective	13

2.3.3	Education White Paper 6 (EWP6) and inclusion	15
2.4	Theoretical explanations of learning-teaching process in inclusive education	17
2.4.1	Scaffolding	18
2.4.2	Zone of proximal development (ZPD)	19
2.4.3	Inclusive education	20
2.4.4	The educator as a mediator in the inclusive classroom	21
2.4.5	The role of the learner in an inclusive classroom	23
2.5	Classroom climate and culture	24
2.6	Teaching strategies	26
2.6.1	Educator personality traits and personal attributes	27
2.6.2	Classroom organisation and environment	29
2.6.3	Questioning	32
2.6.4	Direct instruction	32
2.6.5	Co-operative learning and peer tutoring	33
2.7	Conclusion	34

CHAPTER 3

RESEARCH METHODOLOGY

3.1	Introduction	36
3.2	Data collection methods	37
3.3	Research setting	38
3.4	Sampling	38
3.4.1	The educators	38
3.4.2	The learners	39
3.5	Data collection process	40
3.5.1	Sampling methods	40
3.5.2	Biographical questionnaires	41
3.5.3	Observations	41
3.5.3.1	Pre-observation discussions	42
3.5.3.2	Classroom observations	43
3.5.4	Field notes	44
3.5.5	Video recording	45
3.5.6	Informal interviews	48

3.6	Data analysis	48
3.6.1	Construction of an observation schedule	50
3.6.2	Defining the variables	51
3.6.3	Method of analysis	51
3.6.3.1	Viewing of tapes	53
3.6.3.2	The assessment of the observation schedule	54
3.6.3.3	The refinement of the observation schedule	55
3.6.3.4	Grouping of categories	56
3.6.3.5	Review of tapes	56
3.6.3.6	Compilation of coding or tally sheet descriptive extracts	57
3.6.3.7	Compilation of descriptive extracts	58
3.7	Ethical considerations	58
3.8	Conclusion	60

CHAPTER 4

PRESENTATION OF RESULTS

4.1	Introduction	61
4.2	Actual findings	62
4.2.1	Information collected from the biographical questionnaires	62
4.2.2	Pre-observations discussions	65
4.2.3	Field notes, classroom observation	68
4.2.3.1	Field notes	68
4.2.3.2	Classroom observations	76
4.2.4	Video recording	77
4.3	Strategies	78
4.3.1	Learner interaction and participation	81
4.3.2	Individual support	82
4.3.3	Resource bringing	82
4.3.4	Co-operative learning and peer-tutoring	83
4.3.5	Direct teaching	84
4.3.6	Non-verbal cuing	84
4.4	Conclusion	93

CHAPTER 5**DISCUSSION OF RESULTS, CONCLUSION AND RECOMMENDATIONS**

5.1	Introduction	95
5.2	Discussion of results	95
5.2.1	Classroom atmosphere and environment	97
5.2.2	Positive feedback and acknowledgement	99
5.2.3	Learner interaction and participation	100
5.2.4	Learner support	103
5.2.5	Questioning	105
5.2.6	Educator corrects learners	108
5.2.7	Variety of teaching methods	109
5.2.8	Positive personality traits	114
5.3	Conclusion	116
5.3.1	Concluding remarks	116
5.3.2	Limitations of the study	118
5.3.3	Further research	119

REFERENCES 121**APPENDICES**

A	Letter of permission	135
B	Research application form	136
C	Letter of approval	137
D	Letter to principals	138
E	Letter to parents	139
F	Letter to participating educators	141
G	Biographical questionnaire	142
H	Observation checklist (physical features)	143
I	Observation checklist (lesson observation)	144
J	Observation schedule for recording of video data	146
K	Teaching strategies	147
L	Regrouped strategy definitions	154
M	Tally sheet	155

LIST OF TABLES

4.1	Biographical details of participating educators	62
4.2	Explanation of educators' qualifications	63
4.3	Subject areas	63
4.4	Lesson topics	64
4.5	Physical features of the classroom	70
4.6	Teaching strategies	78
4.6.1	Learner interaction and participation	81
4.6.2	Individual support	82
4.6.3	Resource bringing	82
4.6.4	Direct teaching	84
4.6.5	Non-verbal cuing	84
4.7	Regrouped strategies	86
4.7.1	Summary of regrouped strategies	89
4.7.2	Frequency Table	91

LIST OF FIGURES

Figure 4.1	Classroom layout of Educator 1	73
Figure 4.2	Classroom layout of Educator 2	74
Figure 4.3	Classroom layout of Educator 3	75

CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION AND BACKGROUND TO THE RESEARCH PROBLEM

In the past, learners with special needs, including learners who were deaf/hearing impaired were taught at Special Schools in contexts where such schools were available. These learners were therefore deprived of education in the mainstream school. Research has shown that learners who are deaf/hearing impaired can be educated and can achieve in inclusive education environments (Sari, 2007). In the inclusive environment, non-special educators may be required to educate all learners in their regular classrooms regardless of the barriers experienced by the learners. This research study is conducted at inclusive educational institutions where learners who are deaf/hearing impaired are educated in mainstream classrooms.

Learners who are deaf/hearing impaired are the focus of the study. Their inclusion in mainstream Further Education and Training (FET) classrooms means that these learners are no longer being taught by special educators who are trained to cater for their special needs but by regular subject educators. The lack of specialist training, where learners who are deaf/hearing impaired are concerned, means that the educators have had no training in the use of Sign Language (Hyde and Power, 2004:90) or the use of specialised classroom strategies. This in turn implies that interaction between the

educator and learners who are deaf/hearing impaired might be difficult or non-existent.

The main principle emphasised in Education White Paper 6 (Department of Education, 2001) is that all learners, irrespective of differences in language, culture, ethnicity, economic status, gender and ability, can be educated with their peers in a regular classroom and in their neighbourhood school. This document therefore provides a way of removing the discriminatory practices and a means to include all learners irrespective of their special needs. In a situation where educators do not have a wherewithal to communicate with their learners, many problems are likely to occur. One could question for example, how the educator issues instructions to such learners as classroom learning by its very nature is about following instructions (Mosito, 2005). Furthermore, how would such an educator involve a learner who is deaf/hearing impaired in all the teaching and learning processes?

1.2 AIM OF THE RESEARCH

In view of the background above, this study aimed to:

- (i) explore how non-special education teachers mediate learning to learners who are deaf/hearing impaired in mainstream Further Education and Training classrooms; and
- (ii) seek informed answers about what strategies and interventions are utilised by non-special education teachers in inclusive classrooms that feature

specifically learners who are deaf/hearing impaired.

1.3 RESEARCH QUESTION

For the purpose of this study, the following question has been formulated to guide the research:

What kind of strategies are utilised by non-special education subject teachers in the mainstream classroom to mediate learning to learners who are deaf/hearing impaired?

1.4 RESEARCH DESIGN

In order to investigate the research problem, I implemented a qualitative exploratory design using multiple methods for data collection¹. The participants were selected by means of non-random purposive sampling. The sample consisted of subject educators in Further Education and Training classrooms with no learning support training, but who have learners who are deaf/hearing impaired in their classrooms.

The learners who participated in this study are deaf/hearing impaired/hard of hearing learners and who are enrolled and attending at a mainstream Secondary/High School and a mainstream Further Education and Training College.

¹ Details will be provided in Chapter 3.

The data collection included biographical questionnaires, informal discussions with non-special educators and learners who are deaf/hearing impaired and non-participant classroom observations. During the classroom observations, video-recordings were produced for viewing and reviewing to analyse the data. The data collected was analysed, clustered and organised under specific headings. In addition to the above, field notes were taken during the classroom observations. My research adhered to ethical considerations which are elaborated upon in chapter 3.

1.5 KEY CONCEPTS

In this section I clarify concepts that are central to this study. The concepts are: teaching strategy, the deaf learner, hearing impaired, hard of hearing, deafened, cochlear implant, non-special educator, inclusion, inclusive education, mainstream and inclusive classroom.

1.5.1 Teaching strategy

A teaching strategy is a particular combination of teaching and learning activities which are planned by the educator and used in a particular sequence (Fink, 2003:273). Walton (2002:8) concurs with Fink when he states that strategies are the systematic plans or tactics that are employed by an educator to achieve a predetermined goal. In this study, anything that educators were noted doing during the teaching-learning is thus regarded as a teaching strategy.

1.5.2 The deaf learner

A deaf person is one whose hearing loss is so severe that there is very little or no functional hearing (University of Washington, 2010) and whose hearing disability precludes successful processing of linguistic information through audition, with or without amplification devices (e.g. hearing aids). Persons who are included in this grouping are children who are born deaf and those who become deaf in the first two to three years of life before acquiring spoken language (pre-lingual) (University of Washington, 2010; Barber, 2007; Woodford, 1999).

1.5.3 Hearing impaired

A generic term indicating disability which may range in severity from mild to profound: it includes the subsets of deaf and hard of hearing (University of Washington, 2010; Woodford, 1999).

1.5.4 Hard of hearing

A hard of hearing person is one who, generally with the use of an amplification device (e.g. hearing aid), has residual hearing sufficient to enable successful processing of linguistic information through audition.

1.5.5 Deafened

A deafened person is one who was once able to hear and has lost hearing after acquiring speech and language (post-lingual) (University of Washington, 2010; Woodford, 1999). Their expressive communication skills (speech and language) are intact. Receptive communication is the challenge for deafened persons. They tend to use speechreading (lipreading) and amplification devices (e.g. hearing aids) to aid their receptive communication.

1.5.6 Cochlear implants

A cochlear implant is a small, complex electronic device that helps to provide a sense of sound to a person who is profoundly deaf or severely hard-of-hearing. The implant consists of an external portion that sits behind the ear and a second portion that is surgically placed under the skin. An implant has the following parts: a microphone; a speech processor; a transmitter and receiver/stimulator; an electrode array. An implant does not restore normal hearing. Instead, it can give a deaf person a useful representation of sounds in the environment and help him/her to understand speech (National Institute on Deafness and Other Communication Disorders, 2009).

1.5.7 Non-special educator

For the purpose of this study, non-special educators are educators who are not trained to teach learners with special education needs.

1.5.8 Inclusion

According to Carreiro King, inclusion can be defined as an involvement of learners with special educational needs and who are attending the same schools as their siblings and neighbours. The learners with special educational needs become active members in general education classrooms with chronological age-appropriate classmates. Educators develop individualized learning objectives for their learners and provide them with the support necessary to learn (for example special education and related services) (2003:2).

1.5.9 Inclusive education

Sidogi (2001:4) maintains that inclusive education is "...the provision of educational experiences for all

learners experiencing barriers to learning and development. Such learners would participate in the same classroom situation with those learners who are not experiencing barriers to learning and development, at the same mainstream schools and same mainstream classes that their peers attend".

1.5.10 Mainstream

According to Stephens, Blackhurst and Magliocca (1988), mainstreaming is the education of mildly handicapped children in the regular classroom. It is also described as the placement of learners with special needs in the mainstream or regular school setting (Donald et al., 2002:23). It is a concept that is compatible with the least restrictive environment requiring that all handicapped children be educated with their normal peers wherever possible.

1.5.11 Inclusive classroom

Alban-Metcalfe (2001:20) defines an inclusive classroom as "... one in which continuing emphasis on valuing individual differences lead all pupils, irrespective of social, or cultural background, disability or difficulty in learning to success in terms of the fulfilment of academic and social goals, and in the development of positive attitudes to self and others".

1.6 ORGANISATION OF THE STUDY

The thesis is organised as follows:

Chapter 1 - Orientation of the study

This chapter provides an introduction, background, research question and aim of the study.

Chapter 2 - Literature review

This chapter explicates the concept of inclusive education, provides an overview of deaf/hearing impaired learners and includes strategies in the inclusive environment in mainstream educational institutions.

Chapter 3 - Research methodology

This chapter presents a detailed description of the research design of this study. It provides a detailed explanation on why the study used particular research methods, how and why the participants were selected and how the study was conducted. The procedures relating to the collection, recording and analysis of the data are discussed.

Chapter 4 - Presentation of results

This chapter presents the data, the findings of this study and the interpretation of the data.

Chapter 5 - Discussion of results, conclusion and recommendations

This chapter provides a discussion of the findings of this study. It also includes a summary of the main research results and relates these to other findings. It discusses the limitations of this study, recommendations are made and conclusions are drawn concerning the inclusion of learners who are deaf/hearing impaired in the mainstream classroom.

1.7 CONCLUSION

This chapter has introduced the problem on this study that explores strategies used by mainstream educators in inclusive classrooms that have learners with hearing impairments. The next chapter not only presents a review of the literature on inclusion, but also on classroom climate, culture and learning strategies.

CHAPTER 2

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1 INTRODUCTION

The aim of this study is to establish the range of teaching strategies that are utilised by mainstream non-special education teachers when teaching learners who are deaf/hearing impaired. In addition, I examine how these non-special education teachers mediate learning, teach and interact with their learners who are deaf/hearing impaired in the inclusive Further Education and Training classroom settings.

In this chapter the relevant literature and other related resources relevant to the teaching strategies employed by non-special education teachers in an inclusive classroom setting is reviewed. A literature review helps contextualise the study in support of the researcher's argument (Henning, Van Rensburg and Smit, 2004:27).

According to McMillan and Schumacher, a literature review is "... a narrative interpretative criticism of the existing research" (2001:108). These authors are of the opinion that if a review is conducted carefully and is well presented, it will undoubtedly add much to an understanding of the selected problem and will help place the results of a study in a historical perspective. On the other hand, Murray (2006) and Bruce (1994) postulate that the purpose of a literature review is to provide the background to and justification for the research

undertaken. It is with these two opinions in mind that I set out to review the literature relevant to this study.

2.2 CHAPTER ORGANISATION

This chapter is organised and presented in four separate sections.

In section 2.3 I provide a brief overview of the background of inclusive education as documented in the Salamanca Statement (1994) and Education White Paper 6 (Department of Education, 2001) as well as examine the role of the non-special education teacher in the mainstream classroom environment. The question in mind is: what does it mean to be inclusive in one's teaching?

Section 2.4 is a theoretical explanation on learners' and educators' roles in the teaching-learning process within the philosophy of inclusive education. The questions that guide this part of the review are:

- (i) What theories explain the roles, responsibilities and behaviour of educators and learners in the learning process?
- (ii) Given the general theoretical explanations about learners and learning, what limitations would a hearing impairment place on learners?
- (iii) What mediational role should the educator play?

In the third section, section 2.5, I describe and analyse a range of research that reports on how schools and

educators in particular contribute towards a positive classroom climate and environment especially when learners experience a barrier to learning such as a hearing impairment.

In the last section of the review, section 2.6, I examine the teaching strategies and practices that are typically used with success in settings where learners who are deaf/hearing impaired receive instruction in ordinary classrooms.

2.3 BACKGROUND OF INCLUSIVE EDUCATION

Teaching of learners who are hearing impaired in mainstream schools is a relatively new practice (Walton et al., 2009:107) in South Africa. Understanding why education and the educational needs of learners with disabilities and other debilitating conditions are considered and provided for is a crucial step within inclusive education. In this section I trace policy changes that have contributed to educational provision for the learners who are deaf and hearing impaired in South Africa.

2.3.1 Salamanca Statement

The campaign to include learners with special educational needs in mainstream classrooms became an international human rights concern in 1994 (Smith-Davis, 2002:77) at an international conference on inclusive education which was held in Salamanca, Spain. The main aim of this conference was to discuss the education of learners with learning barriers, also called special educational needs. The conference participants developed the Salamanca Statement

and Framework for Action on Special Needs Education (1994). The underlying philosophy of this statement is that ordinary schools should accommodate all learners regardless of their physical, intellectual, social, emotional, linguistic or other conditions (UNESCO, 1994). Article 7 of the Salamanca Framework of Action states that "the fundamental principle of the inclusive school is that all [learners] learn together, wherever possible, regardless of any difficulties or differences they may have".

The South African Schools Act (Act 84 of 1996) suggests explicit provision for learners with barriers to learning and development. This Act emphatically states that all learners must be admitted to schools without discrimination in any way and that education for learners with special education needs should be provided for at ordinary public schools (Schools Act, 1996:4). In this sense, the South African Schools Act supports the notion that learners who are deaf/hearing impaired should be admitted to, and educated at mainstream schools.

Education White Paper 6 makes clear that inclusive schools must recognise and respond to the diverse needs of their learners, accommodating both different styles and rates of learning (Department of Education, 2001). The concern of this study is: what does it mean to recognise and respond to the needs of learners who are hearing impaired?

2.3.2 Historical perspective

During the Apartheid era, the apartheid policies influenced the development of separate schools for the Deaf: Black Deaf schools, White Deaf schools and

Coloured/Indian Deaf Schools (Morgans, 2001). A few special schools were concentrated in urban areas. This phenomenon made it difficult for learners with special needs, especially learners who are deaf/hearing impaired from rural areas, to gain access to special education. There were varying levels of inequality in the provision for specialised education for the different race groups (Western Cape Education Department, 2003:1). The rigidly applied categorisation system only allowed learners with medical disabilities and those who were diagnosed by medical professionals, access to support and special education and support programmes.

After the first democratic elections in 1994, the government created a new system of education, which no longer consisted of 18 racially divided departments, but one national and nine new provincial departments (Chisholm, 2004; Western Cape Education Department, 2003).

Special Needs Education has undergone some changes with the release of Education White Paper 6 (Department of Education, 2001). Education White Paper 6 is a policy that advocates a major shift in the educational provision for learners who experience barriers to learning in the mainstream, including those with hearing impairments (Ameen, 2008). Non-special educators in the mainstream schools are required to address the diverse needs of all the learners in the mainstream classroom. The notion of barriers to learning in education implies that learners should be supported by educators within the inclusive classroom. Engelbrecht, Swart, Eloff and Forlin (2000) state that educators have expressed concern about their

lack of appropriate training to meet the needs of a learner with a disability.

The provisions made in Education White Paper 6 of 2001 are therefore an attempt by the government to include in a non-racial, non-sexist integrated manner South African learners experiencing barriers to learning.

2.3.3 Education White Paper 6 (EWP6) and Inclusion

Inclusive teaching in South Africa finds expression in Education White Paper 6: Special Needs Education (Department of Education, 2001). As a vehicle towards implementing inclusive education, the government directed a series of White Papers including Education White Paper 6 (Lockwood, 2003). These documents proposed a shift from the medical model to the social model. In the medical model, the medical profession made diagnoses of the physical condition of the learners and made educational recommendations based on these diagnoses. This shift focuses mainly on the move from a medical discourse to a social rights discourse (Naicker, 1999) where the human rights of the learners with disabilities are taken into account.

In particular, the policy recommends the following:

- (i) That learners who experience barriers to learning, should be provided for in mainstream schools. In the case of this study, learners with hearing impairments are taught alongside their age appropriate peers who are without known hearing impairments.

- (ii) All learners, educators and the education system as a whole is supported, so that the full range of learning needs of all the learners can be met.
- (iii) The focus should be on the development of appropriate teaching strategies that arise out of the diverse learning needs of all the learners. These new strategies will be of benefit to all learners and educators, as in the case of learners who are deaf/hearing impaired (Department of Education, 2001).
- (iv) Special schools as Resource Centres should provide support and training for the inexperienced and non-special subject educators teaching in mainstream schools. In this way the non-special educators will be able to re-focus their attention, change their teaching techniques and develop new teaching strategies. This will assist the non-special educator to minimise barriers to learning and encourage the participation of learners who are deaf/hearing impaired in the inclusive classroom. A priority is to empower educators to become problem solvers and to explore ways to respond to everyday teaching and learning problems (Muthukrishna, 2000).
- (v) Classroom educators will be the primary resource for achieving the goal of an inclusive education and training system. This means that educators will need to improve their knowledge and develop new skills.

The recommendations above from Education White Paper 6 have several implications for inclusive teaching.

- Providing the necessary support for all learners
- Using a diverse range of learning strategies
- Seeking outside help from education support services such as those found former special schools/resource centres where necessary
- Keeps reinventing methods (attending workshops, reading) to improve teaching for the sake of learners in the classrooms
- In-service training and reading recent research

2.4 THEORETICAL EXPLANATIONS OF LEARNING-TEACHING PROCESS IN INCLUSIVE EDUCATION

The theoretical framework involves the theory underpinning the research topic. It outlines the views of the different authors about the research topic. The theoretical framework demonstrates the connectedness of phenomena, provides the rationale for the prevailing situation and also establishes relationships between phenomena (Henning, Van Rensburg and Smit, 2004:14). The theoretical framework therefore provides the basis of the research on the learning-teaching process in inclusive education.

Vygotsky, a Russian theorist and pedagogue, emphasises the important role of the educator during mediation. Mediated learning takes place when a mediator (educator or more competent peer) guides the development of the learner. The educator, mediator or more competent peer learner has to engage and collaborate with the learner during the process of instruction. During collaboration

with the learner, the educator has to "explain, inform, inquire, correct and force the learner to explain" (Vygotsky, 1978).

More competent peers can scaffold less-mature classmates and cognitive development is best stimulated when learners are challenged to do something just beyond their current level of development. Some researchers have found that learners benefit most from peer collaboration when they are paired with another learner who is either slightly older or slightly more competent than they are (Berk and Winsler, 1995:133).

2.4.1 Scaffolding

The educator, mediator or more competent peer controls the learning that occurs between what is known and what is to be learned at a level that is appropriate to the learner. More support is offered to the learner when a task is new. As the learner's competence increases, the support offered by the educator, mediator or more experienced peer is decreased (Berk and Winsler, 1995:171).

In scaffolding instruction, a more knowledgeable other provides scaffolds or support to facilitate the learner's development. The activities provided in scaffolding instruction are just beyond the level of what the learner is able to do without assistance (Olson and Platt, 2000). In the educational setting, scaffolds may include models, cues, prompts, hints, partial solutions, think-aloud modelling and direct instruction (Hartman, 2002).

2.4.2 Zone of proximal development (ZPD)

The zone of proximal development (ZPD) is the distance between what learners are able to do by themselves and the next learning that they can be helped to achieve with competent assistance (Raymond, 2000:176). Vygotsky describes that the ZPD as the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers (Vygotsky, 1978:86). For a ZPD to be created, there must be a joint activity that creates a context for interaction between a learner and more competent peer. The expert may then use multiple instructional strategies (Tharpe and Gallimore, 1988).

The educator, mediator or more competent peer employs strategies that engage the learners in a relationship with what is to be learned. In turn, the ZPD is the "function of the interactive context and the learners' capabilities" (Borthic, Jones and Wakai, 1996).

In Vygotsky's view, the main objective in the field of special education was the creation of what he called a positive differential approach. Special education in his vision should be a system that employs its specific methods (because students with special needs require modified and alternative educational methods, but remains within the mainstreamed sociocultural situation (Gindis, 1999:339). Vygotsky therefore was an early proponent of mainstreaming.

2.4.3 Inclusive education

The purpose of educating all learners in mainstream schools is to provide each learner with the opportunity to learn with their age appropriate peers. Mainstream schools therefore provide their learners with the opportunity to work and socialise in a natural, integrated and community setting (Janney and Snell 2006; Stainback and Stainback, 1990). All learners, (including learners who are deaf/hearing impaired) taught in regular mainstream education classes should be provided with age appropriate and challenging education programmes which focus on their capabilities and needs including support and assistance to those in the regular mainstream classroom (O'haulon, 2003; Peters, 2002; Wade and Zone, 2000). In the case of learners who are deaf/hearing impaired, the aim is also to promote natural contact and meaningful communication among such learners and hearing learners in age appropriate peer groups (Janney and Snell, 2006; Pottas, 2005; Bunch, 1987).

Inclusive education provides an opportunity for all learners experiencing barriers to learning and development to be educated in a local community school with their age appropriate peers who are not experiencing barriers to learning and development (Swart and Pettipher, 2006:1).

In the inclusive education classroom, the non-special education teachers need to cater for the diverse needs of the learners who experience barriers to learning and development (Smith, Poolway, Patton and Dowdy, 2001). This can be achieved through the implementation of flexible and appropriate teaching programmes and the use of various resources (Sari, 2007; Knight, 1999:3). A

Lesson Plan time allocation can range from a single activity up to a term's teaching or more time if necessary, depending on the needs of the learner (Department of Education, 2003:1). It will become necessary for the non-special education teachers and/or mainstream educators to adapt their methods of instruction, learning material, resources and time allocation to provide for the needs of the learner who is deaf/hearing impaired. This should be done in a manner that moves learners from the known to the unknown.

2.4.4 The educator as a mediator in the inclusive classroom

Educators play a critical role in any teaching-learning process as mediators. The role of the mediator differs from that of the regular classroom educator or subject educator. Educators are the key element in the successful implementation of the inclusive policies (Pottas, 2005:60; Avramidis and Norwich, 2002:130; Swart et al., 2002:177; Marshall, Ralph and Palmer, 2002:201).

The educator is responsible for carrying out of certain classroom *management activities* with regard to certain matters (such as classroom climate, conflict, teaching media, etc.). Classroom management refers to all the educator's actions to provide and sustain an effective learning environment so that all the learners can achieve as much as possible (Brophy, 2006). In addition to these actions, the educator's behaviours increase the academic engagement of all learners and prevent any inappropriate and disruptive behaviours (Sucuoglu, Akalin and Sazak-Pinar, 2010). Emmer and Stough (2001:1) cite Duke who states that classroom management is about "... the provisions and procedures necessary to establish and

maintain an environment in which instruction and learning can occur.”

The regular education classroom has become the *primary* context within which inclusive education has to be implemented (Department of Education, 2001:18; Sands et al., 2000:26). It therefore is imperative that non-special educators seek ways to instruct all learners in their classrooms (Brownlee and Carrington, 2000:99), giving special attention to the physical environment, instructional strategies employed, classroom management techniques, as well as educational collaboration (Voltz et al., 2001:7).

The inclusion of learners with disabilities in general education classes provides an opportunity for educators to identify classroom management practices that create an environment where all learners feel safe and welcome (Soodak, 2003). For example, subject educators should ensure that specific teaching strategies are utilised to enhance the overall quality of the classroom environment. In addition they should provide the relevant learner support to teach their learners effectively (Soodak, 2003).

Brownlee and Carrington (2000:99) postulate that educators are now obliged to seek ways to instruct all learners in their classrooms. Special attention should be given to the physical environment, instructional strategies employed, classroom management techniques, as well as educational collaboration which can be used for learners who are deaf/hearing impaired (Pottas, 2005:60; Smith et al., 2001:263-267; Voltz et al., 2001:7).

Pottas (2005:60), states that these changes must result in fundamental alterations in the way educators think about knowledge, teaching, learning and their role in the inclusive classroom. In the situation where learners who are deaf/hearing impaired are included in the mainstream classroom, the educator is thus faced with the responsibility of changing and implementing a teaching and learning approach that would fulfil the needs of this learner.

Feuerstein, et al., (1980; 1991) view the classroom educator as a "facilitator" of information. Mosito-Matheleli (1999) suggests that in the mediation process, it is essential for educators to reward appropriate responses with acceptance, acknowledgement and praise. In addition educators should encourage and motivate their learners by positively acknowledging the learners' correct responses as well as identifying that they have followed the correct process to achieve the correct responses.

2.4.5 The role of the learner in an inclusive classroom

All classrooms consist of a diverse range of learners who all have a diverse range of needs and learning styles. It is the subject educators' task to accommodate and provide for the diverse needs of all the learners in the classroom. Not all learners like to learn, or are able to learn, in the same way (Killan, 2000). Various teaching strategies are utilised by educators to successfully transfer the learning material from the learning areas to learners in the most effective manner.

In an environment where co-operative learning is used as a strategy, learners who are higher achievers are

encouraged to assist and explain difficult content and subject matter to their weaker peers (Van Zyl, 2002:98). According to Vygotsky, learners are able to learn from others, both of the same age and of a higher age and developmental level (Allen and Schwartz, 2000:192; Vygotsky, 1978). Co-operative learning is particularly desirable in a classroom consisting of learners with hearing impairments. Learners without hearing impairments could be encouraged to help peer learners who are deaf/hearing impaired within their groups to understand the assigned task (Reilly and Khanh, 2004:6).

The Department of Education (2001) indicated that many educators realised that learners who experienced barriers to learning at school receive support from other learners. Educators also argue that learners learn better from their peers.

2.5 CLASSROOM CLIMATE AND CULTURE

The climate that permeates an inclusive classroom describes the environment that affects the behaviour of the learners and the educator. Yin (1994:57) cites Lewin who defines classroom climate as an important environmental factor interacting with learners' characteristics that affects their attitude and behaviour. A positive classroom climate will encourage and allow the learners to actively participate and have a positive teaching and learning experience. Each educator has the ability to create a unique climate within their own classrooms (Kruger and Steinman, 2003:17).

Effective educators use their knowledge, skills and behaviours to create effective learning environments which maximise opportunities for learning to take place (Kruger and Steinman, 2003:18). Sutton, Mudrey-Camino and Knight (2009) argue that educators' beliefs about the effectiveness of showing positive emotions were positively related to teacher efficacy for learner engagement and classroom management. A positive classroom climate will ultimately lead to a culture of teaching through which the educator can positively influence a culture of learning. In a research conducted by Freiberg and Lamb, learners stated that they felt that the educators were helpers, encouraging them to succeed and listening to their opinions and ideas. This nurturing of the positive climate enabled these students to take risks, build trust and develop a strong sense of community (2009:101).

Page and Page (2010) advise educators to create a relaxed classroom atmosphere in which the confidence of the learners is developed. In turn, this is beneficial in creating motivation and successful learning among the learners. A relaxed environment is particularly important to learners with disabilities as they might feel vulnerable and left out in the inclusive setting as they do not have full hearing like the other learners.

Classroom culture can be defined as the manner in which all tasks in the classroom are embarked upon and conducted. It includes the unspoken and frequently unconscious assumptions about how the educator as well as the learners will conduct themselves during the lessons. A simple way of defining culture is "how things are done around here" (Kruger and Steinman, 2003:19).

The climate and culture within a classroom is influenced by the teaching strategies employed by the educator. In the inclusive classroom environment, the strategies employed should support the needs of the diverse range of learners within the classroom.

2.6 TEACHING STRATEGIES

Teaching strategies are the systematic plans or tactics that can be employed that will enable the predetermined goal to be realised (Walton, 2002:8). The use of specific strategies such as co-operative learning, individualization, peer tutoring and group methods are important and helpful to teach inclusive classes (Naiker, 2008:88). The inclusive educator faces the challenge of selecting appropriate teaching strategies that cater for the diverse needs and learning styles of all the learners in the classroom (Gasant, 2002:73-74; Swart et al., 2002:187).

In the case of the learner who is deaf/hearing impaired, the educator needs to ensure that strategies employed meet the needs of the learner who relies predominantly on observation demonstration. Research has shown that providing quality education for hearing impairments includes taking care of environmental factors such as classroom space (Pottas, 2005; Lang, 2002:273). A practical competence that the innovative educator of learners who are deaf/hearing impaired should employ is appropriate teaching strategies, to prepare thoroughly and thoughtfully, and to draw on a variety of resources to meet the educational needs of the learners who are deaf/hearing impaired (Landsberg, Kruger and Nel, 2005).

2.6.1 Educator personality traits and personal attributes

Educators' personality traits are reflected in their classroom instruction - especially in their selection of various instructional strategies, the materials they use and their classroom management techniques (Henson and Chambers, 2002). In addition, Henson and Chambers, (2002) further state that the educators' personality styles are positively interrelated with learning styles as well as educators' teaching styles.

Griesel and Mellet (1985:102) postulate that the following strategies focus on the educator as a person and professional expert. They maintain that these strategies are the conditions for structuring a positive educational relationship within which the educator can effectively motivate the learner.

- (i) The educator should have a positive self-concept, that is, the educator should see himself/herself positively, as well-informed and attuned to the learners and their problems. In addition the educator should have positive working habits, create a culture of learning, display a culture of teaching, perseverance, etc.

In the situation where subject educators are including a learner who is deaf/hearing impaired in the mainstream classroom, the educators should seek information regarding the learner's circumstances. By gaining background knowledge the educator can have an understanding of the

problems experienced by a learner who is deaf/hearing impaired.

- (ii) An educator with positive personality traits, such as punctuality, friendliness, humanness, enthusiasm, a sense of humour and empathy with the problems of others, has the key to developing the learners' potential.
- (iii) Educators are faced with a wide range of challenges when teaching learners with diverse needs. They have to change their teaching strategies and create an environment that is beneficial and conducive for all learners in the classroom, for example those with physical and sensory problems.

Educators with positive working habits and personality traits are crucial assets in any teaching and learning environment. Such educators create and maintain a classroom atmosphere which nurtures and develops the confidence of any learner including those who are deaf/hearing impaired.

Killen (2000:22) advises educators to select appropriate teaching strategies that would be most likely to help learners achieve the outcomes. In addition to this, educators of learners in mainstream classrooms may sometimes need to adjust their teaching strategies to cater for the different learning styles and preferences of these learners (Stitt-Gohdes, 2001) as well as the learning styles and preferences of those learners who are deaf/hearing impaired.

Learners who are deaf or hard-of-hearing can be educated in a number of ways, one of which is an *auditory-oral* approach. The method attempts to get learners who are deaf or hard-of-hearing to acquire spoken language in an environment in which spoken language is used exclusively. The environment includes the classroom, the school and the home. The use of hearing amplifiers such as hearing aids and cochlear implants at different environments - depending on the seriousness of the learner's hearing impairment - is crucial in this process (Muijs and Reynolds, 2005:161).

2.6.2 Classroom organization and environment

Educators should consider the organization of the learning environment as a significant factor in lesson effectiveness. The attractive and effective organization of the classroom can improve the way learners learn by creating an atmosphere which is conducive to motivation, achievement and effort (Griffiths et al., 2002). The factors to be considered in organizing an effective classroom environment include: the use of space, the location and accessibility of resources, seating arrangement, management of noise issues [both inside and outside of the classroom] and temperature of the room (Mathie, 2004). These factors affect learners in different ways and are directly related to individual learning styles including that of the learner who is deaf/hearing impaired.

The layout of the classroom and seating arrangement of learners will reflect whether the learners are engaged in individual activities or group activities. Learners can sit by themselves to do individual activities or together in small groups to work on the group activities and

assignments. By arranging the seating of learners in small groups, educators can facilitate co-operative learning activities (Titus and Gremler, 2010) and improve the learning, communication and communication skills (Barry and King, 1998). Classroom and seating arrangement is particularly crucial when considering learners who are deaf or have hearing impairments.

The learner who is deaf/hearing impaired should be provided with preferential seating (Deibel, 2007) seated near the front of the classroom (Cawthon, 2001) according to class format and activity (Pottas, 2005) that allows him/her to see and hear optimally (Pottas, 2005; Bennett and Lynas, 2001 and Ross, Brackett and Maxon, 1991). The educator should maintain a full-face presentation during board writing and demonstration. Seating in the classroom should be arranged to allow the learner who is deaf/hearing impaired visual access to his/her peer learners. In addition, the seating plan in the classroom needs to be flexible as the visual demands of the activity vary (Kelman and Branco, 2009).

The noise and temperature levels of the classroom also contribute to the achievement of learning outcomes. In the group work context of the classroom, noise is a significant management issue. As the learners interact with each other, often in hands-on learning activities, the noise level may become boisterous. A suggestion to minimize excessive noise is to plan a mixture of noisy and quiet activities for groups and ensuring that they rotate around these activities (Booker et al., 2004). Reducing ambient noise in the classroom assists the hearing impaired to discern dialogue and feel more connected to the conversations (Karlen and Benya, 2004;

Sorkin, 2000). The learner who is deaf/hearing impaired should be seated away from obvious noise sources (Nelson and Soli, 2000; Luckner and Denzin, 1998). The noise level in the classroom will affect the learner who is deaf/hearing impaired and who is using amplification and/or hearing devices as these devices tend to amplify all sounds including background noise (Queensland Studies Authority, 2007:4). Managing the background noise should enable the educator's speech to be louder than the competing noises (Queensland Studies Authority, 2007:4) The use of electronic devices and digital equipment could provide radio frequency interference (National Institute on Deafness and Other Communication Disorders, 2007). Lighting and acoustics are important physical factors to consider especially for the learners who are deaf/hearing impaired.

The temperature in the classroom is often out of the educator's control; however educators need to be aware of how their learners are affected by extremes in temperature so that they can modify activities to accommodate needs of their learners (Marsh, 2000). According to the United States Environmental Protection Agency, moderate changes in room temperature, even within the comfort zone, appear to affect the learners' abilities to perform mental tasks requiring concentration.

It is the educators' responsibility to provide a safe and supportive atmosphere where all the learners are prepared to participate, take risks (Matsumara et al., 2008:295; Centre for Teaching and Learning, 1997:19) and learn from their own mistakes without being reprimanded or ridiculed (Conroy et al., 2009; Lomofsky, 1994).

2.6.3 Questioning

According to Muijs and Reynolds answering questions allows learners to clarify their own thinking and understanding of the concept taught, and makes them verbalise their thinking (2005:43). In the situation where a learner who is deaf/hearing impaired is present during the lesson presentation, the non-special educator could prepare the sequence of questions beforehand and use a suitable medium (e.g. print media, transparencies, Inter-active Whiteboard, etc.) to display the questions. In this way, the learner who is deaf/hearing impaired will be able to visually follow the sequence and questioning. Muijs and Reynolds (2005:43) further assert that questioning allows the educator to check the learners' understanding of the lesson. This is of prime importance, as it gives the educator the information that is needed to decide whether or not certain topics need to be re-taught, and at what level to pitch the lesson.

2.6.4 Direct instruction

According to Lindsay (2004), the term Direct instruction, refers to a rigorously developed, highly scripted method for teaching that is fast-paced and provides constant interaction between learners and the educator. This method of instruction is educator-centred and the educator is in full control of the didactic situation. By using this method of instruction, the educator is able to impart large volumes of information in a short period of time. All learners, including learners who are deaf/hearing impaired, require instructions and explanations and through these are able to learn subject content. This can be associated with demonstrating and modeling through which a learner who is deaf/hearing

impaired is able to visually follow an oral explanation. Learners who are deaf/hearing impaired prefer a visual style of instruction as learning takes place primarily through vision and not in combination with hearing (Angelides and Aravi, 2007). It has become necessary for non-special educators in mainstream classrooms to become more creative in developing more effective practices to meet the learning needs of learners who are deaf/hearing impaired.

2.6.5 Co-operative learning and peer tutoring

Learners collaborating and working in small groups and working on group activities is another strategy that can be utilized by an educator to implement a lesson plan. Collaboration allows learners to talk among each other, share, articulate, listen and discuss all the view points of the other members within the small group that will help them acquire additional perspectives (Driscoll, 2000). The learner-centered instruction in education suggests that learners are able to learn in a collaborative structure (Duffy, Dueber and Hawley, 1998) where educators provide them with opportunities to interact with each other (Kale, 2008). In the small groups, the learners take the educator's role and teach and explain learning content to their peer learners within the group. This notion suggests that educators scaffold learners and steer the classroom discourse by providing them with opportunities to interact with each other (Chin, 2006). Vygotsky (1978) defines the scaffolding of learners as the "role of educators and peer learners in supporting the learner's development and providing support structures to get to that next stage or level" (Raymond, 2000:176). An important aspect of scaffolding instruction is that the scaffolds are

temporary. As the learner's abilities increase the scaffolding provided by the more knowledgeable other is progressively withdrawn. Finally the learner is able to complete the task or master the concepts independently (Chang, Chen, and Sung, 2002:7). In inclusive classrooms, learners support and nurture each other's learning (Bauer and Shea, 1999).

According to Van Zyl (2002:98) "...activity-based learning gives emphasis to learning in natural settings, thus moving it from being solely a classroom-based activity to encouraging and preparing learners to learn in community settings". Van Zyl (2002) further motivates that co-operative learning can be encouraged by allowing groups of learners to share their knowledge, skills and experiences within the small group. Educators are expected to provide feedback and guidance to individual learners. This means that educators are able to move in the classroom from group-to-group and from learner-to-learner to guide their dynamic learning (Kale, 2008).

2.7 CONCLUSION

In this chapter the relevant literature and other related resources relevant to the teaching strategies employed by non-special education teachers when they have learners who are deaf/hearing impaired in their inclusive classroom setting were reviewed. Inclusive education requires of educators to, among others:

- (i) develop meaningful and flexible approaches to teaching;

- (ii) create a classroom climate that is conducive to learning given particular needs and challenges of the learners;
- (iii) acknowledge and accept that learners with disabilities and those experiencing other barriers do have rights to equal opportunities enjoyed by other learners;
- (iv) provide guidance and support to ensure active learner participation in classroom activities;
- (v) employ suitable teaching strategies and to cater for the learners' diverse learning styles.

In the next chapter the research methodology used in this study will be discussed.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter outlines the methodology used in the study. An exploration within a qualitative paradigm has been utilised. The research setting, criteria for selection of participants, the selection of the participants and research design are described. In addition, the data collection methods and data analysis are outlined. The chapter ends with the explanation of ethical considerations. In this study I was mainly interested in the strategies employed by non-special educators in mainstream classrooms where learners who are deaf/hearing impaired are included with hearing learners.

For the purpose of this study, non-special educators are educators who are not trained to teach learners with special education needs. The question of what teaching strategies are employed to include learners who deaf/hearing impaired in inclusive classrooms clearly indicated that I should see how the learning-teaching process occurs in these settings. Such an undertaking makes this more of a qualitative than a quantitative study. I could not merely rely on one method of data collection such as what educators told me, to investigate the strategies employed by educators in the inclusive environment. Multiple data-gathering methods are used as a reliable means of collecting data and to provide a more comprehensive study. Qualitative techniques collect data

in the form of words rather than numbers and provide an in-depth verbal description of phenomena (McMillan and Schumacher (2001:41). The qualitative technique is essentially an exploration and description of the nature of things (Neuman, 2006).

3.2 DATA COLLECTION METHODS

The method of data collection is the procedure that a researcher uses to physically obtain research data from research participants (Johnson and Christensen, 2004:191). The techniques which I used to obtain the data are: Observation check lists (Appendix H and Appendix I), Observation Schedules for video data (Appendix J) and Tally sheets (Appendix M).

The use of multiple data-gathering methods to investigate the same phenomenon is known as triangulation (Oliver-Hoyo and Allen, 2006; Ritchie and Lewis, 2003; McMillan and Schumacher, 2001; Berg, 1995; Denzin and Lincoln, 1994). It serves to increase the likelihood that the phenomenon of interest has been understood from various points of view (Neuman, 2000; Maykut and Morehouse, 1994). Berg (1995) suggests that an important aspect of triangulation is not simply the combination of different kinds of data but the need to relate them in order to counteract any threats to validity identified in each.

Taylor and Bogdan (1984) define triangulation as a way of guarding against researcher bias and checking out accounts from different informants. Triangulation is used to enhance the richness and trustworthiness of the findings (Neuman, 2000). For the purpose of

triangulation, data was obtained from biographical questionnaires, informal interviews, field notes, video recordings, classroom observation schedules and classroom observation checklists. By drawing on other types and sources of data, the observer can also gain a deeper and clearer understanding of the setting and the subjects used in the study.

3.3 RESEARCH SETTING

The research was conducted at a mainstream Secondary/High School and a Further Education and Training College where learners who are deaf/hearing impaired are taught by non-special educators.

3.4 SAMPLING

3.4.1 The educators

My sample consisted of three willing non-special educators who are involved in the Further Education and Training phase of education (Grade 10 to Grade 12 classrooms). Two educators teach at a mainstream Secondary/High School. The third educator teaches at a Further Education and Training College. The sampling was non-random purposive as it involved a carefully selected group of educators who had neither learning support training, for example, in South African Sign Language (SASL), nor any formal training in how to teach learners with special educational needs (LSEN) such as those who have hearing impairments. These non-special educators however had one or more learner who is deaf/hearing impaired in their classrooms. Purposeful sampling is

based on the assumption that to discover, understand and to gain the most insight, the sample has to be carefully selected as one that will yield the most knowledge (Hamel, Dufour and Fortin, 1993). Neuman (2000) says that purposive sampling occurs when one selects cases with a specific purpose in mind. I therefore selected participants non-randomly for a particular reason (McBurney, 1994). This would allow me to generate meaningful and relevant data that would enable me to address the research question to support the findings (Mason, 2002).

I decided to look at three educators rather than one educator. A single educator could possibly be seen as an exception and therefore might not provide a convincing and realistic conclusion. Having observed three educators also allowed me to compare across the findings. As a qualitative study, I regarded three educators a sufficient number for an in-depth analysis of the exploratory data that would be generated through actions in their classrooms.

3.4.2 The learners

The two learners who participated in this study are deaf/hearing impaired/hard of hearing and enrolled in a mainstream Secondary/High School and a mainstream Further Education and Training College. These learners who are deaf/hearing impaired/hard of hearing, were in Grade 11 and Grade 12 (National Senior Certificate (NSC)) respectively, were taught by non-special subject educators at educational institutions in the southern suburbs of Cape Town. The participating learners were the only deaf/hearing impaired learners in their grades and

also the only learners who were deaf/hearing impaired at their respective schools.

3.5 DATA COLLECTION PROCESS

3.5.1 Sampling methods

The processes followed in selecting the schools and educators are outlined below.

All three cases were situated in the Further Education and Training phase of schooling. I specifically chose the Further Education and Training phase of education, because it is the phase of education with which I am familiar. It is also the level in which I have teaching experience. I elected to use a small sample of educators to allow an in-depth investigation.

The three non-special educators who were willing to participate in this study, taught the following subjects:

1. Natural Science (Physical Science)
2. Small Business Management and
3. Life Sciences (Biology).

From this point onwards I will refer to these schools as School 1 and School 2; and the three educators will be called Educator A, Educator B and Educator C. The subjects taught were not a factor in my selection of the cases. The most important criterion was that as mainstream schools and non-special educators, they have learners who are deaf/hearing impaired.

3.5.2 Biographical questionnaires

A biographical questionnaire was administered. This instrument was used to determine the demographic data of the non-special educators such as age, gender, level of qualifications, years of training and teaching experience. Educators who participated in the study were asked to complete the questionnaire (Appendix G). The questionnaires were collected prior to the start of classroom observations.

The completed questionnaires supply standardised answers. All the participants were exposed to exactly the same questions without the possibility of variations or face-to-face contact with the researcher. According to Denscombe (1998) and McMillan and Schumacher (2001:40), a questionnaire is a common and relatively economical technique for collecting data. In analysing the observation data it might be interesting to note special patterns emerging per years of teaching experience.

3.5.3 Observations

McMillan and Schumacher (2001:439) express the point of view that when a researcher observes, there are some non-verbal cues such as facial expressions, gestures, tone of voice, body movement and other unverballed (sic) social interactions that suggest the subtle meaning of language that the researcher records. Given the fact that I wanted to see what happened in classrooms, observations were used for data collection. I directly observed, visually and aurally, the teaching strategies implemented by the non-special subject educators in a naturally occurring situation and then systematically recorded the observations with the aid of an observation checklist

(Appendix I) and an observation schedule (Appendix J). I opted to use this method of data collection because this technique allowed me to focus on the behaviour of these educators in their natural surroundings.

Cohen and Manion (1994), state that observational data is attractive as it affords the researcher the opportunity to gather 'live' data from a live situation. They further state that in an observation study the researcher is able to notice on-going behaviour as it occurs and is able to make appropriate notes about its main features.

3.5.3.1 Pre-observation discussions

A pre-observation discussion was scheduled with the non-special subject educators at the individual educational institutions. The purpose of the pre-observation discussion was to orientate and prepare the educators for the research study and classroom observations.

Observation dates were discussed with the educators and these were mutually agreed upon. In our discussions I emphasised the fact that the classroom observations would be conducted during normal class time as allocated on the school timetable and therefore would not interfere with the regular school programme.

Participating educators provided information regarding venues where classroom observations would take place, lesson topics, the times that lessons would commence and the duration of the lessons. I provided further explanations about the procedures when it was required by the participating educators. The pre-observation discussion also allowed the researcher an opportunity to obtain information about the background of the learners

who are deaf/hearing impaired and to clarify queries the educators could have about the research. Discussions were conducted in English as English was the preferred language of communication and the language of instruction at both educational institutions. I confirmed classroom observation dates and times via electronic mail and telephone conversations with the participating educators.

3.5.3.2 Classroom observations

Observations were conducted in English medium classes which were theoretical or content based learning areas. I observed each of the three non-special subject educators on two occasions in each of the settings. This makes a total of six observations. Observations were conducted in order to gain answers to the research questions. Observations sought to answer the questions around the strategies utilised by the non-special subject educators to include learners who are deaf/hearing impaired in mainstream Further Education and Training classrooms.

The observations were structured around the observation schedule. According to Galton, structured observation, as used to monitor classroom events, requires an observer to assign such events into previously assigned categories ... the observer can record and code the events simultaneously while present in the classroom (in Keeves, 1988:474).

The observation checklist (Appendix I) was used as an instrument, in a structured manner, to record my observations of the non-special subject educators in their normal classroom environment particularly their interactions with the learners who are deaf/hearing impaired. The checklist allowed me to focus on the

classroom organisation and the teaching strategies employed by the participating educators.

After viewing some of the video material and having recorded actions of the non-special subject educator, learners and the learner who is deaf/hearing impaired, it became necessary to revise the original observation checklist to provide for the "other focus" and "extraneous factors". The other focus included factors such as; use of teaching and learning aids, when the educators provided learners with extra time, additional information and explanations, educators' body language, etc. The extraneous factors were factors that were beyond the control of the educator. These extraneous factors included amongst others, the noise level outside of classroom and problems with hearing devices.

I assumed the role of a non-participant observer. In the classroom situation, I did not participate nor intervene in the classroom activities but remained passive throughout the observation (Kumar, 2005). During the classroom observations, I was able to observe the learners as well as the educators by watching and listening during the classroom activities (Kumar, 2005). The strategies employed by the educator, mediating the learning process, interaction with the learner who is deaf/hearing impaired were noted using the observation schedule (Appendix J).

3.5.4 Field notes

During the first observation session, I became aware of the need to record my observations which were not covered by the observation schedule and checklist. The field notes developed and became more detailed as the

observations progressed. Field notes are contemporaneous notes of observations or conversation taken during the conduct of research (Thorpe and Holt, 2008).

I made field notes of the educators at work in the classrooms while observing the lessons. The field notes were hand-written during the classroom observations. These field notes were later transcribed into electronic version by using a computer and a word processing package. The field notes supplemented the observation schedule.

3.5.5 Video recording

Arnott (2004:53), Hopkins (2002:132) and Craig (1988) suggest that there are advantages to using videotape recordings for accurate data gathering. The argument is that the analysis of the visual material allows for detailed examination of a specific teaching episode. The collection and analysis of visual recordings is appropriate in qualitative research (Arnott, 2004). Visual records of all kinds may help the researcher to develop a closer feel and appreciation of the setting (Hitchcock and Hughes, 1995:178).

The following advantages for using video recordings are postulated:

- it allows the researcher to record the lessons exactly as they are (Gais, 2005)
- the educators are kept in their own natural surroundings (Gais, 2005)

- it allows limitless replay for closer inspection (Reyer, 2005; Aitken et al., 2000:19 and Mosito-Matheleli, 1999)
- it allows observations of all the people participating in an interaction, e.g. both the learner and the educator (Aitken et al., 2000:19)
- it enables the researcher to collect non-verbal behaviours and supplementary extracts of conversation that would otherwise be impossible to record and assemble (Dixon, 1995)
- it provides the researcher with time to decide which part of the data to collect and analyse in detail (Reyer, 2005)
- the researcher can transcribe classroom talk or watch actions down to the smallest detail (Reyer, 2005; Arnott, 2004 and Mosito-Matheleli, 1999).
- Reyer (2005) and Mosito-Matheleli, (1999) also maintain that these advantages lead to a provision of extensive data.

With the permission of the participants (Appendix F), video recordings of the second (final) observation sessions with each educator were made. The video material is an important source of data, particularly because the emphasis is on the observational procedures within this study. I opted to make video recordings of the participating educators in their natural classroom settings. The video recordings would provide me with the

opportunity to view and re-view the video clippings, record observations and data analysis after doing the actual classroom observations.

After the first classroom observation, I became aware of the fact that I would not be able to successfully operate a video camera, observe the lessons and complete the necessary check lists while the lessons were in progress. It is for this reason that I used an additional person to operate the video camera. Reyer (2005) advocates the use of a camera operator who is familiar with the equipment to facilitate the recording. I briefed the cameraman to use the camera in an unobtrusive manner. The cameraman operated the camera equipment from the back of each of the classrooms. The cameraman chose the back left or back right of classroom depending on the position of the learner who is deaf/hearing impaired in the classroom. The fact that an additional person was used, allowed me, as the researcher, the opportunity to concentrate on observing the lessons, complete the checklists and make additional field notes while the video recording was being made.

I viewed the video clippings after the classroom observations had been completed. The video recordings provided me with countless opportunities of viewing and re-viewing the material. I was therefore able to make sound judgements about the teaching strategies involved when teaching learners who are deaf and hearing impaired in the mainstream environment.

In addition to formal methods of data collection, data was also collected through informal discussions which are discussed below.

3.5.6 Informal discussions

During the classroom observation I noticed interactions by the educators and the learners who are deaf/hearing impaired that were not covered in the observation checklist. Informal discussions were conducted to avoid assumptions being made by the researcher. Questions were posed by the researcher to gain clarity and further explanations from the educators about the certain issues that arose during the classroom observation. Questions were posed at the educators and the learners who are deaf/hearing impaired directly after the classroom observation.

No electronic recordings were made of the informal discussions. I kept field notes of the responses of the educators involved.

3.6 DATA ANALYSIS

According to Grinnell (1988:121), the process of data analysis takes many forms. Data analysis is primarily an inductive process of organizing the data into categories and identifying patterns (relationships) among the categories (McMillan and Schumacher, 2001:461). For the purpose of this study, quantification of findings was embarked upon by way of counting instances of action, behaviour and utterances. The following process was used for consolidating the data and generating meaning (Miles and Huberman, 1994):

- The grouping of ideas or processes into categories, known as clustering, for example, through which three

teaching strategies were clustered. In this case, (i) Teaching Strategy 4 - Educator accepts correct answer, (ii) Teaching Strategy 5 - Educator acknowledges learners and (iii) Teaching Strategy 41 - Educator positively acknowledges learner's answer/contribution were clustered as a new group called "Positive Feedback and Acknowledgement".

- The making of contrasts/comparisons to highlight concepts and sharpen understanding; e.g. Educator allows learner interaction with frequencies of 13, 37 and 6 for Educators 1, 2 and 3 respectively. Educator 2 therefore displays a high frequency whereas Educators 1 and 3 respectively display a lower frequency.
- The noting of recurring patterns and/or themes that allowed the researcher to make sense of separate pieces of data, e.g. in the case of all three the non-special subject educators, Positive Personality Traits a high total frequency was recorded.

The process of analysis serves to build a coherent chain of evidence upon which to develop propositions, that is, statements of fact inductively arrived from a systematic analysis of the data (Maykut and Morehouse, 1994). Various methods of data collection that were used within this study went through the above process of data analysis.

The video recorder (device used to replay videotapes for the purpose of viewing, reviewing and analysis of learning and teaching process during the classroom

observations) was used as a device to assist with the data analysis.

3.6.1 Construction of an observation schedule

The collection of quantitative data requires that a standardised observation schedule be compiled before the observations take place (Du Plooy, 2002:148). I compiled an observation schedule which contained a checklist (Appendix I) to record the behaviours of the educator and the learner who is deaf/hearing impaired. I divided the checklist into categories that I would be able to use and code the observations.

As adapted from a study by Mosito-Matheleli (1999) the observation schedule for recording the sub-categories was based on:

- (i) What the educator was doing or saying and why
- (ii) What the learners were doing or saying and why
- (iii) What the deaf/hearing impaired learner was doing or saying and why (added for the present study).

I adapted this format in my study because I found it the most practical way to capture and record what the main teaching strategies and interventions were, that were employed by non-special educators who teach learners who are deaf/hearing impaired in mainstream classrooms. Denscombe (2003) advocates recording the frequency of events ... events at a given point in time ... the duration of events and recording a sample of people.

3.6.2 Defining the variables

The objectives of systematic observations are rooted in quantitative (positivist) research, where operational definitions of concepts are made as precise as possible in order to measure observable human behaviour accurately and objectively (Du Plooy, 2002:148). However, I found this principle sound for my study.

I wrote definitions for every different classroom procedure and classroom activity, e.g. Resource bringing: Educator locates and provides extra useful information, materials, practices, equipment to learners. These definitions clearly specified and conveyed the meaning of each strategy that was observed. These definitions and meanings assisted significantly when I finally sorted and categorised the strategies that were employed by the educators in the classroom activities (Appendix K).

3.6.3 Method of analysis

The method of analysis that I followed is largely based on the method of analysing human transactions recorded on videotape by Craig (1988).

One lesson per educator was captured on video tape. In total three lessons were recorded. The data which was captured on the video tapes were analysed on two levels. Mosito-Matheleli (1999) cites Craig (1985) who states that the first level involves the "evaluation and quantification". The evaluation of the video data was performed with regard to the categories outlined in the observation schedule (Appendix J). The results of the evaluation allowed for quantification. The results referred to the frequency a certain action or behaviour

(as defined by the categories) occurred and was recorded. Observations can be made of observable behaviours and patterns of interpersonal communication with reference to variables such as duration and frequency (Du Plooy, 2002:147).

The second level involves an explanation of the most frequently used strategies employed by the educators.

Craig (1988) proposes five primary steps or stages to analyse video data. The steps are:

1. Viewing of tapes
2. Review of tapes
3. The production of the re-view of a compiled tape
4. Applying thick description
5. Providing an explanatory account

I proceeded and adapted the methods of video analyses postulated by both Craig (1988) and Mosito-Matheleli (1999) to suit this study. I continued as follows:

1. Viewing of tapes to get an initial "feel" for the data
2. Assessment of observation schedule
3. Refinement of the observation schedule
4. Grouping of categories

5. Review of tapes and engaging in evaluation and quantification of data as recorded
6. Compilation of coding or tally sheet descriptive extracts
7. Compilation of descriptive extracts

Below find a detailed description of the procedure involved in the stages of the data analysis.

3.6.3.1 Viewing of tapes

According to Craig (1988:97) at this stage of the analysis, the researcher plays and views the videotapes with a specific aim in mind. While viewing the video material, I sought to answer the following questions which I adapted from Mosito-Matheleli (1999).

A. Educator

1.1 What is the educator doing?

1.2 Why is the educator engaging in this activity?

B. Learner

2.1 What is the learner who is deaf/hearing impaired doing?

2.2 Why is the learner who is deaf/hearing impaired engaging in this activity?

In this way I was able to give meaning to the actions of the various participants (educators and learners) based

on my "pre-understandings" of the situation and theoretical commitments (Craig, 1988 who cites Ricoeur, 1981). Using this information at hand I was able to speculate about the intentions of the various participants (educators and learners).

This stage was merely an exercise in familiarisation with the video material. Therefore I did not record anything that transpired in writing on the observation schedule as yet.

After this stage of viewing I proceeded to the second phase which Craig (1988) calls the coding of the actions and transactions recorded on video. The assessment of the observation schedule was used during the second phase of viewing the videotapes.

3.6.3.2 The assessment of the observation schedule

After the initial viewing of the video tapes I proceeded to the second phase of viewing the individual lesson recordings. It was during the second phase of viewing that I started to record and complete the observation schedule (Appendix J).

Craig (1988), advises that the video tape should be stopped after approximately three seconds so that the coding procedure can be completed. After viewing and observing for three seconds the analysts should record the actions of the educator and the learners participating in the study. As proposed by Kale (2008) and Mosito-Matheleli (1999), I proceeded to run the videotapes for the duration of a meaningful interval. According to Kale (2008) a meaningful interval started with an interaction scene and ended when there was a new

interaction scene observed. An interaction was interpreted as a complete action or utterance of the educators or learners as described above. In this way I was able to capture complete meaning of the transaction between the educator and the learners in its entirety. The videotape was left to run for longer than the suggested duration in most cases until I had grasped the complete meaning of the action or utterance.

3.6.3.3 The refinement of the observation schedule

The assessment of the observation schedule provided me with a wealth of information and data. Some of these pieces of data displayed similar characteristics.

During the recordings of the observations I found that additional categories (e.g. resource bringing, classroom administration, educator explains concepts using diagrammatic representation) were emerging that were not provided for in the initial observation schedule. In some cases these were due to a change of focus on the part of the educator (other focus) in other cases these were due to extraneous factors or factors beyond the control of the educator or researcher (e.g. noise from construction work done to school building, noise from police sirens and passing railway trains, announcements to all learners by office administration staff via school intercom). Observations are usually conducted in the field, which means that the researcher cannot control extraneous variables (Du Plooy, 2002:185).

It is for these reasons that I engaged in a refining process and grouped pieces of data together. Mosito-Matheleli quotes Craig (1988:98) who terms this stage "a first reading of, or a first order imposition of meaning,

on the data". The refinement of the data therefore required a refinement and adjustment of the observation schedule.

3.6.3.4 Grouping of categories

After the refinement process I grouped the pieces of data which were recorded on the observation schedule to re-group it under the appropriate category. I rewrote definitions for every activity and category (Appendix L). These definitions clearly specified and conveyed the meaning of each category that was observed e.g. teaching methods can be defined as a strategy, tactic, technique or mode of instruction used by an educator to convey certain lesson contents to learners. The meanings served two major purposes:

- (i) assisted to determine the most frequently used strategies employed by the educators; and
- (ii) they rendered my analysis as valid and reliable as possible so that no action or utterance was interpreted as two or more things.

3.6.3.5 Review of tapes

According to Craig (1988), this stage in the process of analysis starts when the analysts have some preliminary 'answer' to the question, 'What do the data mean?'. The researcher would have a summary in mind. This summary emerges through the previous viewing of the videotape and through the process engaged in during the refinement of the observation schedule. The summary reflects the intentions of the educators and learners and the possible reasons and meanings attached to these actions.

The following phases:

- Construction of an observation schedule
- Defining the variables
- Viewing tapes
- The grouping of the categories

assisted me in completing the "summary-in-mind".

To continue to determine the main strategies employed by non-special educators who teach learners who are deaf/hearing impaired in mainstream classrooms, I proceeded to compile a tally sheet (Appendix M) and analyse its content.

3.6.3.6 Compilation of coding or tally sheet descriptive extracts

The main strategies employed by non-special educators who teach learners who are deaf/hearing impaired in mainstream classrooms were reflected on the observation schedules. I proceeded to compile a tally sheet by using the data on the observation schedules to quantitatively determine the frequency of the strategies employed by the educators. The content of the tally sheet provided information to analyse the data.

According to Du Plooy (2002:193) a coding or tally sheet is developed when analysing content. Content categories are variables that take on some value when applied in an analysis. Du Plooy (2002:194) suggests two steps to compile a tally sheet. The first is to allocate the data

to specific categories which will assist the coder to organise the data in a visual summary.

The next step is to count the number of cases that belong to each category, with the frequency designated as f . The frequency is an indication of how often a particular action occurred.

I used a computer and an Excel spreadsheet to tally:

1. The total instance of each strategy per educator
2. The highest frequency per strategy
3. The lowest frequency per strategy

3.6.3.7 Compilation of descriptive extracts

The strategies displaying the highest frequency were extracted to illustrate the "crucial aspects of the summary-in-mind regarding the (possible) intentions behind actions and the meanings which may be imposed on the actions" Craig (1988:98). The researcher seeks to illustrate by using further examples which are extracted from the tape to demonstrate and confirm these observations.

3.7 ETHICAL CONSIDERATIONS

In the presentation of these findings, issues of ethics and confidentiality emerged as crucial aspects to be considered by the researcher. The researcher has an obligation to respect the rights, needs, values and desires of the participants.

Successful research conducted in formal educational settings begins with the seeking of permission to enter into the field. I obtained written and/or verbal permission prior to conducting the research.

Since this research study involves learners who are deaf/hearing impaired and their educators, ethical guidelines and considerations needed to be employed. The nature of this study needed to ensure that the privacy of the learners was respected and protected. For the purpose of this study I requested (Appendices A and B) and obtained official permission from the Western Cape Education Department (Appendix C). I further requested permission from school principals (Appendix D), participating educators (Appendix F) and the parents (Appendix E) of learners who are deaf/hearing impaired whom I selected. Consent forms were signed by the parents (Appendix E) of the learners who are deaf/hearing impaired.

The participants were assured of their anonymity. The confidentiality of all the subjects (educators and learners) was guaranteed by the researcher. The names of the educators and learners were not reflected in this study. The identifying information of the educators and learners, disclosed in the video material was used only for the purpose of the evaluation of this study.

3.8 CONCLUSION

In this chapter the methodology used for the study has been explained. The study used a qualitative exploratory research design using pre-observation discussions, biographical questionnaires, classroom observations, video recordings, field notes and informal discussions. The participants, sampling design and data collection technique were addressed.

The next chapter deals with the presentation of findings obtained through the methods described in this chapter.

CHAPTER 4

PRESENTATION OF RESULTS

4.1 INTRODUCTION

This chapter presents the research findings following the analysis of the data. The methods used to analyse the data are discussed in Chapter Three. The results are reported in four separate sections. The presentation of the results is based on the data yielded as described below.

In the first section, a summary of the biographical questionnaires is tabulated. The data refers specifically to the bio-demographical details that were completed by the three educators who were observed in the normal classroom setting.

The informal discussions that were conducted with the educators involved in the research are reported in the second section. This is followed by a section where the data from the observation field notes which were recorded during the classroom observations are presented.

The last section contains the findings for the video recordings of three lessons observed in the normal classroom setting. The setting was normal in a sense that nothing was changed to suit the presence of a researcher.

4.2 ACTUAL FINDINGS

4.2.1 Information collected from the biographical questionnaires

The three participating educators (N=3) who were observed completed the biographical questionnaires. The information was gathered from the biographical questionnaires and analysed. This information was useful in understanding the background and composition of the educators who were observed. The questionnaire required the educator's bio-demographical details.

TABLE 4.1: Biographical details of participating educators

EDUCATORS (N)	TEACHING EXPERIENCE (YEARS)	SCHOOL/FET COLLEGE	AGE (YEARS)	GENDER	EXPERIENCE IN INCLUSIVE ENVIRONMENT (YEARS)	QUALIFICATIONS
1	6	SCHOOL (School A)	Between 31 years and 35 years	Female	2	B.Soc.Sci. PGCE ACE
2	18	FET COLLEGE (School B)	Between 51 years and 55 years	Male	1	B.Soc.Sci. B.Soc.Sci. (Hons) NDPSE
3	6	SCHOOL (School A)	Between 26 years and 30 years	Female	2	B.Sc. PGCE

The educators participating in the research included two female educators and one male educator. All the educators are experienced and each has at least six years teaching

experience. Educator 2 has eighteen years teaching experience.

None of the educators has experience in teaching a large group of learners who are deaf/hearing impaired. Their experience is limited to the one deaf/hearing impaired learner who is presently in their class.

TABLE 4.2: Explanation of educators' qualifications

ABBREVIATION	EXPLANATION
B.Soc.Sci.	Bachelor of Social Science
PGCE	Post Graduate Certificate in Education
ACE	Advanced Certificate in Education
B.Soc.Sci.(Hons)	Bachelor of Social Science (Honours)
NDPSE	National Diploma in Post School Education
B.Sc.	Bachelor of Science

The information presented in Table 4.2 above was gathered from the biographical questionnaires and analysed. The sample consisted of three (N=3) non-special educators from two educational institutions. Educator 1 and educator 3 are educators at a single gender high school for girls. Educator 2 on the other hand, teaches at a public Further Education and Training Institution.

TABLE 4.3: Subject areas

EDUCATOR	SUBJECT
Educator 1	Natural Science (Physical Science)
Educator 2	Small Business Management
Educator 3	Life Sciences (Biology)

From the table above (Table 4.3), we note that the classroom observations were conducted in three different subject areas.

TABLE 4.4: Lesson topics

EDUCATOR	LESSON TOPIC
Educator 1	Redox reactions
Educator 2	Insurance
Educator 3	The cochlear

From the table above (Table 4.4), we note the different lesson topics that were covered during the classroom observations.

Educator 1 and Educator 3 are non-special educators at School A. They are subject educators in the Grade 11 Natural Science (Physical Science) and Life Sciences (Biology) subjects respectively. The Natural Science lesson that was recorded on videotape for the purpose of this study was entitled "Redox reactions", while the Life Sciences lesson was entitled "The cochlear". Both these educators were involved in whole-class teaching where the learner group was at an advanced level.

Educator 2 is a non-special educator at a Further Education and Training College (School B). He is the subject educator of the National Senior Certificate (NSC/Grade 12) in a subject called Small Business Management. The Small Business Management lesson that was recorded on videotape for the purpose of this study was entitled "Insurance". This educator was involved in whole-class teaching with a mixed ability group.

4.2.2 Pre-observation discussions

The informal discussions attempted to find out:

- (i) if the educators are experiencing classroom factors which they consider to be barriers to their efforts to include the deaf/hearing impaired learner
- (ii) what efforts the educators are making to overcome these classroom barriers
- (iii) the background of the deaf/hearing impaired learners
- (iv) the educators background in dealing with deaf/hearing impaired learners
- (v) suitable dates and times during normal class time to conduct the classroom observations and complete video recordings.

During the pre-observation discussions all the educators mentioned that they did not have a problem with the concept of the inclusion of learners with hearing impairments in their classrooms. They acknowledged that teaching learners with special needs such as learners who are deaf/hearing impaired in mainstream classes presented certain challenges, as indicated below:

- (i) they felt unsure and did not feel confident working with the learner who is deaf/hearing impaired in the mainstream classrooms

- (ii) they did not know how to teach the learner who is deaf/hearing impaired
- (iii) they did not know how to effectively communicate with the learner who is deaf/hearing impaired
- (iv) they did not know how to teach and explain new vocabulary (subject related terminology) particularly abstract concepts
- (v) they did not know how to remedy the language and "telephone writing style" of the learner who is deaf/hearing impaired
- (vi) they did not know how to establish if the learner who is deaf/hearing impaired was able to cope with the pace of their lessons in the mainstream classroom
- (vii) they did not always know how to modify their teaching strategies and methodologies to include the learner who is deaf/hearing impaired.

In addition, the participating educators indicated that:

- (i) they are aware of the fact that they lack the skills and training to cope with a learner who is deaf/hearing impaired in the mainstream classroom.
- (ii) they were concerned that their skills in applying different teaching strategies and methodologies were limited.

(iii) as a result of their limited skills and strategies in dealing with learners who are deaf/hearing impaired, the non-special educators rely on guidance from the learner who is deaf/hearing impaired to indicate what they require from the educators to assist them during lessons.

During these discussions the non-special educators provided the researcher with information regarding the classroom environment, background of the learners who are deaf/hearing impaired and the attitude of learners who are hearing towards the learners who are deaf/hearing impaired.

The learners who are deaf/hearing impaired who are included at School A and School B are profoundly deaf. Both the learners are exposed to an oral environment in their respective homes where English is the spoken language. The learner who is deaf/hearing impaired and attending School A is post-lingually deaf². The learner's deafness became more acute and as a result she previously received instruction at a special school. Because the learner had acquired language before being deafened, she was placed in a class where she received oral instruction instead of sign language instruction. Subsequent to this, she was transferred to School A for high school education and she was placed in a general education class. The cochlear implant and a portable microphone are the assistive devices utilised by this learner who is deaf/hearing impaired and further depends on speech-reading (lip-reading).

² Refers to persons who have developed hearing impairments after learning to speak.

The learner who is deaf/hearing impaired and attends School B is pre-lingually deaf³. This learner received instruction at a special school through the medium of sign language but later transferred to a second special school where oral instruction is the preferred method. Subsequent to this, the learner was transferred to inclusive School B and was placed in a mixed ability⁴ class group. This learner uses a hearing aid as an assistive device and depends on speech-reading (lip-reading).

Both deaf/hearing impaired learners at the two mainstream schools are coping without the assistance of resource teachers or sign language interpreters. However, in both cases, hearing learners are supportive and provide assistance and act as peer-tutors. The academic records of both the learners who are deaf/hearing impaired indicate that they are achieving above average results in most subject areas. All the educators attributed the success of these learners who are deaf/hearing impaired to the involvement and the keen interest shown by the parents of the learners who are deaf/hearing impaired.

4.2.3 Field notes and classroom observations

4.2.3.1 Field notes

Information of the educators at work in the classrooms was recorded while observing the lessons. The demographic details provided below will feature these recordings.

³ Refers to persons who have severe hearing impairments before learning to speak.

⁴ A group of learners with a wide range of learning abilities.

SCHOOL A: This is a single gender high school for girls located in the southern suburbs of Cape Town. This well-resourced school which has been an educational institution for over a century is rich in its history and culture. It accommodates learners from Grade 8 to Grade 12. The participating learner being observed is in Grade 11.

SCHOOL B: This is a public Further Education and Training Institution located in the southern suburbs of Cape Town. This college is a well-resourced educational institution that was established over 50 years ago. It has identified and created programmes to develop scarce skills that have urgent national priority. This educational institution accommodates secondary and tertiary learners. The participating learner being observed is enrolled as a National Senior Certificate (Grade 12) learner.

The following tabular statement contains the physical features of the classrooms where observations were conducted.

TABLE 4.5: Physical features of classroom

PHYSICAL FEATURES	EDUCATOR 1	EDUCATOR 2	EDUCATOR 3
	SCHOOL A	SCHOOL B	SCHOOL A
	Class size (learners)	17 learners	15 learners
Classroom size (space)	Laboratory Spacious	Long narrow classroom	Spacious classroom Bulky desks restricted easy movement
Arrangement of learners	Some single Some pairs	Some single Some pairs Traditional	Pairs Traditional
Position of deaf/hearing impaired learner in class	Right side of class First table Facing left	Left side of class Second table Facing educator	Middle row Front desk Facing educator
Position of educator	Not stationary Educator moved throughout the classroom to individual groups during classroom activities	Educator stationary at front of class during explanations	Not stationary Educator moved from left to right in front of classroom Educator moved to individual groups during classroom activities
Availability of whiteboard/ chalkboard/ Overhead Projector/Other devices	Chalkboard Whiteboard Interactive whiteboard Computer Overhead projector Transparencies	Whiteboard Overhead projector Transparencies	Whiteboard Interactive whiteboard Computer Overhead projector Transparencies
Suitable furniture (easily moveable)	Educator's table (in front of classroom) Tables Wooden lab stools Easily moveable Cupboards Demonstration laboratory table with basin	Educator's table (front right of classroom) Tables Chairs Easily moveable Metal filing cabinet	Educator's table (back left of classroom) Tables Wooden lab stools Easily moveable Open book shelves
Suitable learning/teaching aids displayed in classroom	Pictures and charts Periodic table Physical Science laboratory equipment Molecular models	Pictures and charts	Pictures and charts Model of a skeleton Plastic models of human organs

The physical features, as listed in Table 4.5 are explained below.

(a) Class size (learners)

All the classes observed consisted of manageable class sizes (cf. Table 4.3). No class size exceeded the normal prescribed learner-educator ratio of 32:1 for Natural Science and Life Sciences and 38:1 for Business Studies (Department of Education:2002).

(b) Classroom size (space)

The physical classroom size of the room utilized by Educator 1 provided adequate space to accommodate all the learners and provided enough space for movement by the educator and the learners. The classroom is on the first floor of the school building. The windows along the one side of the classroom allowed for sufficient natural light.

The classroom utilised by Educator 2 provided adequate space to accommodate all the learners and enough space for movement by the educator and the learners. This classroom is dark and narrow. The classroom has no windows on the side walls. Although there are windows and a door at the back of the classroom, these did not provide natural light as they opened out into an enclosed atrium. Users of this classroom rely on artificial lighting. Due to the lack of windows, ventilation and air-flow is poor.

The classroom utilised by Educator 3 managed to accommodate all the learners. However the arrangement of the furniture (in the overcrowded room) allowed limited moving space for the educator at the front of the classroom. The classroom is on the first floor of the school building. The blinds and windows allowed for sufficient natural light.

The class size positively affected the organisation and manageability of the class groups. The class groups were arranged in pairs or manageable sizes for learners to be involved in lesson activities. The sizes of the class groups were manageable for the educators to monitor and give assistance where necessary.

(c) Arrangement of learners

The seating arrangement for the learners in the classrooms of Educator 2 and Educator 3 was structured in a "traditional" style. The learners all sat facing the front of the classroom and focused on the educator. Although the seating arrangement in Educator 1's classroom was partly traditional, some learners were seated in groups.

In the classrooms of Educator 1 and Educator 2 some learners sat on their own whilst some learners sat in pairs. As there was a shortage of textbooks, Educator 2 was obliged to re-arrange the seating of the learners to ensure that all learners had access to the text being read. In Educator 3's classroom, the learners sat in pairs.

(d) Position of deaf/hearing impaired learner

In the classroom of Educator 1, the tables were arranged in three rows. The learner who is deaf/hearing impaired was seated in the centre row, at the right side of the second table, facing the left side of the classroom (Figure 4.1). In this position the learner who is deaf/hearing impaired could comfortably face and focus on the peers and/or the educator depending on who was talking.

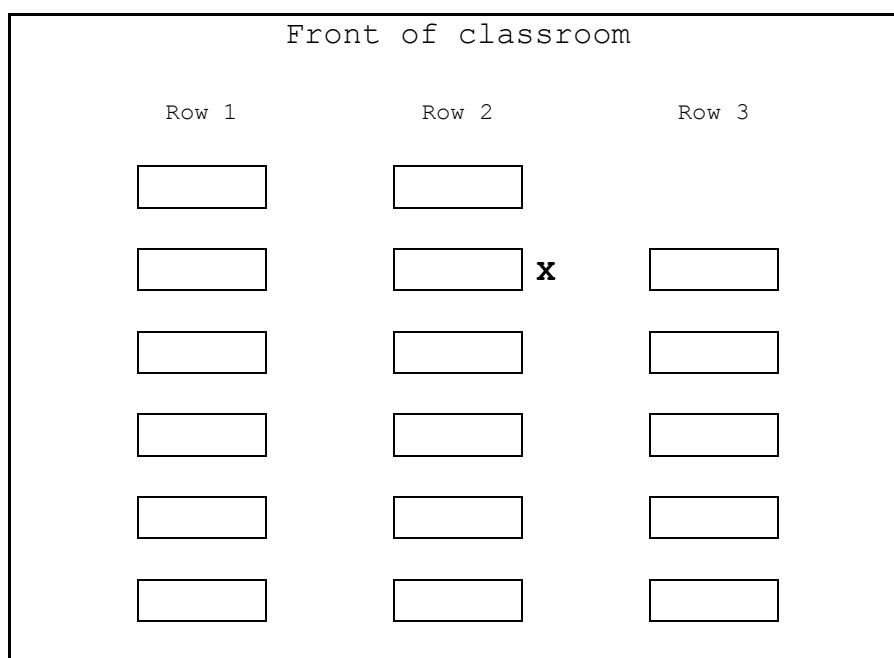


Figure 4.1: Classroom layout of Educator 1

*X represents the position of the learner who is deaf/hearing impaired.

The blocks above indicate the table arrangement providing seating for individual learners or groups of learners per table

In the classroom of Educator 2, the tables were arranged in four rows. The learner who is deaf/hearing impaired was seated in the far left row, at the second table from the front of the classroom facing the right side of the classroom (Fig. 4.2). In this position the learner who is deaf/hearing impaired could comfortably face and focus on the peers and/or the educator depending on who was talking.

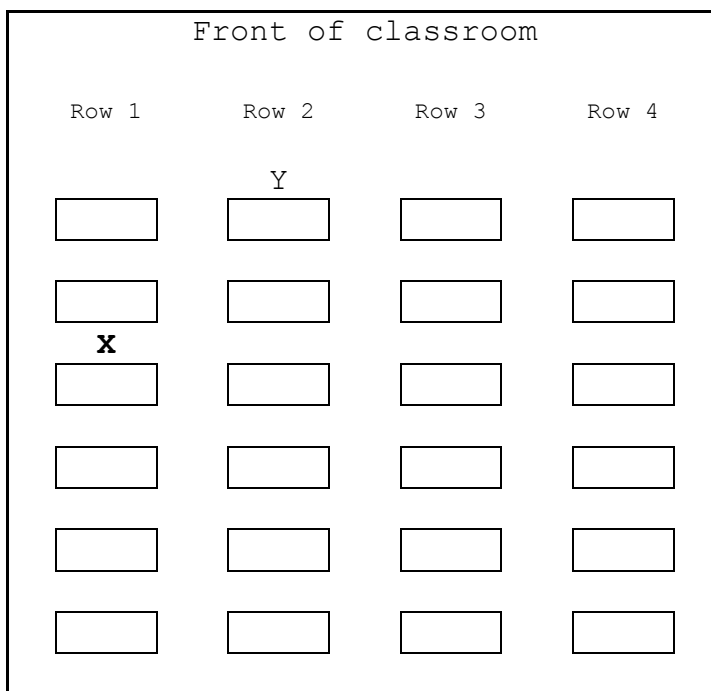


Figure 4.2: Classroom layout of Educator 2

*X represents the position of the learner who is deaf/hearing impaired.

**Y represents the position of educator 2.

The blocks above indicate the table arrangement providing seating for individual or learner pairs per table

In the classroom of Educator 3, the tables were arranged in three rows. The learner who is deaf/hearing impaired was seated at the first table in the centre row, facing the front of the classroom (Figure 4.3). In this position the learner who is deaf/hearing impaired faced the educator.

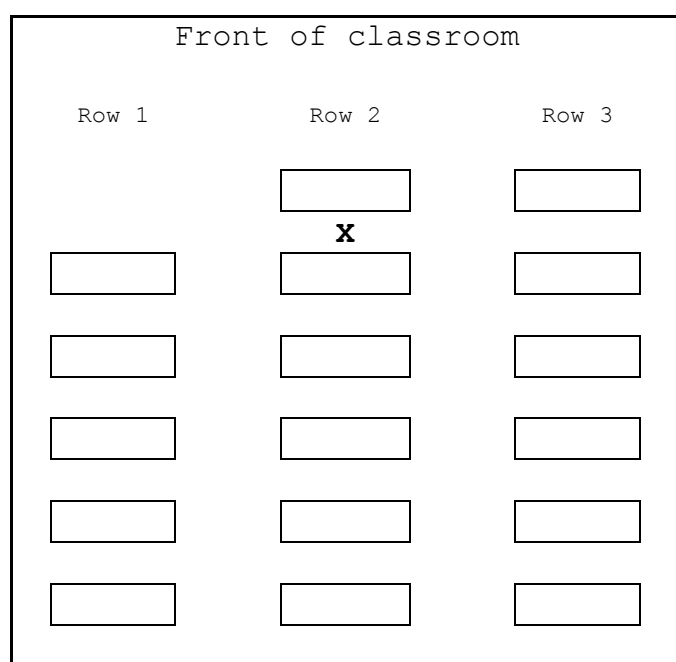


Figure 4.3: Classroom layout of Educator 3

*X represents the position of the learner who is deaf/hearing impaired.

The blocks above indicate the table arrangement providing seating for learner pairs per table

(e) Position of educator

The educators were all aware of the presence of the learner who is deaf/hearing impaired and their seating positions in the classrooms. Due to the nature of the lessons observed, Educator 1 and Educator 3 moved continuously for the purpose of classroom management and classroom activities. This did not seem to affect the learner who is deaf/hearing impaired because the educators were both using the microphone (connected to the cochlear implant). Educator 2 managed the classroom activities from a stationary position diagonally facing

and in close proximity to the learner who is deaf/hearing impaired. This learner did not make use of a hearing device during the lesson that was observed by the researcher. The learner who is deaf/hearing impaired indicated to the educator and the researcher at the beginning of the lesson that he needed new batteries for his hearing device and that he would try to follow oral instructions and explanations by speech-reading (lip-reading) during the lesson.

(f) Availability of classroom facilities

Classrooms at both School A and School B are well-equipped. In addition to whiteboards, overhead projectors and transparencies, the classrooms at School A are fitted with computers and Interactive Whiteboards.

(g) Classroom furniture

The furniture in all the classrooms was arranged to provide seating for individuals or groups of learners. The arrangement of tables provided the opportunity for individuals, pairs or small groups of learners to be seated together. In all cases the classrooms were furnished with moveable tables and stools or chairs.

(h) Learning and teaching aids

The observations were conducted in classrooms designated to specific subjects. The learning and teaching aids displayed in these classrooms were appropriate and subject specific.

4.2.3.2 Classroom observations

No advice or suggestion was given by the researcher to the educators to reflect on their teaching practices. Therefore the classroom observation that took place at

the different educational institutions was pure observation.

The non-special subject educators who were observed were involved in whole-class instruction and did not have any classroom assistant or sign language interpreter to assist with their learners who are deaf/hearing impaired in the mainstream classroom.

The three non-special subject educators utilised a combination of different teaching strategies and interventions to cope with the diverse needs of the learners in the mainstream classrooms. What I attempted to find out was not only if the educator was active, but also how the non-special subject educator copes with the diverse needs of the learner who is deaf/hearing impaired in the mainstream classroom.

4.2.4 Video recording

On average the duration of lessons at high schools and colleges are approximately 55 minutes on Monday to Thursday, but shorter in duration on a Friday. The learners are dismissed earlier on a Friday afternoon. The lessons are approximately 45 minutes in duration and therefore shorter by 10 minutes. Educator 2's lesson was video recorded and observed on a Friday and therefore the duration of the lesson was significantly shorter.

Educators made different efforts to promote the active participation of all learners. All the educators used a classroom activity, where the learners were asked or encouraged to participate and engage in a discussion or group activity.

Even though learners sat in groups (Educator 1 and Educator 3) the learners engaged in individual work as well as group and co-operative activities. In Educator 2's classroom, some learners sat in pairs due to a shortage of text books while other learners chose to sit on their own.

4.3 STRATEGIES

The table below lists the teaching strategies and a quantification of these teaching strategies (the data) utilised by the educators during the classroom observations. From the table, it can be determined that the number of times the different teaching strategies are recorded per class, differs for all the educators. This table makes it easy to compare the teaching strategies which were the most commonly utilised by the three educators during the classroom observations.

TABLE 4.6: Teaching strategies

TEACHING STRATEGY	TEACHING STRATEGIES	EDUCATOR			TOTAL
		1	2	3	
1	Classroom administration	3	1	2	6
2	Classroom management	12	15	17	44
3	Educator uses teaching aids	21	11	46	78
4	Educator accepts correct answer	9	11	7	27
5	Educator acknowledges learners	0	7	15	22
6	Educator advises learners	4	2	1	7
7	Educator allows learner interaction	13	37	6	56
8	Educator allows learner participation	20	34	7	61
9	Educator allows learner to comment	0	1	0	1
10	Educator allows learners to struggle	9	2	3	14
11	Educator asks for clarification	0	3	0	3
12	Educator asks leading question	7	6	1	14
13	Educator cautions learners	4	1	0	5
14	Educator checks for understanding	1	7	0	8

15	Educator checks learner who is deaf/hearing impaired for understanding	2	0	0	2
16	Educator checks learner's reading for accuracy	0	8	0	8
17	Educator checks vocabulary	0	3	1	4
18	Educator circulates and assists learners	19	0	4	23
19	Educator concludes lesson	0	1	0	1
20	Educator corrects learner's responses	0	1	0	1
21	Educator corrects reading	0	2	0	2
22	Educator creates a relaxed learning environment	0	1	0	1
23	Educator explains concepts using diagrammatic representation	1	0	7	8
24	Educator creates opportunity for learner who is deaf/hearing impaired to contribute	0	3	0	3
25	Educator dismisses class	1	1	1	3
26	Educator displays positive body language	71	40	59	170
27	Educator emphasizes important aspects	0	3	0	3
28	Educator encourages learner interaction	1	0	0	1
29	Educator encourages learner participation	9	20	2	31
30	Educator encourages thinking	2	10	0	12
31	Educator guides learners	0	1	0	1
32	Educator invites responses	3	4	3	10
33	Educator involved in direct teaching	25	12	28	65
34	Educator involved in physical demonstration	6	0	4	10
35	Educator issues direct instruction	18	6	6	30
36	Educator makes a comparison	4	5	3	12
37	Educator narrates role play	10	0	0	10
38	Educator offers individual support	19	2	4	25
39	Educator poses a direct question	17	19	14	50
40	Educator poses an indirect question	0	7	2	9
41	Educator positively acknowledges learner's answer/contribution	7	25	10	42
42	Educator probes learner	3	3	2	8
43	Educator provides individual support (learner who is deaf/hearing impaired)	5	2	1	8
44	Educator provides a clue	0	2	0	2
45	Educator provides correct information	4	7	11	22
46	Educator provides correct pronunciation of word	0	1	0	1
47	Educator provides time for learners to think/copy notes	9	8	9	26
48	Educator recaptures	15	13	5	33
49	Educator refers to information from learners' own environment	0	2	0	2
50	Educator rejects incorrect answer	4	3	0	7
51	Educator relates a story (scenario)	2	8	0	10
52	Educator repeats himself/herself to ensure accuracy	0	1	0	1
53	Educator repeats question	1	0	0	1
54	Educator repeats responses to emphasize correct answer	9	6	15	30
55	Educator sets the tone	8	4	4	16
56	Educator simplifies questions	0	3	0	3

57	Educator solicits chorus responses	10	3	12	25
58	Educator uses drama	9	0	0	9
59	Educator uses humour	1	1	2	4
60	Educator uses incomplete sentences	5	0	4	9
61	Educator uses non-verbal cuing	63	39	41	143
62	Educator uses synonym	1	4	0	5
63	Educator varies turntaking	0	6	0	6
64	Interpersonal ease	7	3	3	13
65	Rapport building	20	29	15	64
66	Resource bringing	3	28	3	34
NUMBER OF STRATEGIES UTILISED BY THE EDUCATOR		47	57	39	

The table above (Table 4.6) displays the frequency of each strategy utilised by every educator as was recorded by the researcher during the viewing of the video material. It can therefore be determined that the number of times the different teaching strategies are recorded per class, differs for all the educators.

The educators utilised a different combination of 47, 57 and 39 teaching strategies respectively. For all the educators observed, the strategy with the highest frequency recorded is Strategy 26, i.e. "Educator displays positive body language".

The teaching strategy with the second highest frequency for both Educators 1 and 2 is "Non-verbal cuing" (Teaching Strategy 61) with a frequency of 63 and 39 occurrences respectively. For Educator 3, the teaching strategy with the second highest frequency is the "use of teaching aids" (Teaching Strategy 3), with a frequency of 46 instances recorded by the researcher.

For all the educators observed, the teaching strategy with the third highest frequency differed significantly. "Direct teaching" (Teaching Strategy 33) was utilised by Educator 1 and 25 occurrences were recorded. In the case of Educator 2, there were 37 instances where Teaching

Strategy 7, "allow learner interaction" was observed by the researcher. "Non verbal cuing" (Teaching Strategy 61) was the strategy identified for Educator 3 being utilised on 41 occasions during the recording of the observations.

4.3.1 Learner interaction and participation

In all the classrooms observed, most learners were found to be active and willing to participate and contribute to the lesson and classroom discussion.

TABLE 4.6.1: Learner interaction and participation

TEACHING STRATEGY	STRATEGIES	EDUCATOR			TOTAL
		1	2	3	
24	Educator creates opportunity for learner who is deaf/hearing impaired to contribute	0	3	0	3
63	Educator varies turntaking	0	6	0	6

The extract in Table 4.6.1 indicates that Educator 2 tried to involve the learner who is deaf/hearing impaired in the classroom activities. The educator achieved this participation by allowing this learner to take a turn to read from the textbook. Educator 2 also encouraged and asked the learner who is deaf/hearing impaired to find appropriate information in the textbook. However, Educator 1 and Educator 3's interaction with the learner who is deaf/hearing impaired was mainly in response to the questions posed by this learner. Therefore Educator 2 encouraged the learner who is deaf/hearing impaired to participate, whereas Educator 1 and Educator 3 did not invite or encourage participation during the lesson that was observed by the learner who is deaf/hearing impaired.

4.3.2 Individual support

TABLE 4.6.2: Individual support

TEACHING STRATEGY	STRATEGIES	EDUCATOR			TOTAL
		1	2	3	
38	Educator offers individual support	19	2	4	25
43	Educator provides individual support (learner who is deaf/hearing impaired)	5	2	1	8

Educator 1 and Educator 3 used a classroom application at the end of their lessons. Both these educators circulated and provided individual support to the learners during this time. From the above extract, Table 4.6.2, it can be concluded that a high frequency of individual support is recorded during Educator 1's lesson. Educator 2 and Educator 3 display a low frequency of individual support during their lessons as well as a low frequency of individual support to the learner who is deaf/hearing impaired. Educator 1 displays a higher frequency of support to the learner who is deaf/hearing impaired.

4.3.3 Resource bringing

TABLE 4.6.3: Resource bringing

TEACHING STRATEGY	STRATEGY	EDUCATOR			TOTAL
		1	2	3	
66	Resource bringing	3	28	3	34

The educator provided extra examples that are drawn from the educator's own familiar experience. These examples could possibly be within the learners' own frame of reference as well. Educator 2 displayed a high frequency in comparison to Educator 1 and Educator 3 who both displayed a comparatively low frequency.

4.3.4 Co-operative learning and peer tutoring

Co-operative learning and peer tutoring featured strongly in Educator 1's lesson observed. Educator 1 allowed her teaching strategies to be guided by the responses and learner contributions. It became evident during the classroom observations and the subsequent analysis of the video recordings that not all the activities were planned. In one case it was suggested by a learner to dramatise and use role play during the lesson to assist with the explanation of a concept. Co-operative activities were not utilised during the observation by Educator 2. In the case of Educator 3, co-operative activities were used, but to a lesser degree. There was a clear difference in the strategies employed by all the educators regarding how learning and teaching was facilitated so that learners could engage and participate. Educator 3 did not use class groups, yet learners sat in pairs to share notes and textbooks or some chose to sit on their own.

Educator 1 used peer tutoring as a strategy. This educator organised the learners based on their knowledge needed for the classroom activity. Learners were very willing to assist learners in other groups who were experiencing difficulties. Learners also called on the educator when they found that they needed extra assistance. The educator could move between the groups and give individual attention to the groups and individual learners when needed.

4.3.5 Direct teaching

TABLE 4.6.4: Direct teaching

TEACHING STRATEGY	STRATEGY	EDUCATOR			TOTAL
		1	2	3	
33	Educator involved in direct teaching	25	12	28	65

From the table above we can determine that all the educators engaged in explicit teaching and demonstrations. A high frequency is recorded during the lessons of Educator 1 and Educator 3. Both these lessons were content based with large volumes of new information which the learners needed to acquire. These volumes of information were not within the learners' own frame of reference. Therefore, the educator was required to repeatedly provide explanations to the learners.

A lower frequency is recorded for Educator 2 (Small Business Management) for the lesson that was video recorded. This lesson was also content based. Some of the information the learners needed to acquire was within the learners' own frame of reference. Therefore the educator could rely on the learners contributing to classroom discussions thus reducing the frequency of direct teaching by the educator.

4.3.6 Non-verbal cuing

TABLE 4.6.5: Non-verbal cuing

TEACHING STRATEGY	STRATEGY	EDUCATOR			TOTAL
		1	2	3	
61	Educator uses non-verbal cuing	63	39	41	143

All the educators observed used a high frequency of gesticulations. Positive body language and non-verbal

cuing has been recorded by the researcher. The educators did not communicate by using formal South African Sign Language (SASL). All the educators used informal hand signs and gesticulations to communicate with the learners.

After the strategies were isolated from the observation, the next phase of the analysis involved the categorisation. The categorisation involved the grouping of the categories with similar characteristics.

In the following table, the strategies listed in Table 4.6 were re-organised so that those with similar characteristics were grouped together.

TABLE 4.7: Regrouped strategies

TEACHING STRATEGY	GROUP	STRATEGIES	EDUCATOR			TOTAL	HIGHEST	LOWEST
			1	2	3			
A. CLASSROOM ATMOSPHERE AND ENVIRONMENT								
1	A	Classroom administration	3	1	2	6	3	1
2	A	Classroom management	12	15	17	44	17	12
18	A	Educator circulates and assists learners	19	0	4	23	19	0
19	A	Educator concludes lesson	0	1	0	1	1	0
22	A	Educator creates a relaxed learning environment	0	1	0	1	1	0
25	A	Educator dismisses class	1	1	1	3	1	1
38	A	Educator offers individual support	19	2	4	25	19	2
47	A	Educator provides time for learners to think/copy notes	9	8	9	26	9	8
55	A	Educator sets the tone	8	4	4	16	8	4
63	A	Educator varies turntaking	0	6	0	6	6	0
64	A	Interpersonal ease	7	3	3	13	7	3
65	A	Rapport building	20	29	15	64	29	15
24	A	Educator creates opportunity for learner who is deaf/hearing impaired to contribute	0	3	0	3	3	0
43	A	Educator provided individual support (learner who is deaf/hearing impaired)	5	2	1	8	5	1
3	A	Educator uses teaching aids	21	11	46	78	46	11
CLASSROOM ATMOSPHERE AND ENVIRONMENT TOTAL			124	87	106	317		
B. POSITIVE FEEDBACK AND ACKNOWLEDGEMENT								
4	B	Educator accepts correct answer	9	11	7	27	11	7
5	B	Educator acknowledges learners	0	7	15	22	15	0
41	B	Educator positively acknowledges learner's answer/contribution	7	25	10	42	25	7
POSITIVE FEEDBACK AND ACKNOWLEDGEMENT TOTAL			16	43	32	91		
C. LEARNER INTERACTION AND PARTICIPATION								
7	C	Educator allows learner interaction	13	37	6	56	37	6

8	C	Educator allows learner participation	20	34	7	61	34	7
9	C	Educator allows learner to comment	0	1	0	1	1	0
10	C	Educator allows learners to struggle	9	2	3	14	9	2
28	C	Educator encourages learner interaction	1	0	0	1	1	0
29	C	Educator encourages learner participation	9	20	2	31	20	2
30	C	Educator encourages thinking	2	10	0	12	10	0
32	C	Educator invites responses	3	4	3	10	4	3
57	C	Educator solicits chorus responses	10	3	12	25	12	3
LEARNER INTERACTION AND PARTICIPATION TOTAL			67	111	33	211		
D. LEARNER SUPPORT								
6	D	Educator advises learners	4	2	1	7	4	1
11	D	Educator asks for clarification	0	3	0	3	3	0
13	D	Educator cautions learners	4	1	0	5	4	0
31	D	Educator guides learners	0	1	0	1	1	0
44	D	Educator provides a clue	0	2	0	2	2	0
60	D	Educator uses incomplete sentences	5	0	4	9	5	0
LEARNER SUPPORT TOTAL			13	9	5	27		
E. QUESTIONING TECHNIQUES								
12	E	Educator asks leading question	7	6	1	14	7	1
14	E	Educator checks for understanding	1	7	0	8	7	0
39	E	Educator poses a direct question	17	19	14	50	19	14
40	E	Educator poses an indirect question	0	7	2	9	7	0
42	E	Educator probes learner	3	3	2	8	3	2
52	E	Educator repeats question	1	0	0	1	1	0
55	E	Educator simplifies questions	0	3	0	3	3	0
15	E	Educator checks learner who is deaf/hearing impaired for understanding	2	0	0	2	2	0
QUESTIONING TECHNIQUES TOTAL			31	45	19	95		
F. CORRECTS LEARNERS								
16	F	Educator checks learner's reading for accuracy	0	8	0	8	8	0
17	F	Educator checks vocabulary	0	3	1	4	3	0

20	F	Educator corrects learner's responses	0	1	0	1	1	0
21	F	Educator corrects reading	0	2	0	2	2	0
46	F	Educator provides correct pronunciation of word	0	1	0	1	1	0
50	F	Educator rejects incorrect answer	4	3	0	7	4	0
CORRECTS LEARNERS TOTAL			4	18	1	23		
G. VARIETY OF TEACHING METHODS								
23	G	Educator creates and/explains concepts using diagrammatic representation	1	0	7	8	7	0
27	G	Educator emphasizes important aspects	0	3	0	3	3	0
33	G	Educator involved in direct teaching	25	12	28	65	28	12
34	G	Educator involved in physical demonstration	6	0	4	10	6	0
35	G	Educator issues direct instruction	18	6	6	30	18	6
36	G	Educator makes a comparison	4	5	3	12	5	3
37	G	Educator narrates role play	10	0	0	10	10	0
45	G	Educator provides correct information	4	7	11	22	11	4
48	G	Educator recaptures	15	13	5	33	15	5
49	G	Educator refers to information from learners' own environment	0	2	0	2	2	0
51	G	Educator relates a story (scenario)	2	8	0	10	8	0
52	G	Educator repeats himself/herself to ensure accuracy	0	1	0	1	1	0
54	G	Educator repeats responses to emphasize correct answer	9	6	15	30	15	6
58	G	Educator uses drama	9	0	0	9	9	0
62	G	Educator uses synonym	1	4	0	5	4	0
66	G	Resource bringing	3	28	3	34	28	3
VARIETY OF TEACHING METHODS TOTAL			107	95	82	284		
H. POSITIVE PERSONALITY TRAITS								
26	H	Educator displays positive body language	71	40	59	170	71	40
59	H	Educator uses humour	1	1	2	4	2	1
61	H	Educator uses non-verbal cuing	63	39	41	143	63	39
POSITIVE PERSONALITY TRAITS TOTAL			135	80	102	317		

The following table contains summary of the regrouped strategies in Table 4.7.

TABLE 4.7.1: Summary of regrouped strategies

GROUP	STRATEGIES	EDUCATOR			TOTAL	HIGHEST	LOWEST
		1	2	3			
A	CLASSROOM ATMOSPHERE AND ENVIRONMENT	124	87	106	317	124	87
B	POSITIVE FEEDBACK AND ACKNOWLEDGEMENT	16	43	32	91	43	16
C	LEARNER INTERACTION AND PARTICIPATION	67	111	33	211	111	33
D	LEARNER SUPPORT	13	9	5	27	13	5
E	QUESTIONING	31	45	19	95	45	19
F	CORRECTS LEARNERS	4	18	1	23	18	1
G	VARIETY OF TEACHING METHODS	107	95	82	284	107	82
H	POSITIVE PERSONALITY TRAITS	135	80	102	317	135	80

The information in Table 4.7.1 was used to determine the three highest frequencies for each educator. The three highest frequencies for each of the educators were rated and compared.

From the summary in Table 4.7.1, it is determined that the group with the highest total frequency for Educator 1 was "Positive Personality Traits" (Group H), for which 135 occurrences were recorded by the researcher. The high frequency rate is strongly influenced by Educator 1's "display of positive body language" and "use of non-verbal cuing" (Table 4.7) for the lesson that was video recorded. For Educator 2, the strategies within "Learner Interaction and Participation" (Group C) recorded the highest total frequency with a tally of 111. Within this group the educator focused primarily on allowing learner interaction, allowing learner participation and encouraging learner participation (Table 4.7). "Classroom Atmosphere and Environment" (Group A) emerged as the

group with the highest frequency of occurrence for Educator 3 (Table 4.7.1). A total of 106 instances were recorded, where the "use of teaching aids", "classroom management" and building a relationship with the learners featured strongly (Table 4.7.1).

The group with the second highest total frequency for Educator 1 is "Classroom Atmosphere and Environment", (Group A), which yielded a tally of 124 instances (Table 4.7.1). The strategies most frequently used by this educator were the "use of teaching aids", "rapport building", "circulating and assisting learners" and "offering individual support" to learners (Table 4.7). Educator 2 attempts to incorporate a Variety of Teaching Methods (Group G) displaying a total frequency of 95 instances which were observed during the video recording (Table 4.7.1). This tally is attributed to the instances where educator 2 employed the strategies of "Resource bringing", "recapturing" and "direct teaching" (Table 4.7). For Educator 3, a total frequency of 102 occurrences was recorded for "Positive Personality Traits" (Group H) (Table 4.7.1). This frequency rate was influenced by Educator 3's "display of positive body language" and "use of non-verbal cuing" (Table 4.7) for the lesson that was video recorded.

According to Table 4.7.1, Educator 1 and Educator 3 displayed a total of 107 and 82 instances respectively for utilising a "Variety of Teaching Methods" (Group G) as the third most frequently used group of teaching strategies. While Educator 1 focused on "direct teaching", "direct instruction" and "recapturing"; Educator 3 however, focused on "direct teaching", "repeating the responses to emphasize the correct answer"

and "providing correct information" during the lessons that were video recorded (Table 4.7). "Classroom Atmosphere and Environment" (Group A) emerged as the group with the third highest frequency of occurrence for Educator 2 (Table 4.7.1). A total of 87 instances were recorded, where the "rapport building", "classroom management" and "use of teaching aids" featured strongly (Table 4.7).

The next section of findings contains the comparison of the highest and lowest frequencies for each teaching strategy. The information in Table 4.7.1 was also used to determine the highest and lowest frequencies for each teaching strategy. The highest and lowest frequencies for each of the teaching strategies for the educators that emerged were compared and this is shown in Table 4.7.2 below.

TABLE 4.7.2: Frequency table

GROUP	STRATEGIES	EDUCATOR			TOTAL	HIGHEST	LOWEST
		1	2	3			
H	POSITIVE PERSONALITY TRAITS	135	80	102	317	135	80
A	CLASSROOM ATMOSPHERE AND ENVIRONMENT	124	87	106	317	124	87
C	LEARNER INTERACTION AND PARTICIPATION	67	111	33	211	111	33
G	VARIETY OF TEACHING METHODS	107	95	82	284	107	82
E	QUESTIONING	31	45	19	95	45	19
B	POSITIVE FEEDBACK AND ACKNOWLEDGEMENT	16	43	32	91	43	16
F	CORRECTS LEARNERS	4	18	1	23	18	1
D	LEARNER SUPPORT	13	9	5	27	13	5

From the information displayed in Table 4.7.1 and 4.7.2:

- It can be established that all the educators who were observed utilised teaching strategies that were recorded within all the groups.
- For Group H, Positive personality traits, Educator 1 displays the highest frequency with 135 instances recorded and Educator 2 displays the lowest frequency with 80 instances that were recorded.
- For Group A, Classroom atmosphere and environment, Educator 1 displays the highest frequency with 124 instances recorded. Educator 2 displays the lowest frequency with 87 instances recorded.
- For Group C, Learner interaction and participation, Educator 1 displays the highest frequency with 111 instances recorded. Educator 3 displays the lowest frequency with 33 instances recorded.
- For Group G, Variety of teaching methods, Educator 1 displays the highest frequency with 107 instances recorded. Educator 3 displays the lowest frequency with 82 instances recorded.
- For Group E, Questioning, Educator 2 displayed the highest frequency with 45 instances recorded. Educator 3 displays the lowest frequency with 19 instances recorded.
- For Group B, Positive feedback and acknowledgement, Educator 2 displays the highest frequency with 43 instances recorded and Educator 1 displays the lowest frequency with 16 instances recorded.

- For Group F, Corrects learners, Educator 2 displays the highest frequency with 18 instances recorded and Educator 3 displays the lowest frequency with 1 instance recorded.
- For Group D, Learner support, Educator 1 displays the highest frequency with 13 instances recorded and Educator 3 displays the lowest frequency with 5 instances recorded.

4.4 CONCLUSION

This chapter has presented the research findings from the data analysis of the classroom observations which were conducted with the three non-special educators in the Further Education and Training phase of formal education. The results were reported in four separate sections and the following was made clear:

1. None of the non-special educators who were observed had experience in teaching learners who are deaf/hearing impaired.
2. The non-special educators who were observed are aware of the fact that they lack the skills and training to cope with learners who are deaf/hearing impaired in the mainstream classroom.
3. The non-special educators, who were observed, are guided by the learners who are deaf/hearing impaired as to what assistance they require from the educators during lessons.

4. The non-special educators were actively involved in the mainstream classroom and utilised a combination of different teaching strategies to cope with the diverse needs of the learners, including the learners who are deaf/hearing impaired, in the classroom.

In the next chapter the main findings that are isolated above are discussed in light of the literature reviewed in Chapter 2.

CHAPTER 5

DISCUSSION OF RESULTS, CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter discusses the main findings isolated in chapter 4. In addition, the chapter arrives at a conclusion regarding how non-special educators mediate learning in mainstream classrooms with learners who are deaf/hearing impaired.

The educators were observed in their natural classroom environment in order to:

- (i) establish how mainstream non-special education teachers mediate learning to learners who are deaf/hearing impaired in mainstream Further Education and Training classrooms; and
- (ii) seek informed answers about what strategies and interventions are utilised by non-special education teachers in inclusive classrooms that feature specifically learners who are deaf/hearing impaired.

5.2 DISCUSSION OF RESULTS

The research topic focused on the teaching strategies that are employed by non-special subject educators who

teach learners who are deaf/hearing impaired in mainstream classrooms. The main findings that became apparent were that all the non-special educators employed teaching strategies that could be categorised in the following eight groups. The educators who were observed:

- (i) Create a classroom atmosphere and environment that encourage learning
- (ii) Provide positive feedback and acknowledgement
- (iii) Encourage learner interaction and participation
- (iv) Provide learner support
- (v) Use different styles of questioning
- (vi) Correct learners when necessary
- (vii) Use a variety of teaching methods
- (viii) Have positive personality traits

According to Vygotsky (1978) and Feuerstein et al. (1980), it is essential that the educators of young learners serve as mediators between the learner and the learning environment. These constructivist theorists emphasize the role of the adult in helping learners learn to solve cognitive and social problems. The strategy is to provide decreasing levels of support while placing higher demands as the learner progresses toward the goal of independent problem solving. Vygotsky refers to this part of the teaching/learning process as scaffolding (Allen and Schwartz, 2000:192). In this study educators

were observed to scaffold and mediate learning in varied ways as it will be discussed below.

5.2.1 Classroom atmosphere and environment

Creating a classroom environment that is conducive to learning is regarded a key strategy towards ensuring that learning takes place. The attractive and effective organization of the classroom can improve the way learners learn by creating an atmosphere which is conducive to motivation, achievement and effort (Griffiths et al., 2002).

In this study, *creating a positive classroom atmosphere and environment*, emerged as teaching strategies 18 (educator circulates and assists learners), 22 (educator creates a relaxed learning environment), 24 (educator creates opportunity for learner who is deaf/hearing impaired to contribute), 38 (educator offers individual support) and 65 (rapport building).

During the lessons that were observed, educators circulated to assist learners at their desks when the learners were involved with their individual and small group activities. While circulating in the classroom, the educators were also able to provide individual support to learners including the learner who is deaf/hearing impaired.

The findings reveal that the educators created an extremely relaxed classroom atmosphere. Social courtesies were exchanged between the educators and their learners before and after the lessons. In addition, it was also observed that educators participated in humorous exchanges with the learners. The three educators in this

study provided a safe, secure and supportive classroom environment where all the learners were prepared to participate in the lessons, take risks and learn from their own mistakes without being reprimanded or ridiculed (Conroy et al., 2009; Lomofsky, 1994). The inclusive classroom fosters acceptance, tolerance and caring in all learners. The educator has the responsibility of creating and maintaining a classroom atmosphere which nurtures and develops the confidence of a learner who is deaf/hearing impaired.

All the educators who were observed verbally introduced the lesson with a brief explanation and assisted learners to recall work from the previous year and/or previous lessons. During the lessons that were observed, the educators checked with individual learners to establish whether they understood all the explanations that had been provided by the educators. The relaxed classroom atmosphere and environment that prevailed during the lessons is highly attributable to the rapport between the educators and their learners. Educator 2 provided opportunities for the deaf/hearing impaired learner to contribute orally to the lesson by providing examples and extra information.

The learners who are deaf/hearing impaired were allowed to select their positions near the front of the classroom, where they were in close proximity to the educator (Deibel, 2007; Cawthon, 2001). In all three cases, the educators catered for the needs of the deaf/hearing impaired learners within the inclusive classroom environment. It is the task of the educator to manage and organise the classroom in order to create a flexible and relaxed environment where all the learners

who are present can benefit from a positive learning experience (see Appendix L).

5.2.2 Positive feedback and acknowledgement

Feedback is the information provided to learners by educators regarding their understanding or performance of academic or behavioural tasks (Conroy, et al., 2009). Educators should provide learners with feedback to allow learners to recognise accurately when they have been successful and when they have been unsuccessful. When learners become discouraged about their performances, it will be necessary for the educator to acknowledge and support their efforts to improve their level of performance (Conroy et al., 2009:21; Porter 2000:45). Effective educator feedback is a simple and powerful form of educator attention that can enhance learning, increase achievement and promote self-regulatory competence in learners with and without disabilities (Conroy, 2009:21).

Positive feedback and acknowledgement, emerged as teaching strategies 4 (educator accepts correct answer), 5 (educator acknowledges learners) and 41 (educator positively acknowledges learner's answer/contribution). During the lessons that were observed the educators engaged the learners by posing questions. The educators provided positive feedback and recognition to the learners in the form of praise and encouragement. The praise and encouragement offered by the educators motivated the learners to participate and contribute freely during the lessons.

All the educators who were observed used positive feedback and acknowledgement at varying degrees during the lessons that were observed. It was recorded that on

an occasion Educator 1 acknowledged a learner's correct response by saying "Perfect". A correct response by a learner was acknowledged by the Educator 2 saying "That's right" and later the educator verbally agreed with a response by another learner by saying "Sure". The educator provided feedback and followed up the feedback with further questions, providing the learners the opportunity to apply their knowledge and experience to further build their competence and confidence. This encouraged further participation and created a positive learning experience for the learners. Educator 3 acknowledged a correct response by a learner by saying "Correct" and positively acknowledged learner's question by saying "Good question". It is therefore obvious that the educator adopts the role as a mediator. The acknowledgement of learners' contributions to the lesson and the provision of positive and encouraging feedback enhance the learners' self-esteem and stimulate further learner participation (see Appendix L).

5.2.3 Learner interaction and participation

Within the constructive methodological paradigm, learner participation and interactions are regarded as key elements that determine the quantity and the quality of the learning and achievements (Zabel in Martin and Loomis, 2007:88). While interacting, learners can share, articulate and negotiate views that help them acquire additional perspectives (Driscoll, 2000) as quoted by Kale (2008). This view of learning suggests educators scaffold learners and steer the classroom discourse by providing them with opportunities to interact with each other (Chin, 2006) quoted by Kale (2008).

In this study, *learner interaction and participation*, emerged as teaching strategies 7 (educator allows learner interaction), 8 (educator allows learner participation), 29 (educator encourages learner participation) and 57 (educator solicits chorus responses).

All the educators who were observed opted to involve the learners in the process of recapturing what was covered in previous lessons. Instead of telling the learners what they had done, they linked the current lesson topic with what had been covered previously. In this way, the learners are scaffolded and the educator is able to encourage learners to actively participate in the learning-teaching process.

The learners in the class of Educator 1 actively participated in the "role play" and provided narrations and explanations as the "role play" progressed. In addition to the above, Educator 1 also encouraged the learners to participate by providing answers and deliberating and comparing their understanding of the concepts and lesson content. Educator 2 encouraged the learners to participate in the classroom discussions and allowed the learners to provide examples from their own frame of reference and from their own experience. In addition to the appropriate examples, the learners were allowed to provide explanations of their understanding and interpretation of concepts. In some cases the educator remained passive (where the educator did not initiate discussion) and allowed the learners to engage in background discussions with their peer-learners.

When the learners were provided with opportunities to interact with each other, the educators provided the

learners with the opportunity for small group discussions and scaffolding by their peer learners. Educator 2 encouraged the learners to provide as many responses as they were able to provide which he repeated and consolidated by encouraging learners to think beyond the answers they had provided.

Educator 3 allowed for questioning by learners. A group discussion followed when peer learners volunteered to assist the learner posing the question with providing the answer and the necessary explanations. In this instance the educator passively observed and allowed the exchange of information between the learners.

Educator 2 involved the learner who is deaf/hearing impaired in the classroom activities by getting the learner to take a turn to read. The educator also encouraged the learner who is deaf/hearing impaired to source appropriate information in the textbook.

All the educators who were observed used incomplete sentences by stopping mid-sentence to allow the learners to complete the sentence correctly. This resulted in the whole group of learners responding in unison.

In all of the instances discussed under learner interaction and participation, communication and explanations occurred between the learners. In this instance therefore, the learners were actively participating which makes this strategy learner-centred. The educators used various techniques to encourage the learners to participate in the lesson activities or engage in classroom discussion (see Appendix L).

5.2.4 Learner support

Research has shown that the support provided to learners should primarily be arranged to facilitate participation in learning activities (Hemmingsson et al., 2003). Learning support may have to take a special form, in order to accommodate particular learning needs. Some learners will be studying at a different level of difficulty and/or a different pace, and in the case of the learners who are deaf/hearing impaired, may require special materials. Retief (2006:90) cites Bunch (1987:1-15) who recommends that educators need to assist learners who are deaf/hearing impaired to become aware of their strengths to build their self-confidence.

Learner support, emerged as teaching strategies 6 (educator advises learners), 13 (educator cautions learners) and 60 (educator uses incomplete sentences).

During the lesson that was observed, Educator 1 engaged in a discussion with the learners who did not understand a concept that was explained by the educator during the lesson. Educator 3 encouraged and advised learners to complete their own glossary of all the subject terminology used in the lessons which would provide additional support and assist the learners as an extra source of reference.

Educator 1 indicated to the researcher that she provided the educator's lesson notes to the deaf/hearing impaired learner as an additional resource to offer individual learner support. Educator 2 on the other hand indicated that for some lessons, the lesson questions relating to the lesson topic, that the educator could possibly pose, were prepared beforehand and provided on a transparency.

The educator could refer to this transparency during the lesson. This strategy assisted with providing additional learning support, particularly for the learner who is deaf/hearing impaired. The assistance that was provided was arranged to facilitate academic learning within the classroom.

The microphone, an assistive hearing device, used by the learner with the cochlear implant, was passed around in class by Educator 1 and Educator 3 when groups were engaged in classroom discussions. This additional support allowed the learner who is deaf/hearing impaired to follow the oral group discussions in the classroom. Learners who are deaf/hearing impaired and who are using the auditory oral approach, demonstrate the ability to work independently but sometimes need scaffolded by educators or a more knowledgeable peer learner through the support they provide.

The three non-special subject educators work after school hours and during intervals to provide the learners with extra learning support, remedial lessons or extra lessons. Educator 1 indicated that the learner who is deaf/hearing impaired had to be provided with additional lesson notes and explanations in advance to introduce and explain new subject related terminology and abstract concepts. All learners who experienced barriers to learning, were invited to attend additional classes which were conducted by Educator 1 on Friday afternoons after school hours. Educator 1 cautions the learners to pay special attention during the lesson. In one instance the educator states, *"Now you have to be very careful!"* before posing a question.

As indicated earlier, all the educators who were observed used incomplete sentences by stopping mid-sentence to allow the learners to complete their sentences. Educators used this technique to set learners on the correct track when answering questions. By using this technique, educators are removing the scaffolds and reducing the support to the learner.

The learner support provided by the educator is an *intent to mediate* and suggests a mediator who consciously and deliberately attempts to influence the learner. It is apparent that the educators (mediators) who are offering their learners support are going beyond the goals of the interaction and clearly transcend the immediate goals planned for the lessons that were observed. The educator provides the learners with support by guiding, cautioning and advising learners during the lesson (see Appendix L).

5.2.5 Questioning

Questioning allows educators to check their learners' understanding of the lesson (Muijs and Reynolds, 2004:43). Educators can engage learners by using different questioning techniques. For example:

- Lower order questions which require the learners to recall answers that are factual.
- Higher order questions which involve more abstract, problem solving and reasoning.
- Leading questions are questions that are formulated to which only one logical answer can be given.

- Close ended questions are questions that demand factual information out of a possible range of answers from which the learners can only select one answer.
- Open ended questions are questions that are formulated to encourage the learners to express attitudes or opinions in their own words (Du Plooy, 2002:135 and 138).

Questions directed at the learners assisted the educator to:

- (i) establish whether the learners were able to follow the educators explanations through the various phases of the lesson;
- (ii) identify the learners in the class who were not able to follow the lesson content and the educators' explanations;
- (iii) actively involve the learners in the learning process;
- (iv) assist the educator to plan future lessons - decide whether topics needed to be retaught;
- (v) give the learners the opportunity to articulate their understanding of the lesson content;
- (vi) to decide at what level to pitch the lesson (Muijs and Reynolds, 2005:43).

In this study, *questioning techniques*, emerged as teaching strategies 12 (educator asks leading questions),

39 (educator poses a direct question), 40 (educator poses an indirect question) and 42 (educator probes learner).

This teaching strategy refers to the instances where the educators posed questions at the learners. All the participating educators posed questions to the learners in their classes. Through their questioning, the educators were able to elicit learner participation. The questions which the educators asked were posed in a variety of ways. In addition to the questioning, this category also refers to the answers which were provided by individual learners.

While Educator 1 and Educator 2 rely heavily on questioning as a teaching strategy, Educator 2 however, afforded the learners several opportunities to provide the correct answer during questioning. The learners were also allowed to discuss the questions and the possible answers amongst themselves and debate the correctness of certain answers. By employing this strategy, the educator was able to establish whether the learners had an idea of the lesson content before correcting inaccurate answers or by providing the correct answers. Educator 1 on the other hand, posed a combination of leading question and closed-ended questions. Both the educators used leading questions when they did not receive the answer they required from the direct question in order to probe learners and to elicit the correct answer. Educator 1 often used incomplete sentences and definitions as part of her questioning technique. Learners were therefore expected to complete the sentences and definitions by providing the correct words that were omitted to complete textbook quotes. Educator 2 often posed questions that required "Yes/No" answers.

During Educator 3's lesson that was observed, the educator directed closed-ended and lower order questions at the learners. These questions required the learners to source factual information and provide answers to the questions as it appeared in the textbook. Some of the questions that were posed by the educators were "closed" questions and very simple vocabulary and language was used. Learners therefore did not need to think analytically to answer and provide responses to these questions. The educator uses various questioning techniques in order to engage the learner and encourage learner participation and learner contributions (see Appendix L). Educator 3 prepared the sequence of questions beforehand on transparencies, which were displayed on the screen. The questions were revealed as the lesson progressed. This strategy allowed the deaf/hearing impaired learner to follow the order of the questioning.

5.2.6 Educator corrects learners

Educators should recognise when learners have been unsuccessful (Porter, 2000:245). In addition, Conroy states that this type of feedback also known as corrective feedback can be beneficial in the classroom. Error correction is provided to a learner following an academic or behavioural error with the purpose of teaching the learner the correct response. Corrective feedback by the educator and/or peer learner ensures that the learner is aware of his/her error, provides him/her with the correct response and gives him/her further practice in exhibiting the correct response (Conroy et al., 2009:21 and 22). According to Mosito-Matheleli (1999), in the process of correcting, the educator

assumes the double role of both facilitating knowledge ... and through teaching by repeating forms.

Educator corrects learners, emerged as teaching strategies 16 (educator checks learner's reading for accuracy) and 50 (educator rejects incorrect answers). This teaching strategy refers to the instances where the educator corrects the learners by providing the correct answers to the questions that were posed by the educator or learners.

During the lesson, Educator 2 followed the learner's reading from the textbook and corrected the learner's pronunciation when necessary. The educator also provided and repeated the correct answers when incorrect answers were provided by the learners during questioning by the educator. Educator 2 used this strategy most effectively by combining it with the other teaching strategies that were used.

Educator 1 and Educator 3 used this teaching strategy as well, but to a lesser degree. In the case of Educator 3 it was mainly to check and correct the learners' vocabulary relating to the subject content.

In the classroom situation, it is the educators' task to check the learners' responses for accuracy and to provide the learners with the correct explanations and answers when necessary (see Appendix L).

5.2.7 Variety of teaching methods

For this teaching strategy, the educator utilises and varies the teaching methods to assist the learners to understand what is being taught. A variety of teaching

methods positively influences learner achievement (Brophy and Good, 1986). Variety in instruction is a key aspect of maintaining learners' motivation and hence their engagement in learning (Killen, 2004). By using variety, the educator is therefore able to cater for the diverse needs and the different learning styles of the learners within the inclusive classroom (Swart et al., 2002:187, Gasant, 2002:73; 74).

Learners who prefer verbal instructions, favour a learning style which is highly compatible with the traditional lecture-based teaching method. In order to reach visual learners, who learn better through visual images, educators are encouraged to use figures, tables, pictures, maps, video clips, etc., whenever appropriate (De Vita, 2001). Learners who are deaf/hearing impaired prefer a visual style of instruction.

In this study, *variety of teaching methods*, emerged as teaching strategies 33 (educator involved in direct teaching), 35 (educator issued direct instruction), 37 (educator narrates role play), 45 (educator provides correct information, 48 (educator recaptures), 54 (educator repeats responses to emphasise correct answer) and 66 (resource bringing).

During the classroom observations it was observed that the three educators were all engaged in explicit teaching and demonstrations. The three teaching methods most commonly used by the three educators were "Direct teaching", "Recapturing" and "Resource bringing". The latter is a strategy where the educators provided the learners with extra examples that were drawn from the educator's own familiar experience. These examples could

possibly have been within the learners' own frame of reference. The explanations and activities were discussed and allowed the learners to use their knowledge in a different setting.

Educator 2 allowed the learners to openly discuss matters regarding the lesson topic which were connected to their familiar external experiences. Learners felt free to talk about and make different contributions in this semi-controlled environment.

"Direct teaching" is the main strategy utilised by Educator 3. A difficulty detected by the researcher is that the educator is vocal and actively involved in teaching while the learners are passively listening to the educators' instructions. As a result of this strategy, the learning-teaching process remains to be focused mainly on the educator's direct involvement as opposed to the learners being actively involved. The educator is actively teaching and therefore provides no opportunity for the learners to participate or contribute orally, making this strategy educator-centred. Therefore the learners in this instance are passive observers in the teaching-learning process. In one instance, educator 1 asks learners to indicate by raising a hand to indicate who had an understanding of the concept being discussed.

During the lessons that were observed Educator 1 engaged the learners in a "role play" that was suggested by a learner. Educator 1 is the only educator who used "role play" in this study. A learner provided a narration to the rest of the class to explain the procedure taking place by the "actors". The educator passively observed the "role play" but interjected and corrected learners

when necessary. Therefore communication and explanation occurred between the role-players, the peer-learners and educator. In this instance, the learners were actively participating which makes this strategy learner-centred. Role plays are often a good way to help learners to feel more personally engaged with subject concepts (Centre for Teaching and Learning, 1997:26). On the other hand, Educator 2 often used real life cases in the form of "case studies" and providing scenarios to illustrate examples of situations. In some cases the information supplied in the "case studies" and scenarios were used by the learners to provide an analysis of the "case studies" and scenarios". This means that the learners were actively involved in the classroom activity and displayed their ability to analyse and think critically.

Allen and Schwartz (2000) refer to this strategy as Milieu teaching. Milieu (incidental) teaching provides a strategy for making the best use of teachable moments. The distinguishing feature of such a teaching episode is that it is learner-initiated. The learner approaches the educator asking for help, materials, or information. Because the contact is initiated by the learner, the educator knows the learner is interested and therefore likely to be receptive to a brief learning activity.

Educator 1 and Educator 3 encouraged learners to work in small groups to answer task related questions. The reasons are to:

- (i) answer questions based on the lesson content and
- (ii) allow learners to interact with the lesson content that was discussed.

The groups of learners were a manageable size and consisted of two to four learners. Educator 3 did not rearrange learners in groups according to any noticeable criteria. The learners were seated in groups at the commencement of the lesson. The learners were allowed to participate and discuss in pairs and groups according to their seating arrangements.

Co-operative learning and peer tutoring featured strongly in Educator 1's lesson that was observed. Educator 1 allowed the teaching strategies that were employed to be guided by the responses and learner contributions. It became evident during the classroom observation and the subsequent analysis of the video-recordings that all activities were not planned. In one case it was suggested by a learner to dramatise and use "role play" during the lesson to assist with the explanation of a concept. This educator organised the learners based on their knowledge needed for the classroom activity. Learners were very willing to assist learners in other groups who were experiencing difficulties. Learners also called on the educator when they found that they needed extra assistance.

In the case of Educator 3, co-operative activities were used to a lesser degree. There was a clear difference in the teaching strategies employed by all the educators regarding how learning and teaching was facilitated so that learners could engage and participate. The educator could move between the groups and give individual attention to the groups and individual learners when they needed assistance.

Co-operative activities were utilized by Educator 2 during the lesson that was observed. It became obvious that this teaching strategy was not planned by this educator. Educator 2 established that some learners were not in possession of the textbooks and learning material required for the lesson. The educator grouped learners according to the availability of textbooks and learning material available in the classroom at the time. Thus this strategy was therefore merely a solution to the problem at hand.

The non-special subject educators modified their teaching strategies and classroom management in acknowledgement of the learners who are deaf-hearing impaired. In some cases, the learners who are deaf/hearing impaired were provided with learning support material. In research conducted, it was found that educators react differently in their classrooms because of their different strengths (Manouchehri and Goodman, 2000). Educators may adopt the same approach and use the same teaching strategies in their classrooms, but the dynamics will be different in every classroom because of their different teaching strengths.

To accommodate for the diverse learning styles and needs within the classroom, it is the task of the educator to vary the teaching methods during lessons (see Appendix L).

5.2.8 Positive personality traits

The positive working habits and personality traits of the educators are characteristics that are required for creating and maintaining a classroom atmosphere which nurtures and develops the confidence of a learner who is

deaf/hearing impaired. Educators' personality traits are reflected in their classroom instruction - especially in their selection of various instructional strategies, the materials they use and their classroom management techniques (Henson and Chambers, 2002).

Positive personality traits, emerged as teaching strategies 26 (educator displays positive body language), 59 (educator uses humour) and 61 (educator uses non-verbal cuing).

This teaching strategy discusses the positive personality traits that were displayed by the educators who were observed.

Instances when positive body language and non-verbal cuing were displayed by the educator, were recorded by the researcher. All the educators used informal gesticulations during communication and did not utilise South African Sign Language (SASL). These informal gesticulations during communication include gestures, and body movements that accompany speech and are used naturally by most speakers (Allen and Schwartz, 2000:90).

It was noted that Educator 1 and Educator 2 used gesticulations and gestures at a slower pace and exaggerated body movements while explaining to learners and being involved in direct teaching. These educators also used different facial expressions and altered the tone of their voices when they were trying to explain and express the meaning of a new word or emphasised aspects of their explanations. Educator 1 held up her hand and used her fingers to break down and count down the points

of the concepts explaining (1st, 2nd and 3rd) - i.e. points out order of various components.

In addition to the above, it was observed that educators participated in humorous exchanges with the learners which were related to the ambiguity of subject related terminology and words.

A distinguishing quality demonstrated by Educator 2 was the feature of maintaining eye-contact and remaining focused on learners while they were making their oral contribution to the lesson.

In the teaching situation, the educator displays positive characteristics and personality traits through, amongst others, the use of positive body language, the use of humour and non-verbal cuing (see Appendix L).

5.3 CONCLUSION

In this section the conclusions are arrived at relating to the research question as stated in paragraph 1.4:

What kind of strategies are utilised by non-special education subject teachers in the mainstream classroom to mediate learning to learners who are deaf/hearing impaired?

5.3.1 Concluding Remarks

It appears that in the context of mainstream schools and Further Education and Training Colleges, non-special subject educators are implementing and utilising various teaching strategies to include learners who are

deaf/hearing impaired in their classrooms practices. In the mainstream classrooms that were observed, the non-special subject educators selected and utilised their own combination of teaching strategies, with which they felt confident and comfortable in order to mediate learning to their learners. These teaching strategies were therefore the educators' personal preferences and mirrored the educators' strengths and personality traits.

It is interesting to notice that the non-special educators who participated in this study are concerned about:

- (i) the fact that they lack the skills and training to cope with a learner who is deaf/hearing impaired in the mainstream classroom;
- (ii) their limited skills in applying different teaching strategies and methodologies.

Yet, it is interesting to note that these non-special subject educators are using their own initiative to find creative ways in addition to consulting with their learners who are deaf/hearing to establish how best to provide for the learner's special needs. The non-special subject educators are willing to engage in experimentation and adapting their teaching strategies and differentiated instruction. The strategies they are utilising in their inclusive classrooms are no different from the teaching strategies that are being advocated by education theorists and provided in literature.

5.3.2 Limitations of the study

The following were identified as the main limitations of the study:

- The relatively small sample used in this study can be regarded as a limitation. This sample is not representative of **all** learners who are deaf/hearing impaired in mainstream Secondary Schools and Further Education and Training Colleges since the data was limited to only three educators and two learners in educational institutions in the southern suburbs of Cape Town. The context of the Secondary Schools and Further Education and Training Colleges in the urban areas of Cape Town did not reflect the context of all Secondary Schools and all Further Education and Training Colleges in both urban and rural areas of South Africa. It therefore meant that the results could not be generalised to the larger population of learners who are deaf/hearing impaired.
- Classroom observations were conducted over a short period only. This was due to my work commitments as well as the constraints placed by the participating schools. Only two classroom visits could be arranged per educator.
- It was challenging to find many educators who were willing to participate in the research. After locating learners who are deaf/hearing impaired, contact was established with principals of the educational institutions. After the initial commitment to participate in the research, a principal avoided any further communication with the researcher. In some cases where educators were

located, some were not willing to be observed and/or recorded on video.

- The study was conducted at two well resourced educational institutions in the southern suburbs of Cape Town and this sample may not be generalisable in all schools and to all educators in Cape Town schools or all schools in the Western Cape or South Africa.
- Camera movement was restricted because of the size, shape (long, narrow classroom) and layout of desks and possible disruption to flow of lesson. The aim was to capture video material in an unobtrusive manner. Sometimes classroom situations and interactions between learners were difficult to capture on video.
- The data for this study has been analysed and interpreted in terms of the eight groups. Some of the data which was recorded fell outside of these groups and was thus regarded as irrelevant and extraneous. Because of this, some interesting data might have been ignored to the detriment of an even thicker description.

5.2.3 Further Research

The thoughts and opinions of the participating learners who are deaf/hearing impaired are not considered in this study. It will be valuable to establish from such learners, whether their learning needs are met with the strategies that are employed by the non-special subject educators in the inclusive classrooms.

I would therefore recommend that further research on opinions and perceptions of deaf/hearing impaired learners in mainstream classrooms be explored.

There has never been an in-depth study conducted to establish what strategies are utilised by non-special educators of the learners who are deaf/hearing impaired and how these educators actually communicate to provide instruction when working in the context of South African mainstream education. Therefore, despite the limitations outlined above, this study could be a valuable resource to those who are interested in the inclusion of learners who are deaf/hearing impaired in mainstream classrooms.

REFERENCES

Aitken, S., Buultjens, M., Clark, C., Eyre, J.T. and Pease, L. 2000. *Teaching Children who are Deafblind: Contact, Communication and Learning*. London: David Fulton Publishers.

Alban-Metcalf, J. 2001. *Managing attention deficit/hyperactivity disorder in the inclusive classroom: practical strategies for teachers*. London: David Fulton.

Allen, K.E. and Schwartz, I.S. 2000. *The Exceptional Child: Inclusion in Early Childhood Education*. Fourth edition. New York: Delmar.

Ameen, N. 2008. *The needs of parents of children with hearing impairments in a mainstream school*. Unpublished Dissertation for the completion for the Degree of Master of Education. Johannesburg: University of Johannesburg.

Angelides, P. and Aravi, C. 2007. The development of inclusive practices as a result of the process of integrating deaf/hard of hearing students. *European Journal of Special Needs Education*, 22(1):63-74.

Arnott, L. 2004. *The cognitive and social influences of computer technology in profoundly deaf young children*. Unpublished Dissertation for the completion for the Degree of Master of Education. Cape Town: Cape Peninsula University of Technology.

Avramidis, E. and Norwich, B. 2002. Teachers' attitudes towards integration/inclusion: a review of literature. *European Journal of Special Needs Education*, 17(2):129-147.

Barber, S. 2007. *Who Are the "Deaf and Hard of Hearing"*. Hearing Loss Association of North Carolina
http://www.nchearingloss.org/articla_demographics.htm
 [11 November 2010]

Barry, K. and King, L. 1998. *Beginning Teaching and Beyond*. Third Edition. New South Wales: Social Science.

Bauer, A.M. and Shea, T.M. 1999. *Inclusion 101: How to teach all learners*. London: Paul H. Brookes.

- Bennett, E. and Lynas, W. 2001. The provision of local mainstream education for young pupils who have cochlear implants. *Deafness and Education International*, 3(1):1-14.
- Berg, B.L. 1995. *Qualitative Research Methods for the Social Sciences*. London: Allyn and Bacon.
- Berk, L.E. and Winsler, A. 1995. *Scaffolding children's learning: Vygotsky and early childhood education*. University of California: National Association for the Education of Young Children.
- Booker, G., Bond, D., Sparrow, L. and Swan, P. 2004. *Teaching Primary Mathematics*. Third Edition. Australia: Pearson Education.
- Borthick, A.F., Jones, D.R., and Wakai, S. 1996. Designing learning experiences within faculty facilitators' zones of proximal development (ZPD): Enabling collaborative learning on-site and online. *Journal of Information Systems*, 17(1):107-134.
- Brophy, J. 2006. History of research in classroom management. In C.M. Evertson and C.S. Weinstein (eds.). *Handbook of Classroom Management: research practices and contemporary issues*. New Jersey: Lawrence Earlbaum.
- Brophy J. and Good, T. 1986. Teacher behaviour and student achievement. In M.C. Wittrock (eds.). *Handbook of research on teaching*. Third edition. New York: McMillan.
- Brownlee, J. and Carrington, S. 2000. Opportunities for authentic experience and reflection: A teaching programme designed to change attitudes towards disability for pre-service teachers. *Support for Learning*, 15(3):99-105.
- Bruce, C. 1994. Supervising literature reviews. In Zuber-Skerritt, O. and Ryan, Y. (eds.). *Quality in postgraduate education*. London: Kogan Page.
- Bunch, G.O. 1987. *The Curriculum and the Hearing-Impaired Student Theoretical and Practical Considerations*. Boston: College Hill Press.
- Carreiro King, I. 2003. Examining middle school inclusion classrooms through the lens of learner-centered principles. *Theory into Practice*, 42(2):1-9.
- Cawthon, S.W. 2001. Teaching Strategies in Inclusive Classrooms With Deaf Students. *Journal of Deaf Studies and Deaf Education*, 6(3):212-225.

Center for Teaching and Learning. 1997. *Teaching for Inclusion: Diversity in the College Classroom*. University of North Carolina at Chapel Hill.

Chang, K., Chen, I., and Sung, Y. 2002. The effect of concept mapping to enhance text comprehension and summarization. *The Journal of Experimental Education*, 71(1):5-23.

Chin, C. 2006. Classroom interaction in science: Teacher questioning and feedback to students' responses. *International Journal of Science Education*, 28(11):1315-1346.

Chisholm, L. 2004. *The Quality of Primary Education in South Africa. Background Paper. Prepared for UNESCO Education for All Global Monitoring Report*.

Cohen, L. and Manion, L. 1994. *Research methods in education*. Fourth edition. London: Routledge.

Cohen, L., Manion, L. and Morrison, K. 2000. *Research methods in education*. London: Routledge.

Conroy, M.A., Sutherland, K.S., Snyder, A. Al-Hendawi, M. and Vo, A. 2009. Creating a Positive Classroom Atmosphere: Teachers' Use of Effective Praise and Feedback. *Beyond Behavior*, 18(2):18-26.

Craig, A.P. 1985. Mothers and Children: An Analysis of Change. Unpublished PhD dissertation. Durban: University of Natal.

Craig, A.P. 1988. On the method of analysing human transactions recorded on video tape. *In South African Journal of Psychology*, 18 (3):96-103.

De Vita, G. 2001. Learning Styles, Cultures and Inclusive Instruction in the Multicultural Classroom: A Business and Management Perspective. *Innovations in Education and Teaching International*. UK: Oxford Brookes University, UK <http://www.tandf.co.uk/journals>

[9 August 2010]

Deibel, K. 2007. Studying our inclusive practices: course experiences of students with disabilities. *Proceedings of the 12th annual SIGCSE conference on Innovation and technology in computer science education*, June 25-27, Dundee, Scotland.

Denscombe, M. 1998. *The good research guide for a small-scale social research project*. Buckingham: Open University Press.

Denscombe, M. 2003. *The good research guide for small-scale social research projects*. Maidenhead/Philadelphia: Open University Press.

Denzin, N.K. and Lincoln, Y.S. (eds.). 1994. *Handbook of Qualitative Research*. Thousand Oaks: Sage.

Department of Education. 2001. *Education White Paper 6, Special Needs Education, Building an Inclusive Education and Training System*. Pretoria.

Department of Education. 2002. *Creation of educator posts in a Provincial Department of Education*. G.N. 1451 of 2002 published in Government Gazette number 24077 Dated: 15 November 2002. Pretoria.

Department of Education. 2003. *Education Labour Relations Council: policy handbook for educators*. Pretoria: Universal.

Dixon, P. 1995: Encouraging participation in a middle school classroom, In: Spiegel, S. *Perspectives from Teachers' Classrooms. Action research*. Science F.E.A.T. (Science for Early Adolescence Teachers).
http://www.eric.ed.gov/ERICDOCS/data/ericdocs2sql/content_storage_01/0000019b/80/14/db/03.pdf.
 [29th February 2008]

Donald, D., Lazarus, S. and Lolwana, P., 2002. *Educational psychology in social context*. Second edition. South Africa: Oxford University.

Driscoll, M.P. 2000. *Psychology of learning for instruction*. Needham Heights, Massachusetts: Allyn and Bacon.

Du Plooy, G.M. 2002. *Communication Research: Techniques, methods and applications*. Cape Town: Juta.

Duffy, T.M., Dueber, B., and Hawley, C.L. 1998. Critical thinking in a distributed environment: A Pedagogical base

for the design of conferencing systems. In C.J. Bonk, and K.S. King (eds.), *Electronic collaborators; Learner-centred technologies for literacy, apprenticeship, and discourse* (51-78). Mahwah, NJ, US: Lawrence Erlbaum.

Emmer, E.T. and Stough, L.M. 2001. Classroom Management: a critical part of Educational Psychology, with implications for teacher education. *Educational Psychologist*, 1 36(2):1-12.

Engelbrecht, P., Green, L., Naicker, S. and Engelbrecht, L. 1999. *Inclusive Education in Action in South Africa*. Pretoria: Van Schaik.

Engelbrecht, P., Swart, E., Eloff, I. and Forlin, C. 2000. *Identifying Stressors for South African Teachers In the Implementation of Inclusive education*. http://www.isec2000.org.uk/abstracts/papers_e/eloff_1.htm [31 July 2006]

Feuerstein, R. 1980. *Instrumental enrichment: An intervention program for cognitive modifiability*. Baltimore: University Park.

Feuerstein, R. and Feuerstein, S. 1991. *Mediated Learning Experience: A Theoretical Review*. In Feuerstein, R, Klein, P.S. and Tannenbaum, A *Mediated Learning Experience*. London: Freund.

Feuerstein, R., Rand, Y., Hoffman, M. and Miller, R. 1980. *Instumental Enrichment: Redevelopment of Cognitive Functions of Retarded Performers*. Baltimore, MD: University Park.

Fink, D.L. 2003. *Creating significant learning experiences: An Integrated Approach to Designing College Courses*. San Francisco: Jossey-Bass

Freiberg, H.J. and Lamb, S.M. 2009. Dimensions of Person-Centred Classroom Management. *Theory Into Practice*. 48:99-105. College of Education and Human Ecology, The Ohio State University. Routledge Taylor and Francis.

- Gais, B. 2005. *Assessing characteristics of teacher and student actions during instructional talks in primary science classrooms by means of video-analysis*. London: Taylor and Francis.
- Gasant, L. 2002. *An Assistance Programme for the Learning Disabled Child in the Secondary School*. Unpublished Master of Education Dissertation - with Specialisation in Guidance Counselling. Pretoria: University of South Africa.
- Gindis, B. 1999. Vygotsky's vision: Reshaping the practice of special education for the 21st century. *Remedial and Special Education* 20(6):333-340.
- Griesel, M.J. and Mellet, S.M. 1985. *EDU 202-Q1 Empirical Education*. Pretoria: UNISA.
- Griffiths, J., Podirsky, M., Deakin, S. and Maxwell, S. 2002. *Classroom Layout*.
<http://ehlt.flinders.edu.au/education/DLT/2002/environs/suyin/overview/html>.
[14 April 2006]
- Grinnell, R.N. 1988. *Social Work Research and Evaluation*. Illinois: F.E. Peacock.
- Hamel, J., Dufour, S. and Fortin, D. 1993. *Case Study Methods: Qualitative Research Methods*. California: Sage.
- Hartman, H. 2002. *Scaffolding and Cooperative Learning. Human Learning and Instruction*. New York: City College of City University of New York.
- Hemmingsson, H., Borell, L. and Gustavsson, A. 2003. Participation in school: School assistance creating opportunities and obstacles for pupils with disabilities. *OTJR- Occupation, Participation and Health*, 23(3):88-98.
- Henning, E., Van Rensburg, W. and Smit, B. 2004. *Finding Your Way In Qualitative Research*. Pretoria: Van Schaik.
- Henson, R. and Chambers, S. 2002. Personality type as a predictor of teaching efficacy and classroom control beliefs in emergency certification teachers. *Paper presented at the Annual Meeting of the Southwest Educational Research Association, 14-16 February*. Austin, Texas.

- Hitchcock, G. and Hughes, D. 1995. *Research and the teacher. A qualitative introduction to school-based research*. Second edition. London: Routledge.
- Hopkins, D. 2002. *A Teacher's Guide to classroom research*. Philadelphia: Open University Press.
- Hyde, M. and Power, D. 2004. Inclusion of deaf students: An examination of definitions of inclusion in relation to findings of a recent Australian study of deaf students in regular classes. *Deafness and Education International*. 6(2):82-99
- Janney, R.E. and Snell, M.E. 2006. Modifying Schoolwork in Inclusive Classrooms. *Theory Into Practice*, 45(3):215-223.
- Johnson, B and Christensen, L.B. 2004. *Educational Research: quantitative, qualitative and mixed approaches*. Denver: Allyn and Bacon.
- Kale, U. 2008. Levels of interaction and proximity: Content analysis of video-based classroom cases. *The Internet and Higher Education*, 11: 119-128.
- Karlen, M., and Benya, J. 2004. *Lighting design basics*. New York: Wiley.
- Keeves, J.P., 1988. *Educational Research, Methodology and Measurement: An international handbook*. New York: Pergamon.
- Kelman, C.A., and Branco, A.U. 2009. (Meta)Communication Strategies in Inclusive Classes for Deaf Students. *American Annals of the Deaf*, 154(4):371-381.
- Killen, R. 2000. *Teaching Strategies for Outcomes-based Education*. Cape Town: Juta.
- Killen, R. 2004. *Teaching Strategies for Outcomes-based Education*. Cape Town: Juta.
- Knight, B.A. 1999. Towards Inclusion of Students with Special Educational Needs. *Support for learning*, 14(1):3-7.
- Kruger, A.G. and Steinman, C.F. 2003. The organisational climate and culture of schools. In van Deventer, I. and Kruger, A.G. (eds.). *An educator's guide to school management skills*. Pretoria: Van Schaik.

- Kumar, R. 2005. *Research methodology: A step-by-step guide for beginners*. Second edition. London: Sage.
- Landsberg, E., Kruger, D., Nel, N. 2005. *Addressing Barriers to Learning*. Cape Town: Van Schaik.
- Lang, H.G. 2002. *Higher Education for Deaf Students: Research Priorities in the New Millennium*. New York: Oxford University Press.
- Lindsay, J. 2004. *What The Data Really Show: Direct Instruction Really Works!*
<http://www.jefflindsay.com/EducData.shtml>.
[8 July 2009]
- Lockwood, R. 2003. *Post-Apartheid Inclusive Education in South Africa*.
<http://www.cec-ohio.org>.
[02 January 2007]
- Lomofsky, L. 1994. *The effect of Instrumental Enrichment, a thinking skills programme, on the cognitive abilities and attitudes of pre-service teachers in a college in the Cape*. Unpublished Master of Philosophy Dissertation. Cape Town: University of Cape Town.
- Luckner, J. and Denzin, P. 1998. Adaptations for students who are deaf and heard of hearing. *Perspectives in Deafness and Education*, 17(1).
<http://clerccenter.gallaudet.edu/Products/Persepectives/sep-oct98>.
[31 July 2009]
- Manouchehri, A. and Goodman, T. 2000. Implementing Mathematics Reform: The Challenge Within. *Educational Studies in Mathematics*, 42:1-34.
- Marsh, C. 2000. *Handbook for Beginning Teachers*. Second Edition. Australia: Pearson Education.
- Marshall, J., Ralph, S. and Palmer, S. 2002. "I wasn't trained to work with them": mainstream teachers' attitudes to children with speech and language difficulties. *International Journal of Inclusive Education*, 6(3): 199-215.
- Martin, D.J. and Loomis, K.S. 2007. *Building Teachers: A Constructivist Approach to Introducing Education*. Belmont, CA: Tomson Wadsworth

- Mason, J. 2002. *Qualitative Researching*. Second edition. London: Sage.
- Mathie, V. 2004. *Classroom Education. Lecture 29.3.04*. University of Wollongong.
- Matsumara, L.C., Slater, S.C. and Crosson, A. 2008. Classroom Climate, Rigorous Instruction and Curriculum, and Students' Interactions in Urban Middle Schools. *The Elementary School Journal*, 108(4):293-312
- Maykut, P. and Morehouse, R. 1994. *Beginning Qualitative Research: A Philosophic and Practical Guide*. London: The Falmer Press.
- McBurney, D.H. 1994. *Research Methods*. Third edition. California: Brooks and Cole.
- McMillan, J.H. and Schumacher, S. 2001. *Research and Education*. Third Edition. New York: Harper Collins.
- McMillan, J.H. and Schumacher, S. 2001. *Research and Education: A Conceptual Introduction*. Fifth edition. New York: Longman.
- Miles, M. and Huberman, A. 1994. *Qualitative Data Analysis*. London: Sage.
- Morgans, H. 2001. *South African Sign Language and European Influences. Paper presented at the International Conference on European languages*. Johannesburg.
- Mosito, C.P. 2005. *Cognitive change in out of school learners in a Western Cape intervention programme*. Unpublished Doctoral Dissertation. Cape Town: University of Cape Town.
- Mosito-Matheleli, C.P. 1999. *An exploration of the learning - teaching of English as a second language by non-native speakers*. Unpublished Dissertation for the completion for the Degree of Master of Education specialising in Education support. Cape Town: University of Cape Town.
- Muijs, D. and Reynolds, D. 2005. *Effective Teaching Evidence and Practice*. Second edition. London: Sage.
- Murray, R. 2006. *How to Write a Thesis*. Second edition. New York: Open University.

Muthukrishna, N. 2000. *Transforming the System: The Development of Sustainable Inclusive Education Policy and Practice in South Africa*.

<http://www.isec2000.org.uk/abstracts/keynotes/muthukrishna.htm>

[31 March 2006]

Naicker, S. 1999. Inclusive education in South Africa. In Engelbrecht, P., Green, L., Naicker, S. and Engelbrecht, L. (eds). *Inclusive education in action in South Africa*. Pretoria: Van Schaik.

Naiker, V.S. 2008. *The use of digital video conferencing to support teaching and learning of deaf learners*. Unpublished Dissertation for the completion for the Degree of Master of Education. Johannesburg: University of Johannesburg.

National Institute on Deafness and Other Communication Disorders. 2007. *Hearing Aids*.

www.nidcd.nih.gov/health/hearing/hearindaid.asp

[9 November 2010]

National Institute on Deafness and Other Communication Disorders. 2007. *Cochlear Implants*.

www.nidcd.nih.gov/health/hearing/coch.asp

[9 November 2010]

Nelson, P.B. and Soli, S. 2000. Acoustical barriers to learning: Children at risk in every classroom. *Language, Speech and Hearing Services in Schools*, 31(4):356-361.

Neuman, W.L. 2000. *Social research methods. Qualitative and quantitative methods*. Boston: Allyn and Bacon.

Neuman, W.L. 2006. *Social Research Methods: Qualitative & quantitative approaches*. Sixth edition. Boston: Pearson, Allyn and Bacon.

O'haulon, C. 2003. *Educational Inclusion as Action Research: an Interpretive Discourse*. London: Open University Press.

Oliver-Hoyo, M. and Allen, D. 2006. The Use of Triangulation Methods in Qualitative Educational Research. *Journal of College Science Teaching*, 35(4):42-47.

Olson, J. and Platt, J. 2000. *The Instructional Cycle. Teaching Children and Adolescents with Special Needs*. Upper Saddle River, NJ: Prentice-Hall.

- Page, R.M. and Page T.S. 2010. *Promoting Health and Emotional Well-being in Your Classroom*. Fifth edition. London: Jones and Bartlett.
- Peters, S. 2002. Inclusive education in accelerated and professional development schools: a case based study of two school reform efforts in USA. *International Journal of Inclusive Education*, 6(4):287-308.
- Porter, L. 2000. *Behaviour in Schools: Theory and Practice for Teachers*. United Kingdom: Open University.
- Pottas, L. 2005. *Inclusive Education in South Africa: The Challenges Posed to the Teacher of the Child with a Hearing Loss*. Unpublished Doctoral Dissertation. Pretoria: University of Pretoria.
- Queensland Studies Authority. 2007. *Hearing impairment*. Brisbane: Queensland.
- Raymond, E. 2000. Cognitive Characteristics. *Learners with Mild Disabilities*. Needham Heights, MA: Allyn and Bacon, A Pearson Education Company.
- Reilly, C. and Khanh, N.C. 2004. *Inclusive Education For Hearing-Impaired and Deaf children in Vietnam*. U.S. Agency for International Development (AID) Evaluation Report. Vietnam: Pearl S. Buck Foundation.
- Retief, W.F. 2006. *Addressing the Development of Full-Service Schools to include Learners who are Deaf, using the Auditory Oral Approach*. Unpublished Master of Education Dissertation. Pretoria: University of South Africa.
- Reyer, T. 2005. *Qualitative video-analysis applied to classroom studies - A first steps workshop*. In Fischer (eds.). *Developing standards in research on Science Education*, 39-45. London: Taylor and Francis.
- Ritchie, J. and Lewis, J. 2003. *Qualitative research practice. A guide for Social Science Students and Researchers*. London: Sage.
- Ross, M., Brackett, D. and Maxon, A.B. 1991. *Assessment and Management of Mainstreamed Hearing-Impaired Children. Principles and practices*. Texas: Pro-Ed.

- Sands, D.J., Kozleski, E.B. and French, N.K. 2000. *Inclusive education for the 21st century*. Belmont: Wadsworth.
- Sari, H. 2007. The Influence of In-service Teacher Training (INSET) Programme on Attitudes towards Inclusion by Regular Classroom Teachers Who Teach Deaf Students in Primary Schools in Turkey. *Deafness & Education International*, 9(3):131-146.
- Sidogi, M.G. 2001. *The practice of Inclusive Education in the Thohoyandou Area: a critical reflection*. Unpublished Master of Education Dissertation. Pretoria: University of South Africa.
- Smith, T.C., Poolway, E.A., Patton, J.R. and Dowdy, C.A. 2001. *Teaching students with special needs in inclusive settings*. Third edition. Needham Heights, MA: Allyn and Bacon.
- Smith-Davis, J. 2002. World initiatives for inclusion. Teaching Exceptional Children. *American Annals of the Deaf*, 145(2):64-77.
- Soodak, L.C. 2003. Classroom Management in Inclusive Settings. *Theory Into Practice*, 42(4),2003.
- Sorkin, D.L. 2000. The classroom acoustical environment and the Americans with Disabilities Act. *Language, Speech and Hearing Services in Schools*, 31:358-388.
- South African Schools Act Number 84 of November 1996.
- Stainback, W. and Stainback, S. 1990. *Support Networks for Inclusive Schooling - Interdependent Integrated Education*. Baltimore: Paul H. Brookes.
- Stephens, T.M., Blackhurst, A.E. and Magliocca, L.A. 1988. *Teaching Mainstreamed Students*. Second edition. New York: Pergamon.
- Stitt-Gohdes, W.L. 2001. *Delta Pi Epsilon Journal* 43(3):137-151.
- Sucuoglu, B., Akalin, S. and Sazak-Pinar, E. 2010. The Effects of Classroom Management on the Behaviour of Students with Disabilities in Inclusive Classrooms in Turkey. *The Journal of International Association of Special Education*, 11(1):64-74.

- Sutton, R.E., Mudrey-Camino, R. and Knight, C. 2009. Teachers' Emotion Regulation and Classroom Management. *Theory Into Practice*, 48:130-137. The College of Education and Human Ecology, The Ohio State University: Routledge Taylor and Francis.
- Swart, E., Engelbrecht, P., Eloff, I. and Pettipher, R. 2002. *Implementing inclusive education in South Africa: teachers' attitudes and experiences*, 34(1):174-189.
- Swart, E. and Pettipher, R. 2006. *Educators' journeys in implementing inclusive education: a case study of a South African school*.
<http://www.ispaweb.org/Colloquia/colloquim/Nyborg/Nyborg%20Presentations/Swa>
 [02 December 2006]
- Taylor, S. and Bogdan, R. 1984. *Introduction to qualitative research methods: the research for meaning*. New York: Wiley.
- Tharpe, R.G. and Gallimore, R. 1988. *Rousing minds to life*. Cambridge, MA: Cambridge University.
- Thorpe, R. and Holt, R. 2008. *The Sage Dictionary of Qualitative Management Research*. London: Sage.
- Titus, P.A. and Gremler, D.D. 2010. Guiding Reflective Practice: An Auditing Framework to Assess Teaching Philosophy and Style. *Journal of Marketing Education*, XX(X) 1-15 Sage.
- UNESCO (United Nations Educational, Scientific and Cultural Organization). 1994. *The Salamanca Statement and framework on Special Needs Education*. Paris: UNESCO
- United States Environmental Protection Agency. 2010. *School Facilities and Their Impact on Learning*.
http://www.epa.gov/iaq/schooldesign/impact_on_learning.html.
 [23 October 2010]
- University of Washington. 2010. *How are the terms deaf, deafened, hard of hearing, and hearing impaired typically used?*
<http://www.washington.edu/doit/Faculty/articles?86>
 [11 November 2010]
- Van Zyl, H. 2002. *Management strategies for the implementation of an inclusive system for learners with special educational needs*. Unpublished Doctoral Dissertation. Johannesburg: Rand Afrikaans University.

Voltz, D.L., Brazil, N. and Ford, A. 2001. What matters most in inclusive education: A practical guide for moving forward. *Intervention in School & Clinic*, 37(1):23.
<http://web18.epnet.com/citation>.

[17 August 2007]

Vygotsky, L. 1978. *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press.

Wade, S.E. and Zone, J. 2000. Creating inclusive classrooms: an overview. *Inclusive Education: A casebook and Reading for Prospective and Practising Teachers*. London: LEA.

Walton, E., Nel, N., Hugo, A. and Muller, H. 2009. The extent and practice of inclusion in independent schools in South Africa. *South African Journal of Education*, 9:105-126.

Walton, E.L. 2002. *The role of education managers in implementing a policy of inclusion in independent Christian schools*. Pretoria: University of South Africa.

Western Cape Education Department. 2003. *Inclusive Education. A Historical Overview of Special Education and Inclusive Education in South Africa*.

<http://www.curriculum.wcape.school.za>

[31 July 2009]

Woodford, D. 1999. *Inclusion and Deafness Seminar*
<http://www.eenet.org.uk/deaf/incdeafrep/05.shtml>

[04 January 2007]

Yin, C.C. 1994. Teacher Leadership Style: A Classroom-level Study. *Journal of Educational Administration*, 32(3):54-71

APPENDIX A - LETTER OF PERMISSION

P.O. Box 19063
WYNBERG
7824

Dr R.S. Cornelissen
Grand Central Towers
Lower Parliament Street
Private Bag X0114
CAPE TOWN
8000

Dear Dr Cornelissen

**RESEARCH: TEACHERS' STRATEGIES UTILISED BY NON-SPECIAL EDUCATION
TEACHERS IN INCLUSIVE EDUCATION FET CLASSROOMS**

I hereby wish to apply for permission to conduct research at schools in the southern suburbs of Cape Town where Inclusion is practiced.

I am a registered M.Ed. student at Cape Peninsula University of Technology and researching educators' strategies in inclusive Further Education and Training classrooms.

In this study I am interested in how non special education teachers, teach in mainstream classrooms where there are learners who deaf/hearing impaired and how these educators mediate learning to the learner who are deaf/hearing impaired.

To conduct this research I would appreciate the opportunity to observe educators and learners in a naturally occurring situation during normal teaching hours.

Thanking you

Yours sincerely

SHAUWN VAN STADEN

APPENDIX B - RESEARCH APPLICATION FORM

Navrae
Enquiries Dr RS Cornelissen
Imibuzo
Telefoon
Telephone 021 - 467-2286
Ifoni
Faks
Fax 021 - 425-7445
Ifekesi



Wes-Kaap Onderwysdepartement
Western Cape Education Department
ISebe leMfundo leNtshona Koloni

APPLICATION TO CONDUCT RESEARCH IN
PUBLIC SCHOOLS WITHIN THE WESTERN CAPE

Applicant details	
Title: _____	Surname: _____
First name(s): _____	Gender: _____
Name of organisation (directorate if WCED): _____	
Contact person: _____	
Address: _____	Postal code: _____
Telephone number: _____	Cell number: _____
Fax number: _____	E-mail address: _____
Name of institution: _____	
Student number: _____	Degree/ Diploma: _____
Supervisor's name: _____	Tel no of supervisor: _____
Year of registration: _____	Year of completion: _____
Specialisation: _____	Faculty: _____
Title of research: _____	
Research question: _____	
Respondents: _____	
Name(s) of education institution(s): _____	
Research period in education institutions:	
Start date: _____	End date: _____
Signature: _____	Date: _____
FOR OFFICIAL USE ONLY	
Date approved: _____	Approved by: _____
Reference number: _____	

APPENDIX C - LETTER OF APPROVAL

Navrae
Enquiries Dr RS Cornelissen
IMibuzo
Telefoon
Telephone (021) 467-2286
IFoni
Faks
Fax (021) 425-7445
IFeksi

Verwysing
Reference 20070803-0063
ISalathiso



Wes-Kaap Onderwysdepartement

Western Cape Education Department

ISebe leMfundo leNtshona Koloni

Mr Shawn van Staden
P.O. Box 19063
WYNBERG
7824

Dear Mr S. Van Staden

RESEARCH PROPOSAL: TEACHER'S STRATEGIES UTILISED BY NON-SPECIAL EDUCATION TEACHERS IN INCLUSIVE EDUCATION FET CLASSROOMS.

Your application to conduct the above-mentioned research in schools in the Western Cape has been approved subject to the following conditions:

1. Principals, educators and learners are under no obligation to assist you in your investigation.
2. Principals, educators, learners and schools should not be identifiable in any way from the results of the investigation.
3. You make all the arrangements concerning your investigation.
4. Educators' programmes are not to be interrupted.
5. The Study is to be conducted from **13th August 2007 to 31st September 2008.**
6. No research can be conducted during the fourth term as schools are preparing and finalizing syllabi for examinations (October to December 2007).
7. Should you wish to extend the period of your survey, please contact Dr R. Cornelissen at the contact numbers above quoting the reference number.
8. A photocopy of this letter is submitted to the Principal where the intended research is to be conducted.
9. Your research will be limited to the following schools: [REDACTED]
10. A brief summary of the content, findings and recommendations is provided to the Director: Education Research.
11. The Department receives a copy of the completed report/dissertation/thesis addressed to:

**The Director: Education Research
Western Cape Education Department
Private Bag X9114
CAPE TOWN
8000**

We wish you success in your research.

Kind regards.

Signed: Ronald S. Cornelissen
for: **HEAD: EDUCATION**
DATE: 10th August 2007

MELD ASSEBLIEF VERWYSINGSNUMMERS IN ALLE KORRESPONDENSIE / PLEASE QUOTE REFERENCE NUMBERS IN ALL CORRESPONDENCE /
NCEDA UBHALE IINOMBŎLO ZESALATHISO KUYO YONKE IMBALELWANO

GRAND CENTRAL TOWERS, LAER-PARLEMENTSTRAAT, PRIVAATSAK X9114, KAAPSTAD 8000
GRAND CENTRAL TOWERS, LOWER PARLIAMENT STREET, PRIVATE BAG X9114, CAPE TOWN 8000

WEB: <http://wced.wcape.gov.za>

INBELSENTRUM /CALL CENTRE

INDIENSNEMING- EN SALARISNAVRAE/EMPLOYMENT AND SALARY OFFICES ☎0861 92 33 22

APPENDIX D - LETTER TO PRINCIPALS

P.O. Box 19063
WYNBERG
7824

The Principal

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

Dear Mr/Ms/Mrs

RESEARCH: NON-SPECIAL EDUCATION TEACHERS IN INCLUSIVE EDUCATION FET CLASSROOM

I am a registered M.Ed. student at Cape Peninsula University of Technology and researching educators' strategies in inclusive Further Education and Training classrooms.

In this study I am interested in how non special education teachers, teach in mainstream classrooms where there are learners who deaf/hearing impaired and how these educators mediate learning to the learner who are deaf/hearing impaired.

To conduct this research I would appreciate the opportunity to observe educators and learners in a naturally occurring situation during normal teaching hours.

To ensure confidentiality and anonymity, the names of the school, educators and learners participating will not be included in the report.

Thanking you

Yours sincerely

SHAUNN VAN STADEN

APPENDIX E - LETTER TO PARENTS

P.O. Box 19063
WYNBERG
7824

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

Dear Mr/Ms/Mrs

RESEARCH: NON-SPECIAL EDUCATION TEACHERS IN INCLUSIVE EDUCATION FET CLASSROOM

I am a registered M.Ed. student at Cape Peninsula University of Technology and researching teachers' strategies in inclusive Further Education and Training classrooms.

In this study I am interested in how non special education teachers, teach in mainstream classrooms where there are learners who deaf/hearing impaired and how these educators mediate learning to these learners.

I request permission for your son/daughter

.....
to participate in this research. As part of my research I will conduct two classroom observation sessions and need to video record the second classroom observation.

I will ensure his/her anonymity and assure you that the classroom observations will be conducted in the strictest confidence.

I have obtained permission from the Western Cape Education Department and the school principal to conduct my research at this particular school.

Your permission would be greatly appreciated.

Yours faithfully

SHAUWN VAN STADEN

REPLY SLIP

I, Mr/Ms/Mrs
hereby give permission/do not give permission for my
son/daughter to participate in the research and classroom
observation sessions.

.....
SIGNATURE

			2007
DAY	MONTH	YEAR	

APPENDIX F - LETTER TO PARTICIPATING EDUCATORS

P.O. Box 19063
WYNBERG
7824

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

Dear Mr/Ms/Mrs

RESEARCH: NON-SPECIAL EDUCATION TEACHERS IN INCLUSIVE EDUCATION FET CLASSROOM

I am a registered M.Ed. student at Cape Peninsula University of Technology and researching teachers' strategies in inclusive Further Education and Training classrooms.

In this study I am interested in how non special education teachers, teach in mainstream classrooms where there are learners who are deaf/hearing impaired and how these educators mediate learning to the deaf/hearing impaired learners.

To conduct this research I would appreciate the opportunity to observe you and your learner(s) who is/are deaf/hearing impaired in a naturally occurring situation during normal teaching hours.

As part of my research I need to conduct two classroom observation sessions and need to video record the second classroom observation.

To ensure confidentiality and anonymity, neither the names of participating individuals nor the name of the school will be included the report.

I realize that this is an intrusion into your extremely busy schedule, however I would be most grateful if you could assist me in this regard.

Yours faithfully

SHAUWN VAN STADEN

APPENDIX G - BIOGRAPHICAL QUESTIONNAIRE

<i>EDUCATOR'S BIOGRAPHICAL DETAILS/DEMOGRAPHIC INFORMATION</i>

EDUCATOR'S NAME	
------------------------	--

EDUCATOR'S SURNAME	
---------------------------	--

SCHOOL/EDUCATION INSTITUTION	
-------------------------------------	--

AGE	
------------	--

GENDER	MALE	
	FEMALE	

PROFESSIONAL QUALIFICATION	Teacher's Diploma:
	Degree:
	Degree + Honours:
	Master's:
	Special Education:

TEACHING EXPERIENCE (years)	
--	--

EXPERIENCE IN INCLUSIVE EDUCATION (years)	
--	--

SIGNATURE	
------------------	--

APPENDIX H – OBSERVATION CHECKLIST (PHYSICAL FEATURES)

OBSERVATION

CHECKLIST

DEMOGRAPHIC DETAILS	
SCHOOL	
EDUCATOR	
LESSON	
GRADE	
CLASS GROUP	

PHYSICAL FEATURES	
Class size (learners)	
Classroom size (space)	
Arrangement of learners	
Position of deaf/hearing impaired learner in class	
Availability of whiteboard/chalkboard/Overhead projector/other devices	
Suitable furniture (easily moveable)	
Suitable learning/teaching aids displayed in classroom	

APPENDIX I - OBSERVATION CHECKLIST (LESSON OBSERVATION)
LESSON OBSERVATION

CHECKLIST

TEACHING APPROACHES			
A	Negotiation of objectives		
	Differentiated instruction		
	Use of teaching material		
	Use of learning material		
	Teaching from known to unknown		
	Lesson built on known experiences		
	Co-operative learning		
	Group work		
	Peer tutoring		
Teaching approach/method flexible			

EDUCATOR			
B	Individual attention given to learners		
	Rewards given (praise)		
	Explicit teaching		
	Explicit demonstrations		
	Provides direct instructions		
	Makes eye contact with individual learners and groups of learners		
	Non-verbal expressions (Gesticulates/facial)		
	Asks leading questions		
	Asks direct questions		
	Feedback given to learners		
	Invites learners to question		
	Educator corrects and provides suitable answers when necessary		
	Encourages learners to think for themselves		
	Educator creates a relaxed learning environment/atmosphere		
	Efforts to involve learners in cooperative activity		
	Educator knows individual learners in the class		
	Educator displayed commitment to assist deaf/hearing impaired learner		
	Educator shows sensitivity towards deaf/hearing impaired learner		
	Wraps up and concludes lesson		

LEARNING ACTIVITY			
C	Activity based on instruction		
	Activities at same level of difficulty		
	Activities at varying levels of difficulty		
	Co-operative activities		
	Activities facilitating interaction with the environment		
	Differentiated activities		
	Discovery and movement took place		
	All learners participating actively		
	Participation of learners on individual basis		
	Participation of learners in groups		
	Atmosphere - relaxed		
	Good interpersonal relations in class		

APPENDIX J - OBSERVATION SCHEDULE FOR RECORDING OF VIDEO DATA

OBSERVATION SCHEDULE FOR RECORDING OF VIDEO DATA						
Time	Learning area Focus - Science	Other focus	Role of Educator	Role of Learners	Role of learner who is deaf/hearing impaired	Extraneous Factor

APPENDIX K – TEACHING STRATEGIES

TEACHING STRATEGIES	
1.	<p>Classroom administration</p> <ul style="list-style-type: none"> • Educator takes time to do classroom administration, e.g. take class register, collect assignments, etc.
2.	<p>Classroom management</p> <ul style="list-style-type: none"> • Educator manages class by handing books or worksheets to learners, move teaching aids, organise learners into groups, etc. • Educator finds his/her appropriate transparencies • Educator turns on computer, interactive whiteboard • Educator controls noise level of learners • Educator accepts microphone (cochlear implant) from learner who is deaf/hearing impaired • Handing of microphone to learner who is deaf/hearing impaired • Educator rearranges seating of learner in order for them to have access to the learning material.
3.	<p>Educator uses teaching aids</p> <ul style="list-style-type: none"> • Educator uses teaching aids (models, Inter-active Whiteboard, overhead projector, transparencies, whiteboard, etc.) during lesson.
4.	<p>Educator accepts correct answer</p> <ul style="list-style-type: none"> • Educator accepts answer given by the learner in response to a question posed by the educator.
5.	<p>Educator acknowledges learners</p> <ul style="list-style-type: none"> • Educator makes eye-contact with learners when they indicate that they wish to make a contribution to the lesson. • Educator calls on an individual learner by name to provide an answer or make a contribution to the lesson.
6.	<p>Educator advises learners</p> <ul style="list-style-type: none"> • Educator gives advice to learners on how to attempt or how to answer questions in the examination.
7.	<p>Educator allows learner interaction</p> <ul style="list-style-type: none"> • Educator allows learners to interact and discuss with peer learners in the classroom environment.
8.	<p>Educator allows learner participation</p> <ul style="list-style-type: none"> • Educator allows an individual learner to participate in classroom discussion by making

	oral contributions.
9.	<p>Educator allows learner to comment</p> <ul style="list-style-type: none"> • Educator allows the learner to comment and contribute to the lesson by referring to the learner's personal experience.
10.	<p>Educator allows learners to struggle</p> <ul style="list-style-type: none"> • Educator allows learner to make an attempt at answering a question without the educator providing assistance or intervening.
11.	<p>Educator asks for clarification</p> <ul style="list-style-type: none"> • Educator asks the learner to explain their questions or comments in order to gain a clear understanding of the information required by the learner.
12.	<p>Educator asks leading question</p> <ul style="list-style-type: none"> • Educator poses an additional question to lead the learner to the desired answer.
13.	<p>Educator cautions learners</p> <ul style="list-style-type: none"> • Educator warns and cautions learners on how to attempt to answer particular question. • "Now you be very careful ..."
14.	<p>Educator checks for understanding</p> <ul style="list-style-type: none"> • Educator checks that learners understand the explanation provided by the educator or the peer-learner.
15.	<p>Educator checks learner who is deaf/hearing impaired for understanding</p> <ul style="list-style-type: none"> • Educator checks that the learner who is deaf/hearing impaired follows and understands the explanations provided by the educator or the peer-learner.
16.	<p>Educator checks learner's reading for accuracy</p> <ul style="list-style-type: none"> • Educator follows learner's reading in the text.
17.	<p>Educator checks vocabulary</p> <ul style="list-style-type: none"> • Educator asks learners to explain subject terminology, subject vocabulary or the meaning of a particular word.
18.	<p>Educator circulates and assists learners</p> <ul style="list-style-type: none"> • Educator moves around in the classroom, from group to group, to assist individual learners and/or groups of learners who are experiencing problems.
19.	<p>Educator concludes lesson</p> <ul style="list-style-type: none"> • Educator provides a summary of lesson discussion. • Educator focuses on important aspects of lesson discussion.
20.	<p>Educator corrects learner's responses</p> <ul style="list-style-type: none"> • Educator provides learners with the correct

	<p>answer.</p> <ul style="list-style-type: none"> • Educator rephrases the explanation given by the learner and uses the correct subject terminology and subject vocabulary.
21.	<p>Educator corrects reading</p> <ul style="list-style-type: none"> • Educator assists learner with difficult words while reading from text.
22.	<p>Educator creates a relaxed learning environment</p> <ul style="list-style-type: none"> • Educator sets learners at ease during lesson.
23.	<p>Educator explains concepts using diagrammatic representation</p> <ul style="list-style-type: none"> • Educator uses a sketch or diagrammatic representation together with an oral explanation to explain a concept.
24.	<p>Educator creates opportunity for learner who is deaf/hearing impaired to contribute</p> <ul style="list-style-type: none"> • Educator calls upon the learner who is deaf/hearing impaired to make a contribution to the lesson.
25.	<p>Educator dismisses class</p> <ul style="list-style-type: none"> • Educator provides learners with instructions to leave classroom.
26.	<p>Educator displays positive body language</p> <ul style="list-style-type: none"> • Educator uses non-verbal gestures (e.g. smile, eye contact, body movement) to show interest in learners' contributions.
27.	<p>Educator emphasizes important aspects</p> <ul style="list-style-type: none"> • Educator highlights and repeats important aspects of subject content.
28.	<p>Educator encourages learner interaction</p> <ul style="list-style-type: none"> • Educator passively observes the learners while they engage in a discussion.
29.	<p>Educator encourages learner participation</p> <ul style="list-style-type: none"> • Educator actively involved with learners and engages in a classroom discussion. • Educator acts as a catalyst in initiating learner participation and classroom discussion.
30.	<p>Educator encourages thinking</p> <ul style="list-style-type: none"> • Educator encourages learner to think for themselves. • Educator does not provide assistance even if he/she is aware that the learners having difficulty reaching the desired answer until they produce the required answer.
31.	<p>Educator guides learners</p> <ul style="list-style-type: none"> • Educator provides guidance to learners.
32.	<p>Educator invites responses</p> <ul style="list-style-type: none"> • Educator encourages learners to answer question

	that were posed.
33.	<p>Educator involved in direct teaching</p> <ul style="list-style-type: none"> • Educator actively involved in instructing and explaining to the class.
34.	<p>Educator involved in physical demonstration</p> <ul style="list-style-type: none"> • Educator physically demonstrates a concept, e.g. the transfer of electrons from one compound to the next.
35.	<p>Educator issues direct instruction</p> <ul style="list-style-type: none"> • Educator gives learner an instruction e.g. to complete a task or exercise.
36.	<p>Educator makes a comparison</p> <ul style="list-style-type: none"> • Educator compares one situation with another situation. • Educator compares one object with another object.
37.	<p>Educator narrates role play</p> <ul style="list-style-type: none"> • Educator gives directions as role play is being enacted.
38.	<p>Educator offers individual support</p> <ul style="list-style-type: none"> • Educator assists individual learners who are experiencing problems.
39.	<p>Educator poses a direct question</p> <ul style="list-style-type: none"> • Educator uses a direct question requiring the learners to provide a response consisting of factual information.
40.	<p>Educator poses an indirect question</p> <ul style="list-style-type: none"> • Educator poses a question in a based on previous responses provided by the learner to elicit a further response.
41.	<p>Educator positively acknowledges learner's answer/contribution</p> <ul style="list-style-type: none"> • Educator accepts and acknowledges the correct responses provided by the learners. • E.g. "That's correct!" • "Yes!" • "I agree." • "Exactly!" • "Good answer!"
42.	<p>Educator probes learner</p> <ul style="list-style-type: none"> • Educator draws further information out of learners in order to obtain a complete explanation.
43.	<p>Educator provides individual support (to the learner who is deaf/hearing impaired)</p> <ul style="list-style-type: none"> • Educator answers questions posed by the learner who is deaf/hearing impaired. • Educator supports the learner who is deaf/hearing impaired by pointing to the reading position in

	the text so that this learner is able to follow.
44.	<p>Educator provides a clue</p> <ul style="list-style-type: none"> • Educator provides learners with a cryptic hint which assists the learner to obtain the desired answer.
45.	<p>Educator provides correct information</p> <ul style="list-style-type: none"> • Educator corrects the responses and information provided by the learners.
46.	<p>Educator provides correct pronunciation of word</p> <ul style="list-style-type: none"> • Educator provides learners with the correct pronunciation of words while reading from text.
47.	<p>Educator provides individual attention to learner</p> <ul style="list-style-type: none"> • Educator provides one-to-one (educator-to-learner) instruction to focus on individual's problems and provide necessary assistance or coaching.
48.	<p>Educator provides time for learners to think/copy notes</p> <ul style="list-style-type: none"> • Educator provides learners with class time to think about questions posed or to complete tasks allocated to them. • Educator waits for answers after posing questions.
49.	<p>Educator recaptures</p> <ul style="list-style-type: none"> • Educator refers and questions learners about information that has been covered earlier or in previous lessons.
50.	<p>Educator refers to information from learners' own environment</p> <ul style="list-style-type: none"> • Educator locates and provides extra useful information to learners from the learners' immediate environment or frame of reference.
51.	<p>Educator rejects incorrect answer</p> <ul style="list-style-type: none"> • Educator rejects the answers given by provided by the learners. • E.g. "I don't agree with that answer. Do you want to try again? Anybody else?" • "No! That's not it!"
52.	<p>Educator relates a story (scenario)</p> <ul style="list-style-type: none"> • Educator tells learners a story to explain or illustrate an unfamiliar concept to the learners.
53.	<p>Educator repeats himself/herself to ensure accuracy</p> <ul style="list-style-type: none"> • Educator repeats himself/herself to emphasise and ensure accuracy of the information related.
54.	<p>Educator repeats question</p> <ul style="list-style-type: none"> • Educator repeats questions to ensure that all the learners heard the question posed.
55.	<p>Educator repeats responses to emphasize correct</p>

	<p>answer</p> <ul style="list-style-type: none"> • Educator repeats answers given by learners to emphasize the correct answer.
56.	<p>Educator sets the tone</p> <ul style="list-style-type: none"> • Educator gets the attention of all learners, e.g. before commencing with the lesson or providing instructions.
57.	<p>Educator simplifies questions</p> <ul style="list-style-type: none"> • Educator simplifies questions by rephrasing the questions.
58.	<p>Educator solicits chorus responses</p> <ul style="list-style-type: none"> • Educator directs question to the whole group and the whole group responds in chorus/unison.
59.	<p>Educator uses drama</p> <ul style="list-style-type: none"> • Educator acts out with the use of aids or props to explain a theory or concept.
60.	<p>Educator uses humour</p> <ul style="list-style-type: none"> • Educator cracks a joke.
61.	<p>Educator uses incomplete sentences</p> <ul style="list-style-type: none"> • Educator stops in mid-sentence and provides the learners with the opportunity to complete the sentence.
62.	<p>Educator uses non-verbal cuing</p> <ul style="list-style-type: none"> • Educator uses gestures or facial expressions to indicate that students stop, e.g. hand up waving, angry look, approval, etc • Educator gesticulates to point or describe an object. • Educator uses non-verbal cues to control students. The raised eyebrow, pointed finger, silent stare all communicate meaning.
63.	<p>Educator uses synonym</p> <ul style="list-style-type: none"> • Educator uses a simpler word, with the same meaning, to assist learners to understand.
64.	<p>Educator varies turn-taking</p> <ul style="list-style-type: none"> • Educator adopts a pattern or style of selecting learners to read or answer questions. • In some cases, the learners know when to expect to read or answer questions, thus reducing anxiety about being called upon.
65.	<p>Interpersonal ease</p> <ul style="list-style-type: none"> • The educator builds a good relationship with learners by creating a sense of safety, openness and reducing threats.
66.	<p>Rapport building</p> <ul style="list-style-type: none"> • Educator engages in casual chat with learners. • Educator communicates his/her intentions and expectations of the learners.

	<ul style="list-style-type: none">• Educator provides information of what is yet to happen.• Educator builds a good relationship with learners by creating a sense of safety, openness and reducing threats.
67.	Resource bringing <ul style="list-style-type: none">• Educator locates and provides extra useful information, materials, practices, equipment to learners which is over and above what is expected by the learner.• Educator provides information from his/her personal experience.

APPENDIX L

REGROUPED STRATEGY DEFINITIONS		
GROUP	STRATEGIES	DEFINITION
A	The educator creates a positive classroom atmosphere and environment	The educator manages and organises the classroom in order to create a flexible and relaxed environment where all the learners who are present can benefit from a positive learning experience.
B	The educator acknowledges the learners and provides positive feedback	The educator acknowledges the learners' contribution to the lesson and provides positive and encouraging feedback in order to enhance the learners' self-esteem and thus stimulate further learner participation.
C	The educator encourages learner interaction and participation	The educator uses various techniques to encourage the learners to participate in the lesson activities or engage in classroom discussion.
D	The educator provides support to the learners	The educator provides the learners with support by guiding, cautioning and advising learners during the lesson.
E	The educator questions the learners	The educator uses various questioning techniques in order to engage the learner and encourage learner participation and learner contributions.
F	The educator corrects the learners	The educator checks the learners' responses for accuracy and provides the correct explanations and answers when necessary.
G	The educator utilises a variety of teaching methods	The educator changes the teaching method within the lesson in order to accommodate for the learning needs of a diverse group of learners with varying levels of ability.
H	The educator displays positive personality traits	In the teaching situation, the educator displays positive characteristics and personality traits through, amongst others, the use of positive body language, the use of humour and non-verbal cuing.

APPENDIX M – TALLY SHEET

TALLY SHEET							
(TO RECORD FREQUENCY TEACHING STRATEGIES WERE UTILISED DURING LESSON)							
EDUCATOR							
1.	Classroom administration						
2.	Classroom management						
3.	Comparison						
4.	Direct instruction						
5.	Direct questioning						
6.	Direct teaching						
7.	Educator accepts approximation						
8.	Educator advises learners						
9.	Educator allows learner interaction						
10.	Educator allows learner participation						
11.	Educator allows learner to comment						
12.	Educator asks for clarification						
13.	Educator asks leading question						
14.	Educator begins lesson with short review of previous lesson						
15.	Educator cautions learner						
16.	Educator checks for understanding						
17.	Educator checks learners reading for accuracy						
18.	Educator checks vocabulary						
19.	Educator concludes lesson						

20.	Educator corrects learner's responses								
21.	Educator corrects reading								
22.	Educator creates a relaxed learning environment								
23.	Educator dismisses class								
24.	Educator emphasizes important aspects								
25.	Educator encourages learner participation								
26.	Educator encourages thinking								
27.	Educator gives individual attention								
28.	Educator invites responses								
29.	Educator manages discussion so that it can remain focused								
30.	Educator probes learner								
31.	Educator provides a clue								
32.	Educator provides correct information								
33.	Educator provides correct pronunciation of word								
34.	Educator provides time for slower learners to think								
35.	Educator recaptures								
36.	Educator refers to his own working experience (Resource Bringing)								
37.	Educator refers to information from learners' own environment								
38.	Educator rejects approximation								
39.	Educator relates a story (scenario)								
40.	Educator repeats himself to ensure accuracy								
41.	Educator repeats responses to emphasize correct answer								
42.	Educator simplifies questions								
43.	Educator solicits chorus responses								

44.	Educator uses humour								
45.	Educator uses non-verbal cuing								
46.	Educator uses synonym								
47.	Educator uses teaching aids								
48.	Educator varies turn-taking								
49.	Interpersonal ease								
50.	Positive acknowledgement								
51.	Positive body language and non-verbal cuing								
52.	Rapport building								
53.	Resource brining								
54.	Setting the tone								