ACCOMMODATION OF GRADE R LEARNERS WITH CEREBRAL
PALSY BY TEACHERS AND PRACTITIONERS:
A CASE STUDY OF TWO SPECIAL SCHOOLS

By

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DECLARATION

I, Michelle Sharon Stevens, Student Number 0791 025 8, declare that *Accommodation of Grade R Learners with Cerebral Palsy by Teachers and Practitioners: A Case Study of Two Special Schools* is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

I further declare that I have not previously submitted this work, or part of it, for examination at Unisa for another qualification or at any other higher education institution.

_____   28/02/2018.

MRS M.S. STEVENS   DATE

DEDICATION

It gives me great pleasure to dedicate this dissertation to

My Children: in order of age

Darren Ryan and Shaun Craig

Stevens.

A BLESSING FOR MY SONS

These things-

I warmly wish for you-

Someone to love

Some work to do

A bit o' sun

A bit o' cheer

And a guardian angel

Always near.

ACKNOWLEDGEMENTS

To my husband, Brian. I deeply appreciate your support and encouragement. I wish to express my sincere gratitude to you, as there were so many times during the past few years when I could not put you first.

To my parents, Donald and Johanna McCarlie, for giving me the best start in life and for all the sacrifices they made for me. One of the most valuable lessons you taught me, Mom and Dad, is to believe in myself. Thank you.

To my younger son, Shaun, and daughter-in-law, Claire, for giving me the gift of two beautiful grandsons, Riley and Jordan, during the course of my research.

To my elder son, Darren. Congratulations on obtaining your BCom degree during the course of my research.

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To a beautiful and courageous little girl,

Whom I met on my travels through life.

You taught me humility and patience;

You showed me the world through your eyes;

For that I will always be grateful.

PROOF OF EDITORSHIP

Mrs M.A. Denniston
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21 February 2018

Mrs M.S. Stevens

Dear Michelle

PROOF OF EDITORSHIP

I, Margaret Anne Denniston (Identity Number 540307 0082 08 7), hereby confirm that quality assurance and editing of your dissertation was done to the best of my ability and, as far as I can ascertain, the work is substantially ready for submission to the examiners.

My academic and professional qualifications are as follows:

- Academic – BA (Wits), H.Dip.Lib. (Wits)
- Professional – Accreditation for Editing in English by the South African Translators Institute, Member Number 1001446.

Yours sincerely

Anne Denniston

ABSTRACT

The study explored how a practitioner and a teacher accommodated children living with cerebral palsy in Grade R, also referred to as the reception year, at two special schools, especially how they adapted the environment and used assistive devices.

Cerebral Palsy is the most common form of a neurological disorder that appears in infancy or early childhood, permanently affecting body movement and muscle coordination. Research has illuminated that early specialist intervention such as assistive devices, augmentative and alternative commutation methods and assistive technology can make the world of difference to the future of the child.

My research afforded me the opportunity to observe the children in Grade R living with cerebral palsy, with the practitioner and the teacher in their natural setting at school level. I followed the deductive paradigm, and adopted a case study design.

The use of assistive devices and argumentative and alternative communication has historically been the domain of occupational-, speech- and physiotherapists. With the introduction of inclusive education and the new screening, identification, assessment and support policy to be conducted in all Grade R classes at all schools in South Africa, my research will be beneficial to mainstream and full-service schools, as well as special schools. Young children living with cerebral palsy will be included in all these schools and will need support from expert teachers and practitioners, who are knowledgeable about their requirements for an adapted environment and the use of assistive devices and augmentative and alternative communication methods.

The study found that the Grade R staff at the special schools were knowledgeable, but their knowledge was superficial, their classrooms lacked adapted toys, and assistive technology was non-existent. Teachers and practitioners need practical training on the importance of movement for children living with cerebral palsy and the training should emphasize that experiencing the world through assistive devices alleviates barriers to learning and development.

KEY TERMS

Accommodations, Assistive devices, Assistive technology, Augmentative and alternative communication, Cerebral palsy, Early Childhood Development, Special school, the Practitioner, the Reception Year, the Teacher, Descriptive case study, Inclusion, Early intervention.

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LIST OF ABBREVIATIONS AND ACRONYMS

AAC	augmentative and alternative communication
ADs	assistive devices
AT	assistive technology
CFCS	Communication Function Classification System
CP	cerebral palsy
DBE	National Department of Basic Education, South Africa
DHET	Department of Higher Education and Training
DOE	National Department of Education, South Africa
DSD	National Department of Social Development, South Africa
ECD	early childhood development
EDACS	Eating and Drinking Ability Classification System
GDE	Gauteng Department of Education, South Africa
GMFCS	Gross Motor Function Classification System
Grade R	Reception Year
IEP	individual educational programme
ISP	individual support programme
ISS	Inclusion Support Services Unit
MACS	Manual Ability Classification System
NQF	National Qualifications Framework
SACE	South African Council for Educators
SIAS	screening, identification, assessment and support
WHO	World Health Organization

CHAPTER 1
BACKGROUND TO THE STUDY

"For most people, technology makes things easier. For people with disabilities, technology makes things possible" (Radabaugh cited in World Health Organization 2015:9).

1.1   INTRODUCTION

The Government of the Republic of South Africa has recently prioritised early childhood development, due to the overwhelming scientific evidence stressing the importance of the early years for human development.

The Department of Education's White Paper 5 (DOE 2001a) ushered in a new and exciting era for early childhood development in South Africa. Its priority was the "establishment of a national system to provide a Reception Year (Grade R) for all children aged four to five" (DOE 2001a:5). White Paper 6: *Special needs education* (DOE 2001b) enforced the rights of children living with a barrier, thus providing an inclusive education system.   The Department of Social Development's *National integrated early childhood development policy* (DSD 2015:36) acknowledged that White Paper 6 sought "to establish procedures for early identification and interventions for children with disabilities...in the foundation phase". In 2014, the Department of Basic Education (DBE 2014) introduced a revised strategy on screening, identification, assessment and support (SIAS), thereby completing a trilogy of policies to support inclusion and early identification of barriers to learning and development in all schools.

The *National integrated early childhood development policy* (DSD 2015:8) stated that "poor quality interventions during early childhood can significantly disadvantage young children and diminish their potential for success". This is especially true for young learners living with a physical impairment such as cerebral palsy.   Statistics from the DBE (2013a:29) showed that this was the most prevalent physical impairment in South African special schools in 2011. However, the overall incidence of cerebral palsy in South Africa today is difficult to determine.

McLaren (2014:1) pointed out that "cerebral palsy is considered the single largest cause of childhood disability worldwide"; and recorded that the prevalence in Australia was 2,0 to

2,5 per 1 000 live births; that there were 2,18 per 1 000 live births in Sweden; and that the global incidence of cerebral palsy was 0,2 to 0,3% in 2014.

A pertinent research study on 242 records of children living with cerebral palsy was conducted at the Stellenbosch University by the Department of Paediatrics at Tygerberg Hospital in Cape Town, South Africa (Van Toorn, Laughton & Van Zyl 2007:74–77). The data revealed that spastic quadriplegia (where all limbs, body and face are symmetrically affected) constitutes the most prevalent type of cerebral palsy in most developing countries. "There is a significant difference in the spectrum of cerebral palsy in developed countries compared to that of developing countries. Developing countries seem to have more cases of cerebral palsy that are associated with moderate-to-severe mental retardation, whereas in developed countries the prevalent types of cerebral seen are those associated with a normal range of intelligence" (Van Toorn et al 2007:74–77).

One of the greatest challenges when educating young learners living with cerebral palsy is the need to introduce and incorporate assistive technology, assistive devices and augmentative and alternative communication methods into their daily lives. The life-changing impact of the correct assistive device should not be underestimated. It allows the young learners to interact with their environment through movement, giving them the opportunity to play, develop social skills, and explore the world they live in, thus developing to their full potential.

Cerebral palsy cannot be cured as it is caused by injury to the parts of the brain that control our ability to move by affecting our muscles and the central nervous system; in medical terms it is called 'static encephalopathy' (Johns Hopkins University 2016). However, research has shown surprising benefits of early intervention and the use of assistive devices and augmentative and alternative communication methods in levelling the playing field for these children (Clarke & Wilkinson 2008:3–15).

1.2   YOUNG CHILDREN AND CEREBRAL PALSY

The importance and benefits of a stimulating learning environment that supports play-based education in early childhood have been extensively researched over many decades.

Children learn through their senses while playing and exploring their environment, and it is through movement and using their senses that young children absorb and discover their world (Montessori 1992a:5). Tamm and Skar (2000 cited in Malkawi 2009:1-2) noticed

that playing may be difficult for young children living with cerebral palsy and that they "seldom initiate play" and are given "lower status" play roles by their peers. Olds (1994:32-33 cited in Krog 2010:2) pointed out that a prominent theorist such as Jean Piaget was of the opinion that "movement is essential to the formation of intellect". Most children with a physical impairment, including cerebral palsy, have to use assistive devices such as walkers, crutches and wheelchairs to move around, allowing them to interact with friends, and play. People such as practitioners and teachers who interact daily with such children should therefore be knowledgeable on the use and value of assistive technology and augmentative and alternative communication methods, as well as assistive devices.

In order to include a child with cerebral palsy in the Grade R environment, practitioners and teachers at special schools must accommodate the child's specific needs. A stimulating interactive environment, where the teacher or practitioner maximises the use of assistive devices, can mean the difference between failure and success, between a poor self-image and the accomplishment of a task for the young child living with cerebral palsy. A child who constantly fails due to a lack of assistive devices is denied the joy of achievement and is doomed to expect only failure and isolation in future.

Teachers and practitioners therefore need to undergo intensive, practical training in the effective use of all kinds of assistive devices, in the classroom and on the playground.

1.3   MOTIVATION FOR THE STUDY

I am fortunate to have travelled and lived in many parts of South Africa over the 25 years that I have been involved in early childhood education. This has afforded me many experiences in the education arena, including:

- owning and managing my own Montessori pre-school for more than twelve years;
- working at a school in Venda (where some teaching took place under trees);
- working at private and state schools in Mpumalanga and Gauteng, both mainstream and special; and
- recently working at a full-service primary school, where I am Departmental Head of the Foundation Phase and co-coordinator of the school-based support team. All these added to my experience in diversity and inclusion.

When the opportunity presented itself, I accepted the post of departmental head at a school for physically impaired children. My responsibility was to manage the Early Childhood and Foundation Phases.

Departmental heads are obliged to attend meetings, training and workshops, and have considerable interaction with many people in the education field; therefore I have attended workshops on the importance of an inclusive Grade R environment. However, very little information was given at these workshops on how to incorporate assistive devices and augmentative and alternative communication methods in the practical day-to-day running of a classroom for children with diverse learning needs.

The need for this type of training became apparent when I first visited a Grade R classroom managed by a practitioner at a special school for learners living with physical disabilities such as cerebral palsy.

I noted that the left-handed children had been given right-handed scissors to cut with. The importance of puzzles, block play and fantasy play was not fully understood. There was little knowledge of early childhood development practices and, seemingly, little training had been given on how to use assistive technology, assistive devices and augmentative and alternative communication methods. The practitioner had more than six children in her class with various levels and types of cerebral palsy, three of whom could not communicate very well by using spoken language.

Here I met a young girl in the Grade R class, who was living with athetoid cerebral palsy (see a description of athetosis on page 26). The day I met her, she was amusing herself by playing in the construction area while the rest of the children were in the next classroom busy with their lesson. When I asked why she was not with the rest of the group, the practitioner replied that she did not know how to 'teach' this child, and that she was happy to play with the blocks. I began using homemade communication boards and prompted her to try to speak in the classroom and on the playground. After a few months, she was beginning to form verbal words that I could understand if I listened carefully. I was delighted one day while sitting next to her with an alphabet board when she spelt out her name for the first time. This was an awesome and defining moment in my life. We could communicate with one another, and I was able to access her knowledge through using a homemade assistive device.

That practitioner and this little girl are my inspiration for this research study of learners living with cerebral palsy, between four and seven years old, in the Reception-year classroom at two special schools.

I deliberately did not use 'highbrow academic language' throughout my dissertation, as I wanted to make it as accessible and reader-friendly as possible for my target audience of South African practitioners and teachers who have learners living with cerebral palsy in their respective Grade R classrooms.

1.4   PROBLEM STATEMENT

Special schools in South Africa serve children who need the most assistance because their disabilities are of such a nature that they call for the most specialized staff. These special schools are to be made resource centres and their Early Childhood Development Practitioners and Teachers are expected to support teaching staff at full service and mainstream schools. The staff at special schools should therefore have superior training and knowledge of adaptation methods, assistive devices, augmentation and alternative communication methods and assistive technology.

The roles of the Early Childhood Development Practitioner and Teacher in the Reception Year are pivotal for providing quality education and the correct assistive devices for a young child living with cerebral palsy. Good practice is informed by an in-depth understanding of how to include these children and adapt the classroom environment to encourage an inclusive learning experience.

The purpose of this descriptive case study is to investigate the ability of the Reception Year Teacher and Early Childhood Development Practitioner to accommodate young children with cerebral palsy in the Grade R classroom.

1.5   RESEARCH QUESTIONS

1.5.1   Main question

How do teachers and practitioners adapt the environment and incorporate assistive devices to accommodate learners living with cerebral palsy in the Grade R environment?

1.5.2   Sub-questions

1.   What are the statistics of children living with cerebral palsy in South African schools?
2.   What is cerebral palsy?
3.   What are assistive devices?
4.   Who is the young child in Grade R?
5.   What do teachers in Grade R know about assistive devices?
6.   What do practitioners in Grade R know about assistive devices?
7.   How can teachers and practitioners be trained to use assistive devices to accommodate young children with cerebral palsy in Grade R?

1.6   AIMS AND OBJECTIVES

The study focused on the use of assistive devices by a practitioner and a teacher in the Grade R classroom in order to support young learners with cerebral palsy.

The study was guided by the following objectives:

1.   To investigate the prevalence of cerebral palsy in South African schools;
2.   To define the term 'cerebral palsy';
3.   To describe assistive devices that can be used to accommodate cerebral palsied children in Grade R, including the different kinds of augmentative and alternative communication strategies that can be used to communicate effectively with them;
4.   To identify the challenges a Grade R practitioner and a Grade R teacher experience that may cause barriers to teaching and learning in their classrooms;
5.   To investigate the extent and type of practical training a teacher and a practitioner had received on the use of assistive devices in the Grade R environment;
6.   To assess the extent to which the lack of adequate practical training impacted on the ability of the practitioner and the professionally trained teacher to include children living with cerebral palsy in the Grade R environment; and
7.   To provide recommendations for the training of Grade R teachers and practitioners on the use of assistive devices to support young children with cerebral palsy.

1.7   SIGNIFICANCE OF THE STUDY

With the introduction of inclusive education and support for Grade R classes at all South African government schools, and the *National strategy on screening, identification,*

assessment and support (SIAS)(DOE 2014), learners living with cerebral palsy are included in mainstream- and full-service schools, as well as special schools. This study could therefore be beneficial to all these schools.

They all need professionally trained staff who can adapt classrooms and playgrounds, and effectively use assistive devices and augmentative and alternative communication methods. This particular subject has not been widely researched in South African government schools. The research in this dissertation therefore provides valuable insight into the significance and value of assistive devices in reducing barriers to learning for the young child living with cerebral palsy. It improves understanding of the complexity of cerebral palsy, and the specific needs of learners with cerebral palsy in the Grade R environment.

The case study focused on the ability of a practitioner and a teacher to use all kinds of assistive devices effectively in the Grade R classroom at two special schools.

1.8   RESEARCH METHODOLOGY

1.8.1   Research design

Babbie and Mouton (2003:74 cited in Matlala 2015) referred to research designs as the researcher's blueprint for conducting the research. McMillan and Schumacher (2006:22), defined research design as "the plan and structure of the investigation used to gather evidence to answer the research questions". In other words, the research design indicates the general plan of the study, including "how the research is set up, what happens to the subject, and what methods of data collection are to be used" (McMillan & Schumacher 2006:22).

1.8.2   Qualitative approach

This research was of a qualitative nature and combined three research instruments; namely, a literature review, interviews and observations (Drew, Hardman & Hops 2008:187). Berg (2004:7) explained that a qualitative research study "supports the enquiry of how human beings experience their surroundings in a natural setting". Qualitative methods allow the researcher to approach the subject, probe the setting, and describe it in its natural form and in detail. The qualitative method was appropriate in this study of how

well-trained teachers and practitioners, and the use of assistive devices, could help the child engage with the learning environment.

The qualitative approach departs from the constructivist viewpoint, which accepts the fact that ideas are constructed through interaction between people, knowledge of reality is gained through social constructions such as shared ideas, language and various documents and, since reality is socially constructed, people can have a diversity of interpretations of reality. The teacher and the practitioner, who were the adult participants in the school situation, constructed the reality of the classrooms where they were teaching (Dema & Moeller 2012:78). I observed them and the children who were the participants of the study and integrated the new knowledge gained from my observations with my existing knowledge (Powell & Kalina 2009:241).

1.8.3   Case study

A descriptive case study method was chosen for this research. McMillan and Schumacher (2010:20) described a case study as "the procedure for conducting the research study: this includes when, from whom, and under which conditions the data will be obtained". Elmes, Kantowitz and Roediger (2006:89) explained, "a case study usually involves the detailed study of one individual or school, but may also involve a comparison of a small number of individuals or schools". Henning (2004:32) proposed that "case studies are much freer and less controlled" and that "data may include pictures and videos that are inherent to the case or the situation that is being scrutinised".

This case study took place at two special schools for young learners living with cerebral palsy.

1.9   POPULATION AND SAMPLE

1.9.1   Population

McMillan and Schumacher (2010:129) stated that a target population is "a group of elements or cases, whether individuals, objects or events, that conform to specific criteria and from which we intend to generalize the results of the research."

The population for this research study consisted of a practitioner and a teacher, with children living with cerebral palsy, in their respective classrooms at two special schools.

1.9.2   Sample

McMillan and Schumacher (2010:138) indicated that purposeful sampling happens when the participants are selected because of the researcher's knowledge of the population. A decision is then taken about which participants should be selected to provide the best information to address the purpose of the research.

Purposeful sampling was applied to select study participants who would provide me with relevant information that would be convenient and purposive. The practitioner and the teacher were selected because they managed Grade R classrooms at special schools. The children were chosen because they were living with various forms of cerebral palsy; namely ataxia, diplegia, hemiplegia, and athetoid- and mixed cerebral palsy.

1.10   DATA COLLECTION

I collected data via a literature study and an empirical investigation, conducted by way of questionnaires, semi-structured interviews using tape recordings, observation notes and photographs that did not include the faces of the children in the schools. This use of multiple sources of data is referred to as 'triangulation' (Leedy & Ormrod 2005:150).

The questionnaires, tape recordings, observation notes and photographs will be stored under lock and key for five years and then deleted and destroyed.

Literature study

I conducted an extensive and in-depth literature study of cerebral palsy, Grade R learners, and assistive devices for young children living with a physical impairment such as cerebral palsy. Hard copy and Internet resources that included articles in journals and books, and official documents on education, such as government policies, circulars and gazettes, as well as international and local theses, provided background information on these topics.

1.10.1   Observation

Creswell (2007:221) described observation as the process of gathering first-hand information by observing people. Observations took place in the Grade R environments at two special schools.

Participation observation best suited this research study, as I wanted to be part of the Grade R environment at both schools.

The particular focus of the observation was how the teacher and the practitioner arranged and adapted their learning environments, as well as how they accommodated the children living with different types and levels of cerebral palsy. Questions that I asked myself were, for instance: Are they creative enough to make their own low-tech assistive devices, and are there augmentative and alternative communication materials in their teaching environments? I was also curious to note whether there was any assistive technology in their classrooms.

I wrote down my observations of how the teacher and practitioner went about including the children living with cerebral palsy in their individual classrooms. I took photographs of the adaptive environment and any assistive devices they had made or used in their classrooms and on the playground (see Appendix 8 for the observation list).

1.10.2   Biographical questionnaire

A short biographical questionnaire was used to collect information about the practitioner and the teacher: their level of education, age, gender, years of experience, understanding of cerebral palsy, and what types of cerebral palsy they accommodated daily in their respective Grade R classrooms (see Appendix 9 for this questionnaire).

1.10.3   Semi-structured interviews

Face-to-face interviews that took less than one hour were conducted in the strictest confidence, after school hours, in places and at times that were convenient for the interviewees. The two interviews were taped and transcribed, and the tapes are kept under lock and key (see Appendix 10 for the semi-structured interview questions).

1.10.4   Photographs

Photographs of the adapted environment, assistive devices, and augmentative and alternative communication materials used in the Grade R environment document how the adults accommodated the children living with cerebral palsy in their respective classrooms and on the playgrounds (see Chapter 4). The photographs of children using the adaptive devices show only their hands, feet and bodies.

1.11   DATA ANALYSIS

A qualitative study is primarily an inductive process of organising data into categories and identifying patterns among the categories (McMillan & Schumacher 2001:461-462).   The information was obtained from naturally occurring phenomena (McMillan & Schumacher 2006:26).   Information from interviews was transcribed and the units were identified and grouped into categories, the themes of which were used as research findings.   Information from observations was compared with the information from the interviews.   Themes that emerged from this comparison informed the final finding (McMillan & Schumacher 2010).

1.12   MEASURES OF TRUSTWORTHINESS

When analysing the data, the issue of internal validity, i.e., the accuracy of the information, was addressed (Creswell 1994:158 cited in Yorke 2008:64).   My conclusions are reliable and credible because they were truthfully drawn from the raw data and therefore correspond to the perceptions of the participants (Patton 2002).   The information selected to determine whether any patterns occurred is trustworthy because of the extent to which the findings prove the value of the information collected (McMillan & Schumacher 2006:374).

1.13   ETHICAL CONSIDERATIONS

All participants were assured of privacy, confidentiality, anonymity and the principle of trust, as urged by Lincoln and Guba (1994:300 cited in Mahlo 2011:15).

Before observing, I delivered consent and assent forms to the teacher and the practitioner, who gave them to the parents of the children in the study (see Appendix 6 and Appendix 7). I collected the forms on the day of the observation and keep them under lock and key. All the forms to be completed were given to the respective people in re-sealable envelopes, and collected by either the class teacher or myself.   I tape-recorded the interviews, with the consent of both adults concerned, because Oliver (2010:47) stated, "it has become almost the norm nowadays that unstructured or semi-structured interviews are tape-recorded". I also obtained letters of assent from the principals of the schools (see Appendix 3 and Appendix 4) and from the GDE (see Appendix 1).   An ethical clearance certificate was obtained from the Ethics Committee in the College of Education at the University of South Africa (see Appendix 2).

1.14   CLARIFICATION OF KEY CONCEPTS

1.14.1   Accommodation

Living spaces (mass noun) "a room, group of rooms, or building in which someone may live or stay" are usually associated with the word 'accommodation'. However, it can also mean (mass noun) "the process of adapting or adjusting to someone or something" (OxfordDictionaries.com 2017, sv "accommodation").

1.14.2   Assistive technology

According to the World Health Organization (2015:7), "assistive technology comprises products and related services that could expand the functioning of children living with disabilities". Often assistive technology (AT) is considered the "missing link" in the chain of requirements that help children with disabilities to lead a life where they can enjoy and exercise their rights.

1.14.3   Assistive devices

Assistive devices (ADs) can be anything from a simple pencil grip (low technology/low-tech) to the most sophisticated computerized communication system (high technology/high-tech). There is usually an assessment conducted by a multi-disciplinary team of specialists, consisting of a medical doctor, occupational-, physio- and speech therapists, an audiologist, dietician, social worker and psychologist (McLaren 2014:2), who together prescribe the correct assistive device or devices for the individual child.

1.14.4   Augmentative and alternative communication

This term is used to describe the different ways of communicating, either to support speaking (augmentative) or instead of speaking (alternative). Augmentative and alternative communication (AAC) methods allow people with communication disorders to express themselves; for example, by using a simple talking mat, a communication board or a program that turns text messages into synthesized speech (National Institute on Deafness and Other Communication Disorders 2011:1).

1.14.5   Cerebral palsy

Cerebral palsy (CP) is classified according to two distinct systems in this study; namely, the physiological classification system and the topographical classification system. The physiological system refers to the motor symptoms of CP (spasticity, dyskinesia, hypertonia, ataxia and mixed types); and the topographical system refers to the parts of the body that are affected by CP; namely, monoplegia, hemiplegia, triplegia, quadriplegia, diplegia and paraplegia (Botha cited in Landsberg, Kruger & Nel 2005:291). See Section 2.4 for a detailed discussion of the types of CP.

1.14.6   Early childhood development

Education White Paper 5 on Early Childhood Development (DOE 2001a:9) defined early childhood development (ECD) as "[t]he processes by which children from birth to nine years of age grow and thrive physically, mentally, emotionally, morally and socially". The City of Cape Town's ECD Policy (2013:3) referred to the terms of the Children's Act 38 of 2005, in which ECD was defined as the process of emotional, cognitive, sensory, spiritual, moral, physical, social and communication development of children from birth to school-going age (0-6 years of age).

1.14.7   Early Childhood Development Practitioners

In the South African context, Early Childhood Development practitioners are adults who have very little basic or formal teacher training. In this study, they are henceforth referred to simply as 'practitioners'.

Historically, the Early Childhood Development Phase fell under the control of the DSD. Practitioners who taught at DSD sites were not required to hold a formal teaching qualification.

This has changed due to the universalization of Grade R sites at state schools. Grade R now falls under the DBE and all practitioners are required to attain a professionally recognised teaching qualification: "The Diploma in Grade R Practices is the initial qualification for this sector", being an NQF Level 6 - 360 credits (DBE 2013b:6). The NQF provides a set of guidelines and principles that records learner achievement and registration for national recognition of acquired skills and knowledge, to ensure an integrated system that encourages life-long learning.

1.14.8 Reception Year/Grade R

The Reception Year is intended to provide all children with time in an introductory class before they enter the Grade 1 classroom. The Reception Year, typically referred to as Grade R, forms part of the Early Childhood Development Phase in South African schools. It is a comparatively recent introduction to the education system, as the first year of education for all South African children, incorporated into the Foundation Phase, which covers Grades R to 3 (DBE 2013b). The management of Grade R falls under the DBE.

According to Atmore, Van Niekerk and Ashley-Cooper (2012:126), "the main Early Childhood Development policy priority of the South African government after 2001 has been the establishment of a national system of provision, called Grade R for children aged between five and six years of age". The DBE's *Universal access to Grade R policy framework* (2013b:3) stated that "the admission age of children in Grade R is the age of four turning five by June in the year of admission or at the age of five turning six after June in that year".

1.14.9 Special schools

The *Guidelines for responding to learner diversity in the classroom: through curriculum and assessment policy statements* (DBE 2011b:35) defined a special school as "a school resourced to deliver education to learners requiring high-intensity education". The Departments of Basic Education and Higher Education and Training (DBE & DHET 2011) integrated their plans for 2011–2015 and prioritised special schools to function as resource centres, and to support full-service and mainstream schools in their quest to incorporate the Inclusive Education Policy proposed in Education White Paper 6 (DOE 2001b:50). Staff at special schools are expected to transfer their specialist knowledge by training full-service and mainstream staff on how to include learners living with CP, and on how to work from day-to-day with ADs to accommodate these children in an inclusive classroom. Lapham and Papilyan (2012:55) emphasised that special school staff need to attend "continued professional development programmes" in order to be able to provide this support.

1.14.10 Teachers

In order to teach in a classroom at a state school, a teacher in South Africa needs to have a degree in Education, according to the Personal Administration Measures (PAM) gazette

(DBE 2016b:41–44). A school-based classroom teacher must hold at least an REQV 13 qualification, which is equal to Grade 12 plus three years of relevant professional teacher training, and must be registered with the South African Council for Educators (SACE) as a professional educator.

1.15   OUTLINE OF CHAPTERS

Chapter 1: Background to the Study

The research problem is contextualised in Chapter 1, with the motivation for and significance of the study. An overview of methodology is provided and the main concepts are defined.

Chapter 2: Learners Living with Cerebral Palsy in the Reception-year Classroom

Literature pertaining to the development of the Grade R learner and the accommodation of Grade R learners with CP by teachers and practitioners at special schools is reviewed in Chapter 2.

Chapter 3: The Research Design and Methodology

In this chapter, the choice of research design and methodology are explained, and the population, sample, data collection and data analysis are described.

Chapter 4: Presentation and Discussion of Findings

In Chapter 4, the findings of the research are discussed.

Chapter 5: Conclusion and Recommendations of the Study

The final chapter outlines the findings, provides recommendations, and expresses the conclusion reached.

1.16   CONCLUSION

Chapter 1 presented the orientation and background of the study, as well as the research problem and the aims of the study. The relevant concepts were clarified and a brief

rationale was provided for the research design and methodology employed during the research process.

CHAPTER 2.
LEARNERS LIVING WITH CEREBRAL PALSY IN THE RECEPTION-YEAR CLASSROOM

2.1 INTRODUCTION

Children living with CP require specialised care and attention to accommodate their individual specific needs. In order to do this in the Reception-year environment, the practitioner and teacher have to wear many hats.

Education White Paper 6 mandated in 2001 (DOE 2001b:50) that special schools were to become resource centres and that the staff at special schools should support staff at full-service and mainstream schools because they had specialized knowledge on how to support the inclusion objective.

This chapter therefore begins with an explanation of the importance of Grade R, and then informs the reader about the demographics and distribution of children living with CP at special schools in Gauteng. The classification of CP and the associated conditions are discussed, and the types of CP found in developed countries are compared to those in developing countries. The benefits and impact of early, specialized intervention, adaptations to the environment and correct assistive devices (ADs) are explored. Finally, the extent of teacher and practitioner education on the practical day-to-day use of assistive technology (AT), ADs and augmentative and alternative communication (AAC) methods in the Grade R classroom and playground is examined.

2.2 RECEPTION YEAR (GRADE R)

As from 2019, Grade R will form part of the Foundation Phase at South African government schools. In planning for 2011–2025, the Departments of Basic Education and Higher Education and Training (DBE and DHET) (2011:5) decided that the admission age for children to enter Grade R in South African schools should be four, turning five by June in the year of admission.

This will afford all children a year of learning before entering formal school in Grade 1. Therefore, the purpose of introducing a reception year is to enable the child to be "school ready" by the end of Grade R. To do so, Grade R practitioners and teachers need to

follow the *National curriculum and assessment policy statements (CAPS)* published by the Department of Education (DOE) in 2012. The various CAPS guide both practitioners and teachers and set out as different themes what should be taught in the Grade R classroom.

2.2.1 Subjects

In 2013, the DBE published its *Universal access to Grade R* (DBE 2013b), which sets out the policy framework to allow all children access to Grade R. There they experience the new approach to teaching and learning in the Grade R classroom, brought about the introduction of the CAPS for Grades R to 12 (DOE 2012). The subjects prescribed for Grade R are Home Language, Mathematics and Life Skills, in an instructional time of 23 hours per week. The *Curriculum and assessment policy statement, Grade R, Mathematics*, (DBE 2011a:6) sets a time for Home Language of 10 hours per week. There is no First Additional Language subject in Grade R, but Mathematics is allotted seven hours per week and Life Skills has six hours per week, broken up into Beginning Knowledge (one hour per week), Creative Arts (two hours per week), Physical Education (two hours per week), and Personal and Social Well-being (one hour per week). The Grade R daily programme is recommended to run from 07:30 to 13:00 (DBE 2011a:15) (see the recommended timetable in Appendix 12).

2.2.2 Learning areas

The Grade R classroom is divided into different learning areas that are set up in the classroom and can spill out into the play area. These learning areas should consist of a theme table, a science table, a big block and construction area, a creative area, imaginative play or fantasy area, a literacy area, a library corner and the outdoor classroom or playground (DBE 2011a; 2015:2-3). The learning areas provide opportunities to develop the independence, teamwork, decision-making and responsibility skills shown in Figure 2.1.
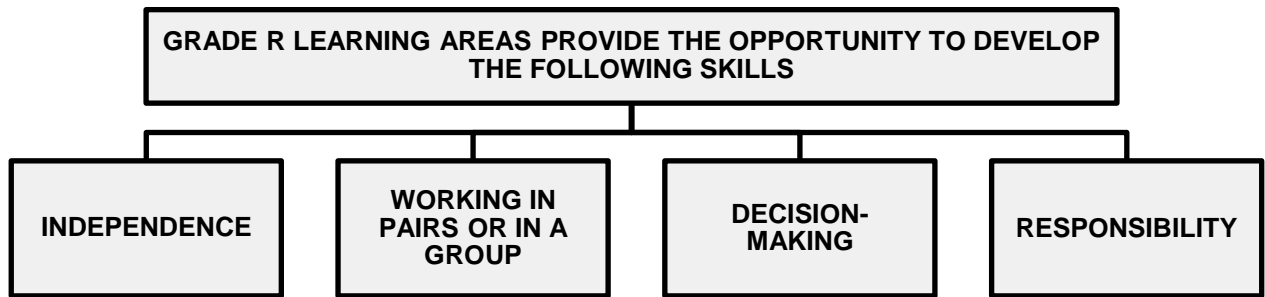
Figure 2.1   Specific learning areas in Grade R allow skills to be developed
Source: DBE 2011a; 2015:2-3.

Learning these skills should allow gross motor, social and good health skills to develop, as shown in Figure 2.2.
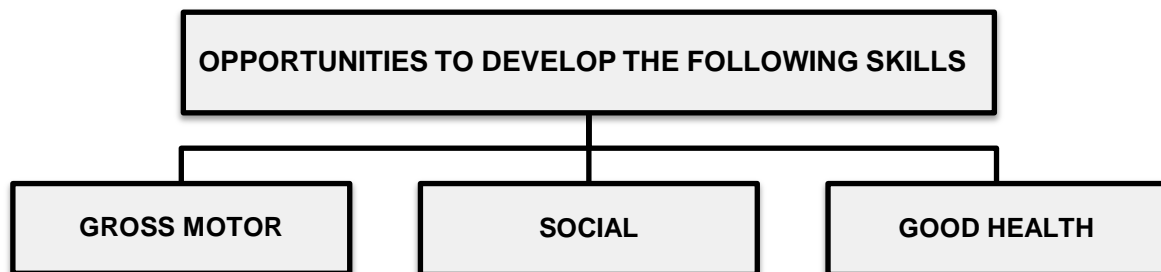
Figure 2.2   Skills to be developed in the Grade R environment
Source: Adapted from DBE 2015b:2-3.

Development theorists such as Freud (1856–1939), Watson (1878–1958), Gesell (1880–1961), Piaget (1896–1980), Erikson (1902–1994), Skinner (1904–1990), Bronfenbrenner (1917–2005), Bandura (1925-) and Chomsky (1928-) have all written about the importance of the early developmental years (Centre for Learning Innovation 2006:3). The practitioner or teacher in the Grade R classroom therefore has a very important role to play in getting children ready for "big school". De Jager (2012:1) defined school readiness as "when a child between 5 and 7 years old is ready for formal learning. This means the child is able to work independently, can sit still and do work that is of an abstract nature, and plays less".

2.3   STATISTICS OF CEREBRAL PALSY IN SOUTH AFRICAN SCHOOLS

The research study focussed on special schools in South Africa and specifically the young child living with CP in Grade R, which is now part of the Foundation Phase (Grade R and Grades 1-3).

According to the *Annual performance plan 2016/2017* of the Gauteng Department of Higher Education and Training (2016:32), the 2011 census data revealed a Gauteng population of 12,3 million people, a massive increase of 2.9 million people over the period 2001 to 2011. Statistics South Africa's *Community survey 2016* (2016:23) reported that the population of South Africa increased from 40,6 million in 1996 to 55,6 million in 2016, with the highest increase in those between five and nine years of age – from 4,8 million in 2011 to 5,6 million in 2016.

Figure 2.3 isolates the statistics on special schools and illuminates the increasing number of learners living with CP in the Gauteng province, where this research took place.

Statistics on Special Education in Gauteng

Learners

2010: 38 074

2014: 44 065

Educators.

2010:   3 385

2014:   3 602

Schools.

2010:   126

2014:   136
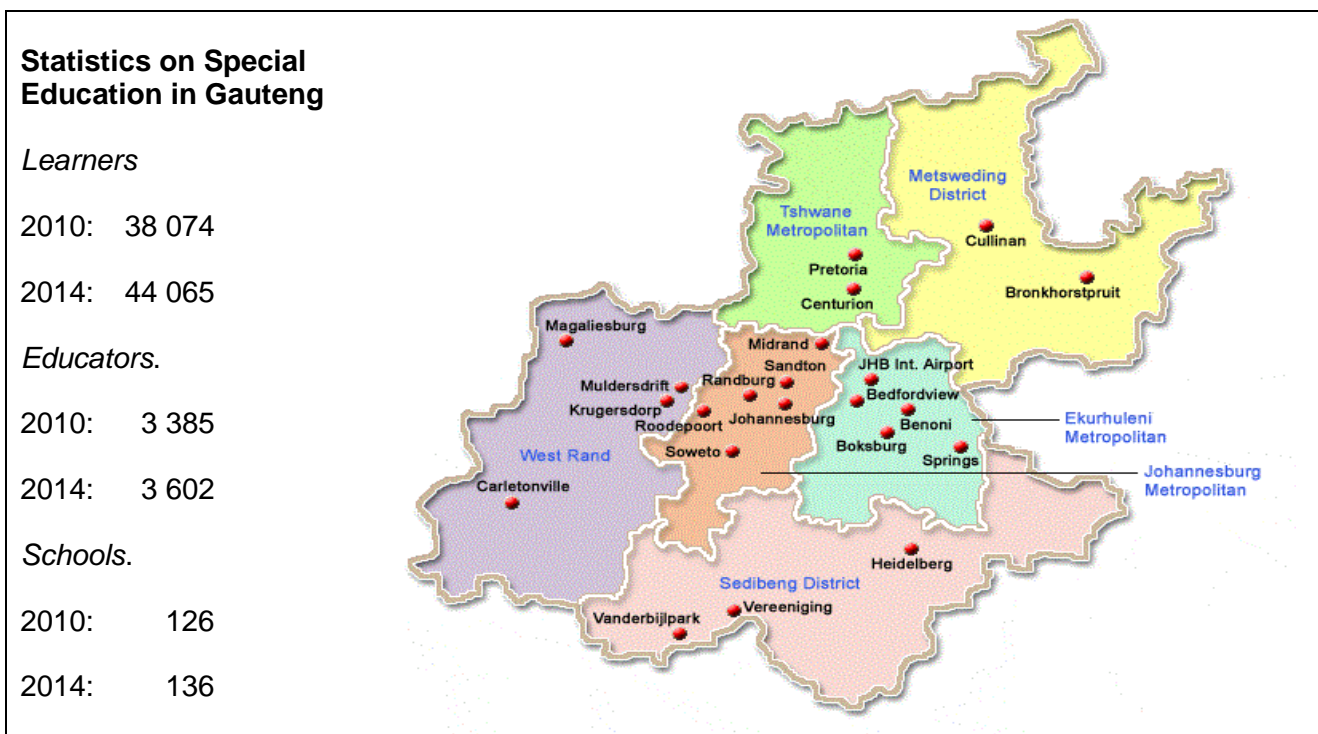
Figure 2.3   Statistics on special schools in Gauteng and a map of Gauteng
Source: DOE 2013; DOE 2015

The Gauteng Department of Education (GDE) had to allow for the growing number of learners in Gauteng special schools in its annual performance plan for 2016/17 (2016:35), as depicted graphically in Figure 2.4.
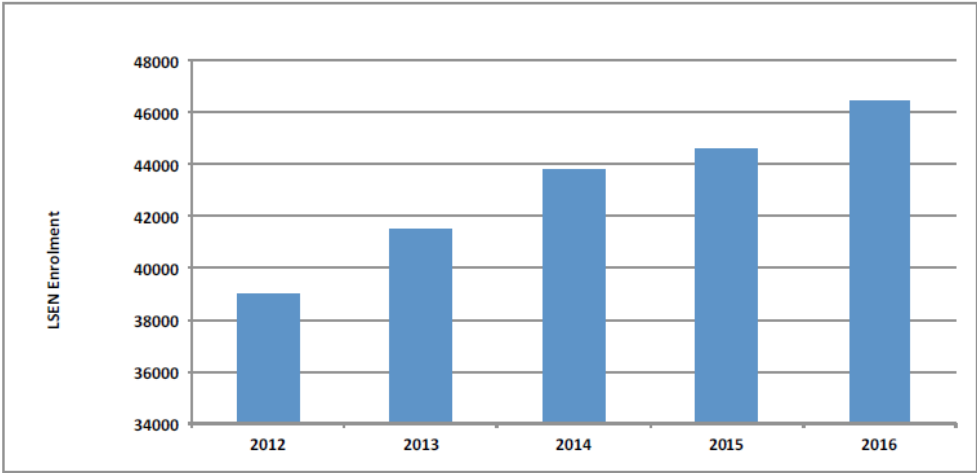
Figure 2.4   Increasing enrolment of learners with special education needs in Gauteng
Source: GDE 2016:35.

Figure 2.4 shows a steady increase in the special schools sector between 2012 and 2016. According to the GDE *Annual performance plan 2016/2017* (2016:35), "in 2015 there were 44 604 learners compared to 46 477 learners in 2016; this sector experienced a 4,2% growth in learner numbers".

Figure 2.5 shows the growth in Grade R enrolment between 2012 and 2016.
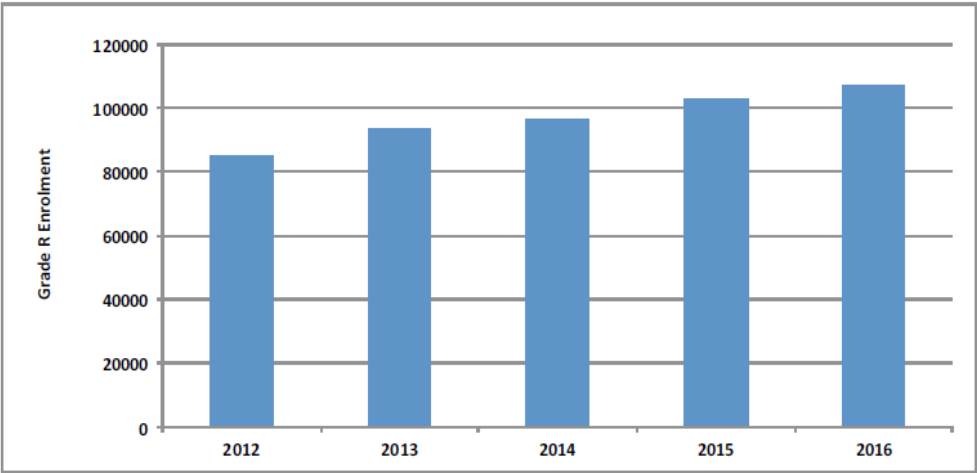
Figure 2.5   Increasing Grade R enrolment in Gauteng
Source: GDE 2016:35.

The enrolment in Grade R increased from "77 957 in 2011 to 107 317 in 2016, indicating an average increase of 6, 6% over a six-year period" (GDE 2016:35).

The statistics presented in this section provide one with a bird's-eye view of special education in South Africa and particularly in the Gauteng province.   McLaren (2014:1)

reported that CP is considered the single largest cause of childhood disability worldwide so it is evident that there must be an increasing number of children presenting with CP in Gauteng schools for learners with special educational needs.

2.4   CEREBRAL PALSY

According to the National Institute of Neurological Disorders and Stroke (NINDS 2012:Introduction), in the 1860s, an English surgeon named William John Little published the first medical descriptions of a disorder that affected children in early childhood. He noticed that the condition did not get worse as the child aged but stayed relatively the same.

For many years, the condition that we now call 'spastic diplegia' was known as Little's disease. He suggested that the condition was caused by oxygen deprivation during birth and that the soft sensitive brain tissue that controlled movement had been damaged. In 1897, Doctor Sigmund Freud disagreed with this theory as he was of the opinion that "difficult birth" was not the cause of this puzzling condition. His analysis suggested that the disorder might have its roots earlier, during brain development in the womb. "Difficult birth, in certain cases," he wrote, "is merely a symptom of deeper effects that influence the developing foetus" (NINDS 2012: no pagination). Doctor Freud described the changes, thereby linking them with the types of paresis (weakness - see Section 2.4.3.1). He is credited with refining the concept of spastic diplegia.

2.4.1   Causes of cerebral palsy

CP may be caused by many factors that, according to Early Support (2012:7), could include the mother's contracting an infection during pregnancy, premature birth, a difficult birth, illness and injury after birth, and genetic links – however the latter is extremely rare.

Figure 2.6 shows how damage to the three main areas of the brain affects the body.

The Basal Ganglia

This area controls the brain's ability to recall previously learned movement patterns, such as walking and sitting.

An injury in this region can cause a variety of tone disorders, such as and including hypertonia, dystonia, chorea and athetosis.

The Cerebral Cortex

This area produces a person's desire to move.

An injury in this region can cause spasticity (muscle stiffness), probably the most common tone abnormality associated with cerebral palsy.

The Cerebellum

This area monitors and maintains coordination during movements.

An injury in this region can cause tremors when movements are attempted, as well as hypertonia (low tone) and ataxia (poor coordination).

Figure 2.6   The cerebral cortex, the cerebellum and the basal ganglia, and the associated physical impairment when damaged

Source: Gillette Children's Specialty Healthcare 2009:8.

McLaren (2014:1) reported that the Disability Action Research Team (DART) found that "cerebral palsy is complex and difficult to diagnose". In South Africa, it is estimated that CP is mostly caused during or after birth. Perinatal causes include asphyxia or lack of oxygen during delayed or complicated labour, infections such as frequent tuberculosis, and meningitis associated with HIV. Postnatal causes include uncontrolled epilepsy, head injuries, near drowning and undiagnosed or prolonged yellow jaundice leading to kernicterus.

2.4.2   Cerebral palsy in developed and developing countries

The Cerebral Palsy Alliance (2015a:1) identified CP as the most common physical disability in childhood, stating that an Australian child was born with CP every 15 hours. The Centers for Disease Control and Prevention (2016:1) reported that an average of one in 323 children had CP in the United States of America, and that the global incidence of CP was 0,2 to 0,3%, with CP occurring in approximately three out of every 1 000 live births.

Research on 242 records of children with CP was conducted at the Stellenbosch University by the Department of Paediatrics at Tygerberg Hospital in Cape Town, South

Africa (Van Toorn et al 2007). The study compared the clinical spectrum of CP in developed and developing countries. The results are presented in Table 2.1.

Table 2.1   Cerebral palsy in developed and developing countries

Developed countries	Developing countries
Most cases were attributed to events before labour	Higher prevalence of post-neonatal-acquired cerebral palsy
	Central nervous system infections such as: • meningitis • encephalitis • anoxic encephalopathy • idiopathic and severe hypernatremia dehydration • bilirubin toxicity
Intrapartum asphyxia - Less than 10%	Severe birth asphyxia
Spastic diplegia and hemiplegia are the predominant types	Spastic quadriplegia is the predominant type.

Source: Adapted from Van Toorn et al (2007:74-77).

The incidence of CP in South Africa is difficult to determine exactly. However, there is growing evidence that CP is on the increase worldwide and that the most severe type of CP, spastic quadriplegia, is more prevalent in developing countries like South Africa. Spastic quadriplegia, where all limbs, body and face are affected symmetrically, presents along with moderate-to-severe mental retardation.

Van Toorn et al (2007:74-77) reported, "Developing countries seem to have more cases of CP that are associated with moderate-to-severe mental retardation, whereas in developed countries the prevalent types of cerebral palsy seen are those associated with a normal range of intelligence."

CP varies in severity from case to case and classification systems are a useful tool for identifying the severity of the disability.

2.4.3   Classification of the level of cerebral palsy

The classification systems described below will assist the practitioner and teacher in the early screening process in Grade R. The systems complement each other and allow practitioners or teachers to identify the adaptions and the assistive and AAC materials and methods to best accommodate the child in Grade R classrooms.

According to the Physiopedia's *Classification of cerebral palsy* (2017), parents and teachers alike can be guided by the following four classification systems to gain a better understanding of CP:

- the severity of the CP;
- the topographical classification of CP;
- muscle tone; and
- functional classification of CP.

The severity of the disability is usually indicated on a spectrum from mild to moderate to severe, in five cascading descriptive levels.

In the educational field, CP is usually classified by only two systems; namely, topographical classification, which refers to the affected parts of the body, and physiological or functional classification, which refers to the motor symptoms that are present (Botha cited in Landsberg et al 2005:290-294).

2.4.3.1   Topographical classification of cerebral palsy

The topographical system of classifying CP is widely used. Cerebral Palsy Care (2016:1) explained that this system refers to the parts of the body that are affected. It combines prefixes and root words, such as 'paresis' (meaning weakened) and 'plegia/plegic' (meaning paralyzed), to yield the terms in use today. Ataxia, athetosis, diplegia, monoplegia, quadriplegia, paraplegia, spastic hemiplegia and triplegia are explained in more detail below.

Ataxia

The Cerebral Palsy Alliance (2015a:5) stated that the word used to explain unsteady and shaky movements is 'ataxia' and that ataxic CP is the "least common type of cerebral palsy". Landsberg et al (2005:294) highlighted the main symptom of ataxia as lack of coordination and an inability to maintain one's balance, associated with lack of fine and/or gross motor coordination. This impairment causes clumsiness. Imbalance of the eye muscles often occurs, which makes reading difficult. The person with ataxia appears drunk and typically displays slurred speech and a high-stepping gait (Landsberg et al 2005:294).

Athetosis

Landsberg et al (2005:292) pointed out that athetoid (dyskinetic) CP is marked by excessive involuntary movements. These movements follow "no fixed patterns; they are described as irregular, arrhythmic, wriggling and writhing". This type of CP seems to affect the whole body but is more pronounced at the extremities. The muscles in the face are usually distorted and speech is usually affected, as are chewing and swallowing. There may also be postural problems caused by the uncontrolled movements, which may hamper walking and sitting. Athetosis is divided into two broad categories, namely cases with and without muscle tension (Advice Service Capability Scotland 2012).

According to the NINDS (2012), common tendencies include "muscle stiffness mostly in the legs and less severe in the arms and face, although the hands may be clumsy... Tightness in certain leg muscles make the legs move like the arms of a scissor. Intelligence and language skills are usually normal".

Monoplegia

One limb is affected, either an arm or a leg. Pure monoplegia is very rare (Landsberg et al 2005:290).

Diplegia

Usually the legs are affected more than the arms (Cerebral Palsy Care 2016:1). According to the NINDS (2012), common tendencies include "muscle stiffness mostly in the legs and less severe in the arms and face, although the hands may be clumsy... Tightness in certain leg muscles make the legs move like the arms of a scissor. Intelligence and language skills are usually normal".

Quadriplegia

This type of CP affects the movement in all four limbs (Landsberg et al 2005:291). The NINDS (2012) considers this to be the "severe form of cerebral palsy", which is often associated with "moderate to severe mental retardation; these children often find it difficult to communicate and may have 'non-functional' speech".

Paraplegia

Both the lower limbs are affected but not the upper limbs (Landsberg et al 2005:291).

Spastic hemiplegia (hemiparesis)

Hemiplegia is a neurological condition that weakens one side of the body and the effect is similar to that of having a stroke; the motor manifestations are on the side of the body opposite to the damaged side of the brain (Kennedy 2014:1). One side of the face may be affected; some children develop an abnormal curvature of the spine (scoliosis); some also have seizures, depending where the lesion on the brain is located; there may also be delayed speech, but intelligence is usually normal (NINDS 2012)(see Figure 2.9. "How spastic hemiplegia affects one's hands" on page 30).

Some people living with spastic hemiplegia have visual impairments as well.

Research conducted in Scotland showed that spastic hemiplegia or hemiparesis "occurs in 75% to 88% of people living with cerebral palsy, making this kind of cerebral palsy the most common type" (Advice Service Capability Scotland 2012).

Triplegia

With triplegia, three limbs are affected, either both arms and a leg, or both legs and an arm. The upper or lower extremity of the face may also be affected (My Child 2016:1).

Figure 2.7 illustrates types of CP classified topographically.
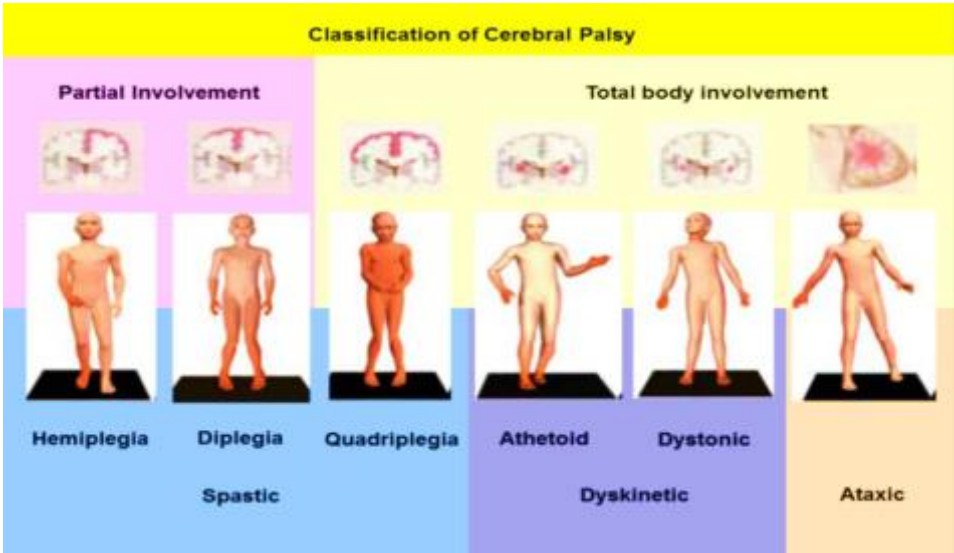
Figure 2.7   Topographical classification of cerebral palsy
Source: Zan Mitrev Clinic 2017.

2.4.4 Physiological classification of cerebral palsy

Physiological or functional classification refers to the motor function and control of the body (Botha & Kruger cited in Landsberg et al 2005:288). The following variations are dealt with in more detail below:

- gross motor function;
- manual ability;
- communication function; and
- eating and drinking ability.

Gross motor function

The Gross Motor Function Classification System (GMFCS) is a tool that practitioners or teachers in Grade R can use to guide them on the different levels and abilities of the child living with CP (see Figure 2.8). Mater, Olds, Williams and Lane (2008 cited in Redford 2012) claimed that children functioning at Gross Motor Function levels 1 to 3 are often in mainstream or full-service schools.

Manual ability

The Manual Ability Classification System (MACS) was specially designed for children with CP aged 4 to 18 years of age, and describes how they handle objects in everyday activities (Eliasson, Krumlinde Sundholm, Rosblad, Beckung, Arner, Ohvall & Rosenbaum 2006).

The MAC system enables practitioners and teachers to evaluate a child's ability to use his or her hands effectually. Table 2.2 and Figure 2.9 give an idea of the debilitating effect of CP on hand function.

Table 2.2   Manual Ability Classification System

Level 1	Level 2	Level 3	Level 4	Level 5
Objects are handled easily and successfully	Handles most objects but with some reduced quality and or speed	Handles objects with difficulty - the child will need help to prepare and /or modify activities	Handles a limited selection of easily managed objects and always requires some help from others	The child is not able to handle objects or to complete even simple actions with his or her hands

Source: Adapted from Eliasson et al 2006.

Gross Motor Function Classification System (GMFCS) for Children

	GMFCS Level 1 Children walk indoors and climb stairs without difficulty. They can perform gross motor functions, such as running and jumping, but speed, balance and coordination are impaired.
	GMFCS Level 2 Children are able to walk indoors and climb stairs holding onto a railing. However, they experience limitations walking on uneven surfaces and inclines and walking in confined spaces.
	GMFCS Level 3 Children walk indoors and outdoors on a level surface with an assistive device. They may climb stairs holding onto a railing. They can propel a manual wheelchair, especially when traveling long distances or on uneven terrain.
	GMFCS Level 4 Children may walk for short distances using an assistive device such as a walker. They may rely more on wheeled mobility at home, in the community and at school.
	GMFCS Level 5 Physical impairment restricts voluntary control of movement and the ability to maintain antigravity of head and trunk postures. All areas of motor function are limited. Some children may be able to control an electrical wheelchair. Those with no means of independent mobility are transported.

Figure 2.8   Gross Motor Function Classification System for Children

Source: Adapted from Palisano, Rosenbaum, Walter, Russell, Wood & Galuppi 1997:214-223.
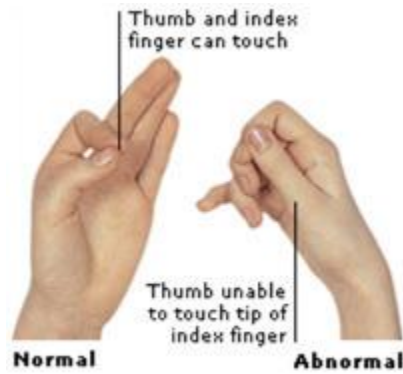
Figure 2.9   How spastic hemiplegia affects one's hands

Source: Dorling Kindersley Complete Home Medical Guide 2010, vs. "cerebral palsy" in Aviva 2016.

Communication function

Communication function classification helps understand the everyday difficulties in speech that a child living with CP might encounter, and describes the resultant limitations. The Communication Function Classification System (CFCS) is useful for isolating the different components of communication, and is an excellent starting point for considering which AAC methods and materials would be beneficial to a particular child.

Table 2.3   Communication Function Classification System

Level 1	Level 2	Level 3	Level 4	Level 5
•Effective Sender and Receiver with unfamiliar and familiar partners	•Effective but slower paced Sender and/or Receiver with unfamiliar and/or familiar partners	•Effective Sender and Receiver with familiar partners	•Inconsistent Sender and/or Receiver with familiar partners	•Seldom Effective Sender and Receiver even with familiar partners

Source: Adapted from CFCS Level Identification Chart in Hidecker, Paneth, Rosenbaum, Kent, Lillie, Eulenberg, Chester, Johnson, Michalsen, Evatt & Taylor 2011:1-4.

A small percentage of people living with CP may have no speech; others may have difficulty speaking, due to their inability to control the muscles in the mouth, tongue, palate and voice box. This also affects eating and drinking.

Eating and drinking ability

Table 2.4 provides a scale of guidelines called the Eating and Drinking Ability Classification System (EDACS) to help Grade R practitioners and teachers decide on the ADs to use with a child who has difficulty eating and drinking.

Table 2.4   Eating and Drinking Ability Classification System

level 1	• Eats and drinks safely and efficiently.
level 2	• Eats and drinks safely but with some limitations.
level 3	• Eats and drinks with some limitations; may be limitations to efficiency.
level 4	• Eats and drinks with significant limitations to safety.
level 5	• Unable to eat or drink safely - tube feeding may be considered to provide nutrition.

Source: Adapted from Chailey Clinical Services 2017.

Pohl and Cantrell (2006:14) determined that feeding problems (dysphagia) are common in children with CP.

2.4.5   Nutrition and feeding difficulties

Pohl and Cantrell (2006:14) found that 37% of children with diplegia or hemiplegia, and 86% of children with quadriplegia have feeding problems. Miller (2012) stated that minor "feeding problems" occurred in 25%–35% of normally developing children, and that 75% to 80% of children with CP may have dysphagia at some point.

The American Speech-Language-Hearing Association (2015:1) reported that children with dysphagia could be in danger of being dehydrated or malnourished. In Grade R, the children are served a cooked meal at lunchtime and it falls on the shoulders of the practitioner to help feed a cerebral palsied child who is unable to feed himself.

Practitioners and teachers in Grade R should research the importance of good nutrition for brain development (Singh 2003) and take into consideration the weight, height and age of the child. Atmore et al (2012:22) indicated that "all meals and snacks should meet the nutritional requirements of the children". Just like any other child, children with CP need adequate calories, protein, vitamins, minerals and fluids to sustain healthy growth; their caloric needs are 60% to 70% of the recommended daily allowance (Pohl & Cantrell 2006:21).

When feeding children with CP, the meal must not be rushed as this could cause distress and embarrassment to the child.

2.4.6 Associated physical and cognitive issues

Table 2.5 gives the reader an overview of the associated physical and cognitive issues affecting children who are living with CP.

Table 2.5   Physical and cognitive issues associated with cerebral palsy

ONE IN THREE IS UNABLE TO WALK	ONE IN FOUR IS UNABLE TO TALK	ONE IN TWENTY HAS A HEARING IMPAIRMENT	ONE IN FIVE IS DEAF
ONE IN FOUR HAS EPILEPSY	THREE IN FOUR EXPERIENCE PAIN	ONE IN FOUR EXPERIENCE BLADDER INCONTINENCE	ONE IN TWO HAS AN INTELLECTUAL IMPAIRMENT
ONE IN FIVE HAS A MODERATE TO SEVERE INTELLECTUAL IMPAIRMENT	ONE IN THREE HAS HIP DISPLACEMENT	ONE IN FIVE HAS SALIVA LOSS	ONE IN FIVE HAS A VISUAL IMPAIRMENT
ONE IN TEN HAS A SEVERE VISUAL IMPAIRMENT	ONE IN FIVE HAS A SLEEP DISORDER	ONE IN FOUR PRESENTS WITH A BEHAVIOUR DISORDER	ONE IN FIFTEEN REQUIRES NON-ORAL FEEDING

Source: Adapted from Cerebral Palsy Alliance 2015b; WHO 2015:15.

2.4.7 The importance of specialized knowledge about cerebral palsy

Section 2.4.1 described causes of CP, Section 2.4.2 looked at global CP statistics, Section 2.4.3 introduced the classification systems, Section 2.4.5 described nutrition and feeding problems, and Section 2.4.5 tabulated the physical and cognitive issues associated with CP. From the above, it is evident that CP has many facets. It is, therefore, pertinent to add some concluding remarks about the importance of specialized knowledge.

Young children living with CP who are in the Foundation Phase cannot speak for themselves and cannot explain their impairment. They also cannot explain their personal needs and what kind of support they need. The Grade R classroom is often the first time many young children living with a physically disability experience 'school'. They have to

adapt to a new environment and are faced with many obsticales and challenges. It is therefore vital that Grade R practitioners and teachers have an in-depth, specialized knowledge of CP and its implications for the performance of the child in the classroom situation. The multifaceted nature of CP means that these children have many diverse special needs and their condition is not cut and dried.

If the adults truly understand CP, their understanding leads, more often than not, to compassion and tolerance. If they do not understand the frustrations of a child living with CP, the child is often labeled as naughty or uncooperative. As a result, the child could be isolated and excluded, at the very time when he or she should be exposed to as many play and educational activities and experiences as possible.

Practitioners and teachers should use the classification systems to help them choose the correct accommodations for the children. The correct AD in the hands of a professionally trained teacher can be life-changing for a young child living with CP (Chien-Yu 2012).

2.5   ASSISTIVE DEVICES AND TECHNOLOGY

The life-changing impact of an AD should not be underestimated. Correct training of the teacher can mean the difference between success and failure for the child. Teachers who study for a degree in Early Childhood Education learn how to make their own teaching materials. Low-tech AAC materials are made by using photographs, for example, and even some high-tech materials can be made with a little creativity (Chien-Yu 2012).

2.5.1   Assistive devices in the Grade R classroom

The most challenging aspect of educating young children who live with CP is the need to incorporate AT, ADs and AAC methods or materials into their daily lives. The correct AD may well contribute to levelling the playing field for physically impaired young children by affording them the opportunity to interact with their environment through movement. Being able to move allows them to play, develop social skills, and explore their life world. The correct AD could be considered the missing link in the chain that gives children the chance to interact with their life world, thereby reaching their full potential.

An AD can be anything from a simple pencil grip (low-tech) to the most sophisticated computerized communication system (high-tech). There is usually an assessment

conducted by a multi-disciplinary team of specialists (McLaren 2014:2) before the correct AD for the child is prescribed.

As young children are still growing, adjustments will be needed from time to time, or even a completely new device, to keep in line with the child's developmental and physical needs. With each new AD, the teacher will need training and instructions on how to use it, and how to introduce the child to the use of the new device in the classroom environment, as well as information on how to take care of the device.

In the next discussion, just a few of the assistive devices and assistive technologies that can help make learning and playing in any Grade R classroom exciting and educational are included. Figures 2.11 to 2.16 show a variety of relatively inexpensive low-tech devices.

- Figure 2.11 shows a young child using a large grip of crayons (Research conducted by Levin (2010:98) on how ADs support handwriting for children with disabilities found that there was "a significant difference in writing speeds when the children were using ADs versus when no ADs were utilised").

- Figure 2.12 shows a pair of "easy open" scissors that are lightweight, easier to grip, and do not require much muscle effort. Their self-opening handles are operated by a slight gentle pressure between the thumb and fingers or fingers and palm (Yankova & Yanina 2010:277).

- Figure 2.13 introduces the reader to a fun idea of personalised communication books. These can be adapted for any activity at any time.

- Some battery operated toys have a simple on/off switch that can be adapted by simply adding a special adapter cord and a switch, as is shown in Figure 2.14. This allows a child to press or bang on the large round switch to activate the movement of the toy.

- In Figure 2.15, the computer keyboard is fully sealed. This helps prevent the spread of infection as it is easy to clean. It is also waterproof, which is ideal for children who dribble.

- The recording device in Figure 2.15 can record any single message or play messages up to two minutes long. It has a large target area for easy activation of the device.

- The joystick shown in Figure 2.16 does not require fine motor skills to operate it. It assists with moving the curser and is suitable for a wide range of computers.

Figure 2.10 Adapted crayon holder for the preschool child

Source: Satterfield (2009:22)

Figure 2.11 A pair of easy-open scissors

Source: Satterfield 2009.

Figure 2.12 A manual communication book

Source: Inclusive Solutions [sa]:85

Figure 2.13 A switch to operate a toy

Source: Inclusive Solutions [sa]:24.

Figure 2.14 A computer keyboard

Source: Inclusive Solutions [sa]:25.

Figure 2.15 A recording device

Source: Inclusive Solutions [sa]:5

Figure 2.16 A joystick used as a mouse

Source: Inclusive Solutions [sa]:32.

A child living with a mild physical disability, such as hemiplegia, and who is on Level 1 of the GMFCS would most likely make use of low technology, such as a picture timetable or a non-slip mat or Prestik placed under a book to stop it slipping.

Children in the Grade R classroom are at the age where they are beginning to write their names. A rubber stamp with the child's name on it can be a fun way to 'sign' his or her name (Edyburn 2006:21).

There are many assistive devices that the teacher and the practitioner can make themselves. This can be turned into a fun activity like giving the children an inexpensive camera and asking them to take photos of items in and around the school. This can be placed in a photo album as a discussion point in the library area.

Figure 2.17 is a diagram of the most commonly used ADs and technology for young children in Grade R.

Adapted pencil grips	Hand and leg splints	Walking and standing frames
Adapted toys and games	Artificial limbs	Manual and powered wheelchairs
High-tech and low-tech AAC devices	Eyeglasses and magnifiers	Adapted cutlery and crockery
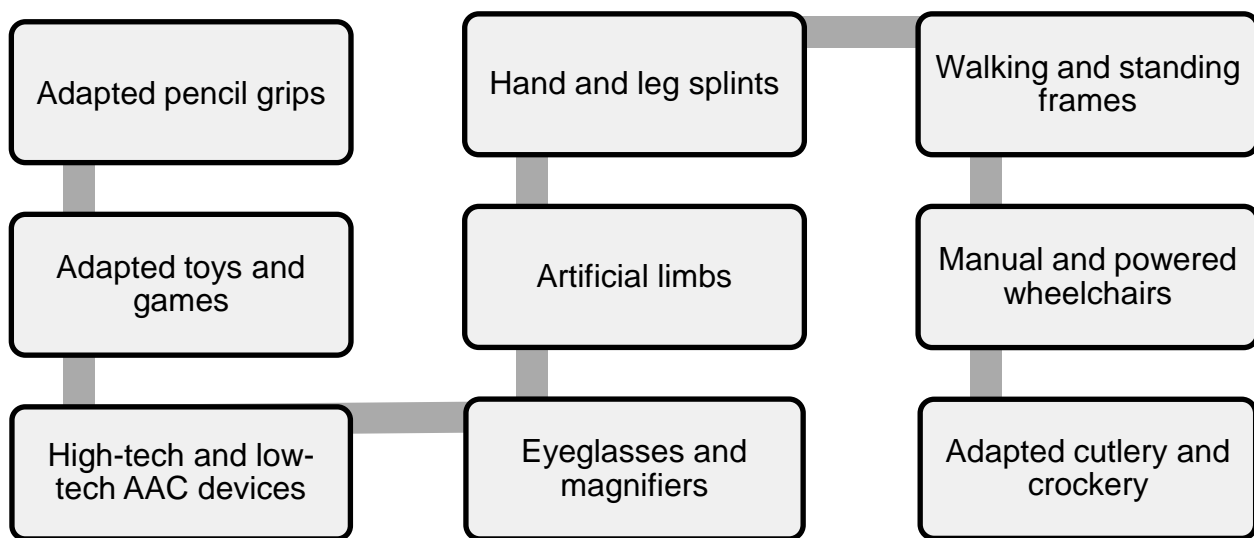
Figure 2.17 Common assistive devices and technology for Grade R children

Source: Adapted from Cerebral Palsy Alliance 2015b.https://www.cerebralpalsy.org.au/what-is-cerebral-palsy/how-cerebral-palsy-affects-people/

2.5.2   Augmentative and alternative communication methods and materials

A term commonly used when defining the kind of additional help needed by children who are unable to speak is 'AAC'. It describes the different ways of communicating, either to support speaking (augmentative) or instead of speaking (alternative). The simplest AAC methods involve gestures and communication boards, but there are many other specially designed assistive communication devices.

Almost everything we do involves some kind of communication. Everyday tasks, such as making friends, communicating our wants and needs, or just having a good time, all rely on our ability to communicate with other people. In our modern world, being able to communicate is as important to our existence as oxygen.

2.5.2.1   Communication boards

Communication boards are simple and easy ADs for accessing knowledge and for a young child to communicate wants and needs. They can be high- or low-tech. They allow the young nonverbal child to communicate with people in their immediate vicinity. Grade R teachers or practitioners would easily be able to make simple communication boards (see Figure 2.12 on page 35).

Pain

Children living with CP are often in pain (see Table 2.5 on page 32, which indicated that three out of four children experience pain). They need a way of communicating when they are in pain (Johnson 2015:1), such as especially designed communication boards, like the six faces showing increasing levels of pain in Figure 2.18.

Figure 2.18 The faces pain scale
Source: Von Baeyer 2007; Blackstone & Pressman 2011:16.

Abuse

Teachers and practitioners need to be aware of the possibility of physical abuse, which is why Bornman, Bryen, Kershaw & Ledwaba (2011) developed communication boards to help the child to communicate any abuse, and to help the teacher or practitioner to understand the extent of the abuse (see Appendix 13).

2.5.3   Assistive technology

In our modern world, physically impaired people are able to purchase and use many ADs. People who are deaf and people with non-functional speech, in and out of the classroom, can use the computer and cell phone. iPads are very popular ADs as there are many free apps to download, which are not only educational but fun as well, like the easy-to-use example in Figure 2.19.

Figure 2.19 AAC vocabulary app that turns symbols into clear speech
Source: Inclusive Solutions [sa]:42

One of the most famous persons to use the latest AAC technology must be Stephen Hawking.   Because of his degenerative motor-neuron disease, he relies on AT to communicate with people around the world. Professor Hawking uses cheek movements to navigate around his computer (Hawking [sa]).   He has been working with a team of research experts from Intel who developed a program called SwiftKey, enabling him to type twice as fast as before (Sawers 2014). The program remembers what the professor typed previously and predicts what he plans to type, based on the history of his use of words and word patterns.

2.5.4   Concluding remarks about assistive devices and technology

Section 2.5 explained how assistive devices and materials help to level the playing field for the physically disabled young child. However, teachers, therapists and parents have many devices to choose from, ranging from low-tech to high-tech. The quality of a child's early learning experiences and environment in Grade R play an important role in strengthening or weakening the architecture of the child's growing brain (The National Scientific Council on the Developing Child 2004).   Specific experiences affect the different parts of the circuits of the brain during specific stages of development.   These specific windows of learning opportunities are referred to as 'sensitive periods' (Montessori 1992b). They need to be capitalized on by using ADs and AAC materials and methods to ensure that a sensitive period for learning is not a missed opportunity for the physically impaired child.

The importance of the correct AD, adjustment time and kindly, knowledgeable supervision cannot be over-emphasized.

2.5.4.1 The importance of the correct assistive device

A child living with CP should be assessed by a team of specialists on entering Grade R so that the correct AD can be prescribed and introduced to both child and teacher.

2.5.4.2 The importance of giving time

Grade R teachers should recognize that very young children living with CP are still learning how to cope with their disability, and should give them as much time as they need to adjust to their new environment while interacting with their peers.

2.5.4.3 The importance of well trained, enthusiastic supervision

Children, including those living with CP, learn through playing, and Grade R teachers do more than teach them; they nurture and guide their young charges holistically. Therefore, they need to understand brain development and childhood developmental milestones, to have a keen eye when observing children interacting with their peers and, above all, to have patience and a kind sense of humour. They need to know how to assist the child to become school-ready, and this requires concrete training using the devices themselves.

Many low-tech devices or communication boards can be handmade by the teacher or the child. This in turn leads to a learning experience while playing; for example, taking photos in the classroom environment and gluing them onto paper.

The correct AD and a well trained, enthusiastic teacher can make the world of difference to the success and self-esteem of a child living with CP.

2.6 THE YOUNG CHILD IN GRADE R

The young child in Grade R is generally four to six years old, an age when children develop their social and cognitive skills, mature emotionally and learn about the world around them. As Montessori so eloquently states, young children "absorb their environment" (1992:5). A young child in Grade R only has this year of discovery learning to prepare him or her for 'big school'. It is therefore imperative that teachers and practitioners make Grade R a quality year (DSD 2015:21).

The importance of quality early childhood education is no secret: Literature and research in the fields of ECD and the critical years from birth to six years of age abound. "The

greatest prospect of reducing disability or improving the lives of children is the early identification and support given to children and their families". It is for this reason that ECD services "are critical for identifying and supporting children with disabilities, and further work needs to be carried out on the challenges for integrating children with disabilities into early childhood development services" (Atmore et al 2012:47).

Children with disabilities, impairments or barriers to learning need to be identified as soon as possible, to try to limit the extent of the impairment. Early inclusive support is extremely important because the earlier the problem is addressed, the better. The combined timing and quality of early experiences shape the brain 'architecture' of a young child (DOE 2001a:7).

2.6.1   The importance of play

A free play area allows the creative teacher or practitioner to offer age-appropriate, exciting and stimulating, multi-sensory materials and games, so that the children can explore through their senses, learning to distinguish the different textures, tastes or smells, and to experience how things feel, look, and sound. The materials and games can foster a child's growth and imagination by giving them opportunities to play, discover and explore. This will encourage their natural curiosity. Children need many chances to play and interact with age-appropriate, interesting activities.

According to Gray (2010: no pagination), children are "directed, protected, catered to, ranked, judged and rewarded by adults". There is no freedom to play away from the adults and the resultant sense of helplessness and lack of control over their own choices leads to frustration and, eventually, depression.

In an article in *The Washington Post* on 1 September 2015, Valerie Strauss described the work of Angela Hanscom, a paediatric occupational therapist and author, who said, "We are consistently seeing sensory, motor and cognitive issues pop up more and more in later childhood; partly because of inadequate opportunities to move and play at an early age. Preschool children need to play! It would seem that the value of play has been devalued in our modern society".

2.6.2　The importance of a quality Reception Year

As far back as 1992, Montessori (1992b:36) provided an insight into the importance of the early years in the development of human beings. She said, "[M]any permanent defects, like those of speech, are acquired when one is a child because we neglect to take care of individuals at the most important period of their lives when their principal functions are formed and stabilised, that is when they are between the ages of three and six".

In 2001, the DOE recognised in its Education White Paper 5 (2001a:6) that providing learners with quality early childhood education would go a long way towards eradicating the "under-preparedness" of young children when entering schools.

Children need a safe, clean and loving environment. For young children, the world is a world of relationships. Relationships are the main component of the environmental influences that lead to healthy human development. For children to develop well and healthily, they need secure and caring relationships with adults who are concerned about their well-being, both within and outside the family.

According to the National Scientific Council on the Developing Child (2004:1), even the development of a child's brain is dependent on the creation of good relationships with other people. Figure 2.20 shows the importance of quality education by a highly trained, professional team of practitioners and teachers in the period from birth-to-five-years, when the neural connections for vision, hearing, language and higher cognitive function are developing sequentially.
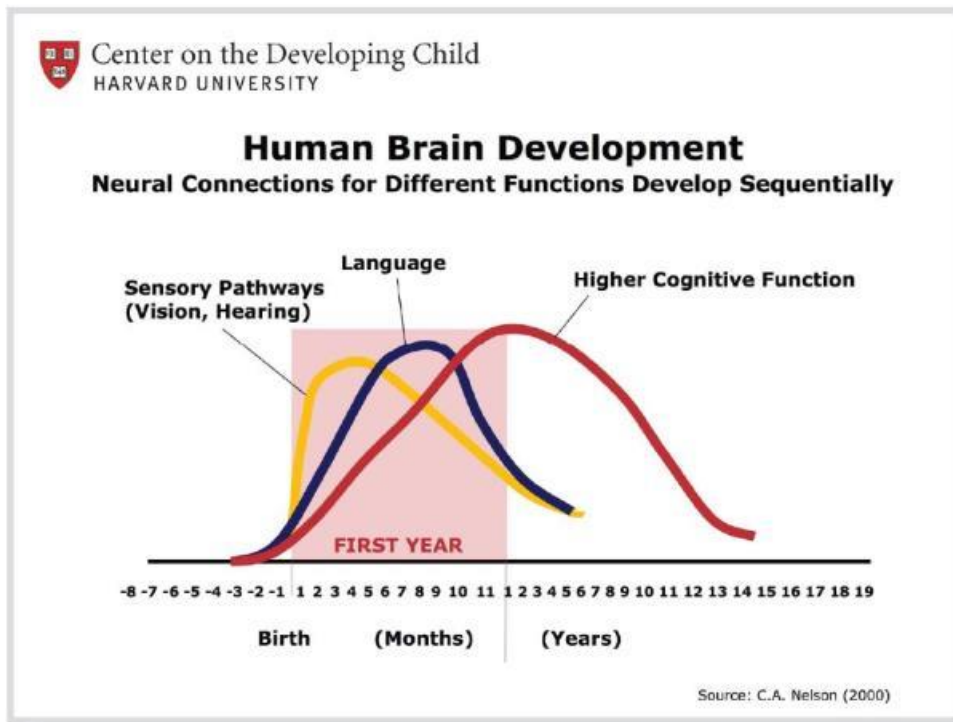
Figure 2.20 Graph of neural connections in the developing brain
Source: https://developingchild.harvard.edu/.

2.6.3   The importance of teachers and practitioners

Children discover their world through movement and play, learning through their senses while playing and exploring their environment (Montessori 1992a:5). Jean Piaget believed that "movement is essential to the formation of intellect" (Olds 1994:32-33 cited in Krog 2010:2) but young children living with CP "seldom initiate play" and are given "lower status" play roles by their peers (Tamm & Skar 2000 cited in Malkawi 2009:1-2).

Most children who live with a physical impairment such as CP have to use ADs to move around and to play, therefore any person who deals daily with such children should be informed about ADs.   This means that teachers and practitioners need to undergo intensive, practical training in using them to help the children to move in their environment.

Research on ECD stresses the importance of correct timing for acquiring knowledge, as well as the importance of interaction between the child and the environment. For example, Oates (2012:28) emphasized that, "because different elements of the brain have their growth peaks at different times", there are "sensitive periods when different environmental influences are important". It is the teachers' and the practitioners' responsibility to create a stimulating and safe environment while keeping in mind the 'sensitive periods' for learning and development.

As Hohmann (cited in Singh 2003) so graphically put it, "His genes are the bricks and mortar to build a brain. The environment is the architect". The teacher is the architect of his/her Grade R environment.   A well-educated teacher should offer his/her class of children challenging opportunities that are still within their capabilities. The teacher must always embrace the concept of the development of the whole child. Proper planning of the classroom and the outdoor play area is very important for successful teaching in the Reception-year classroom and playground.

The foregoing proves that the Reception-year (Grade R) classroom should be a busy and interesting place, rich with child-centred activities, with a practitioner and teacher who carefully and thoughtfully set out the learning environment for play and incidental learning (as a producer sets a stage). The teacher should be pro-active, a mediator rather than a facilitator, and make the most of opportunities when the young child's natural curiosity is stimulated to provide "teachable moments" (DOE 2012:24). South African schools and the adults who teach in the Grade R classroom have a wonderful opportunity to give the future citizens of this country an excellent beginning to their future academic careers.

To achieve this, the people who train Grade R learners need to be well qualified and well informed about all types of impairment, and especially about CP. Yet, in 2005, Bartell (2005:4 cited in Kempen 2010:25) bewailed the fact that the need for well-qualified, highly competent teachers has never been greater.   In 2007, Rossi and Stuart (2007:151) concluded that there were so many Grade 1 learners in South Africa who were at risk that educational authorities should address the problem of young learners who received inadequate stimulation from staff members who were not trained.

2.6.4   The importance of professional qualifications

In 2013, the DBE gave all practitioners until 2019 to improve their qualifications, and specified that they must have at least a Level 6 professional teaching qualification by this deadline. The department stated, "The Diploma in Grade R Practices is the entrance qualification for this sector", being a NQF Level 6 with 360 credits (DBE 2013b:6). However, according to Andrich, Hill and Steenkamp (2015), from 2015 onwards, only the BEd (Foundation Phase) degree will give practitioners and teachers access to permanent teaching posts in Grade R classrooms.

The Department of Women, Children and People with Disabilities report on children in special schools testified that only "47.8% of staff has been trained in the use of the ADs

currently in use" (2013:18). Herein may lie the greatest challenge of the ECD and Foundation Phase today at special schools.

In an research article entitled *Power mobility and socialization in preschool: a case study of a child with CP*, Ragonesi, Chen, Agrawal and Galloway (2010:323) mentioned that the child in the North American study "was enrolled in a centre with 250 children; in his class were 10 to 15 children and 2 teachers". However, in most of our South African classrooms, we only have one teacher in a pre-school classroom.

The *Universal access to Grade R: policy framework* (DBE 2013b:5) stipulated that the ratio of learners to practitioners in the Grade R classroom should be 30:1.

The Departments of Basic Education and of Higher Education and Training addressed the problem in their integrated plan for 2011–2025 (DBE & DHET 2011), proposing that the Department of Higher Education and Training would work with universities to train more ECD practitioners and Foundation Phase teachers (2011:16). According to the *National curriculum and assessment policy for Foundation Phase Home Language* (DOE 2012), Grade R–3 learners with barriers to learning would be recognised and provided with the relevant support structures; these would include their teachers, district-based support teams, institutional-level support teams, their parents and special schools. Teachers are advised to consult the DBE's *Guidelines for inclusive teaching and learning* (2010).

2.7   CONCLUSION

In this chapter, the implications of having a child living with CP in the Grade R class were clarified. The importance of Grade R, the classifications of CP, the associated conditions, ADs and AAC methods were all described in depth.

Section 2.3 responded to Objective 1: "To investigate the prevalence of cerebral palsy in South African schools", in order to answer Research Sub-question 1: "What are the statistics of children living with cerebral palsy in South African schools?"

Section 2.4 responded to Objective 2: "To define the term 'cerebral palsy'", in order to answer Research Sub-question 2: "What is cerebral palsy?" The literature review showed that CP creates diverse barriers to teaching and learning in Grade R, which partially answers Research Objective 4: "To identify the challenges a Grade R practitioner and a

Grade R teacher experience that may cause barriers to teaching and learning in their classrooms".

Section 2.5 responded to Objective 3: "To describe assistive devices that can be used to accommodate cerebral palsied children in Grade R, including the different kinds of augmentative and alternative communication strategies that can be used to communicate effectively with them", in order to answer Research Sub-question 3: "What are assistive devices?"

Sections 2.2 and 2.6 addressed Research Sub-question 4: "Who is the young child in Grade R?"

The next chapter explains the design and methodology of this research study.

CHAPTER 3.

THE RESEARCH DESIGN AND METHODOLOGY

3.1   INTRODUCTION

A qualitative investigation was followed in this study. 0 was an orientation to the study and explained the motivation for the main research question: whether the practitioner and teacher, who were the participants in the study, were able to use ADs and to adapt the Grade R classroom and playground to accommodate young children living with CP.

The literature review in Chapter 2 provided general answers to the research sub-questions about the statistics of children with CP in South African schools, what cerebral palsy is, what assistive devices are, and who the young child in Grade R is.

The focus of Chapter 3 is to describe and discuss the research design and methodology used to collect specific data on how a teacher and a practitioner accommodated the young child living with CP at Grade R sites at two special schools.

This chapter also provides a detailed description of the data collection process, ethical considerations and limitations of this study. The chapter ends by explaining the significance of the study in a broader context.

3.2   RESEARCH METHODOLOGY

A methodology defines how a researcher studies any phenomenon (Silverman 2000 cited in Human 2010:9). The approach can be quantitative or qualitative.

3.2.1   Qualitative approach

Creswell (2010:56) explained that the aim of qualitative research studies is to engage in research that probes for a deeper understanding of a phenomenon rather than to search for causal relationships, and it sets out to penetrate the human understanding and the construction thereof. Picciano (2004:32) indicated, "Qualitative research requires seeing and hearing as well as experiencing and exploring activities in their natural settings, such as schools, playgrounds and classrooms".

In this case, a qualitative approach was appropriate because the nature of the research problem required data to be collected through observation in the classrooms to establish how the practitioner and the teacher adapted the Reception-Year classroom and which ADs they incorporated to assist and support the young child living with CP. The research also encompassed one-on-one interviews with the teacher and the practitioner at their two special schools.

This study used constructivism as its research paradigm because it aligns well with a qualitative research approach. Constructivism is a theory that people learn by reflecting on experiences (Murphy [sa]:11).

3.3   RESEARCH DESIGN

According to McMillan and Schumacher (2006:22), a research design refers to the plan and structure of the investigation method used to gather evidence to answer the research questions; it describes the procedure for conducting the study, including when, from whom and under which conditions the data will be obtained. Mouton (2006:55) saw research design as a blueprint of how one intends conducting the research. It is essential to choose a research design that will ultimately yield the desired result (Creswell 2010:78).

3.3.1   Case study

McMillian and Schumacher (2010:344) and Creswell (2010:75) argued that a case study affords a better understanding of the problem. Constructivism is associated with case studies because it allows the researcher to experience the real situation and construct an understanding of it by reflecting on those experiences (Murphy [sa]:11). Reality is diverse and is expressed in many symbolic and language systems of humans (Denzin & Lincoln 2000:236). A case study is used to understand a real-life situation in depth (Yin 2009:18).

My research was designed as a case study because this design allowed me to zoom in on the real-life issues set out in the aims of the research in order to derive the information I desired.

3.3.2   Sampling

'Sampling' refers to the process used to select a portion of the population for study, and the elements in the population considered for the study (Maree 2010:79 cited in Matlala

2015:37). McMillan and Schumacher (2010:138) stated that 'purposeful sampling' is a technique used to select the best persons or settings because they can provide the sought after information. Participants in this study were chosen according to purposeful sampling.

3.3.2.1   Purposeful sampling

This refers to the deliberate selection of participants for a study based on the assumption that the information they can provide may be of more use or of a better quality that what could be gained when using participants who are not information-rich. The teacher and the practitioner who were the participants in this study had the experience, knowledge and skills relevant to the study. They are referred to as Participant 1 and Participant 2.

The focus was on eight learners living with various types of CP in Grade R at the two special schools where they were taught by Participants 1 and 2.

3.3.2.2   Description of the study sites

Special schools are in the process of becoming resource centres to train and assist teachers in mainstream schools and full-service schools to accommodate learners who have CP. Teachers and practitioners at special schools were therefore expected to be rich sources of information for the specific topic studied; they could be expected to have expert knowledge and have received specialized training on accommodating young children living with a physical disability in their classrooms.

Two special schools were chosen to be the site of the study. Both had been educating children living with CP for many years. One school is in Krugersdorp, on the west side of Gauteng. The second school is in Tembisa, on the east side of Gauteng. As the Departmental Head of the Foundation Phase at another special school that caters for children living with CP, I was familiar with the other schools that offered this service.

3.3.2.3   Population

'Population' refers to individuals who possess the same characteristics. McMillan and Schumacher (2010:129) argued that the target population should be a group of cases, whether individuals, objects or events, that conform to specific criteria. To restrict the investigation to manageable proportions, the research took place at only two schools in the Gauteng province of South Africa. The criteria required two Grade R year classrooms in those schools, one managed by a practitioner with some form of early childhood training

but without a formal teaching degree, and the other by a teacher with a degree in ECD (see sections 1.14.7 and 1.14.10 for a discussion of the qualifications of practitioners and teachers).

The schools were selected because they are special schools and have learners living with different types of CP in their Grade R classrooms. The practitioner and the teacher were selected because they managed Grade R sites, had learners living with CP in their classrooms, and had the desired qualifications. Eight children in each classroom were selected because they were living with different kinds and different levels of CP and therefore would need different kinds of AT, devices or AAC methods and materials. However, only ten parents gave permission for their children to participate in the research.

Table 3.1   Selected learners living with cerebral palsy at School 1

Gender	Number	Type of cerebral palsy
Boys	2	Diplegia
Boys	2	Ataxia
Boys	1	Athetoid
Girl	1	Ataxia
Girl	1	Athetoid

Table 3.2   Selected learners living with cerebral palsy at School 2

Gender	Number	Type of cerebral palsy
Boy	1	Hemiplegia
Boys	2	Quadriplegia

3.3.3   Data collection techniques

Data collection was via an empirical investigation by means of a questionnaire, observation and interviews.

3.3.3.1   Questionnaire

The short biographical questionnaire ascertained the participants' levels of education, age, gender; years of experience, understanding of CP, and what types of CP they accommodated in their respective Grade R classrooms daily (see Appendix 9 for the questionnaire).

3.3.3.2   Observation

Observation at the two special schools determined how children were accommodated in the various areas that are typical of a Grade R classroom and playground. Notes and photographs were taken of how the teacher and practitioner in their individual classrooms went about including children living with CP. No photograph was taken of any child's face, thus protecting the identification of the children (see Appendix 8 for the observation list).

The intention was not to study the children but to determine the teacher and practitioner's knowledge of how to accommodate children living with CP in their Grade R environment.

I was appropriately qualified to be the observer in this case study because I hold an Honours degree in Inclusive Education and I have many years' experience of accommodating children in the various grades in the Foundation Phase and the Pre-school Phase, including the Grade R classroom. I have specialised knowledge of ADs, AAC methods and AT. I could therefore judge immediately whether the classroom, learning areas and playground had been adapted to accommodate children living with CP.

3.3.3.3   Interviews

Data was also collected via face-to-face interviews conducted in the strictest confidence, after school hours, in places and at times that were convenient for the participants.

Mertler (2006:94 cited in Wienand 2011:162) described an interview as a conversation between the researcher and the participants in the research study, during which time the researcher asks questions of the participant. It has become almost the norm nowadays for unstructured or semi-structured interviews to be tape-recorded but a tape recorder can be intimidating for some people and so it should be within arm's reach of the interviewees so that they have control of it and can stop it at any time during the interview (Oliver (2010:47).

After asking the teacher and the practitioner for permission, I recorded the conversations and I keep the tapes under lock and key (see Appendix 10 for the semi-structured interview questions).

After I collected the information, I analysed it.

3.4   DATA ANALYSIS

Qualitative data analysis is the relatively systematic process of coding, interpreting and categorizing data to provide explanations of a single phenomenon of interest (McMillan & Schumacher 2006:364). The researcher looks for patterns and examines the data in a variety of ways (McMillan & Schumacher 2006:359).

In this study, information was obtained from naturally occurring phenomena (McMillan & Schumacher 2006:26). The information gathered was synthesized inductively to generate conclusions: Information from questionnaires and interviews was transcribed, and units were identified and grouped into categories. The categories formed themes that were used as research findings. Information from observations was compared with information from interviews, and the themes arising from the comparison shaped the final findings (McMillan & Schumacher 2010).

The combination of methods allowed me to validate findings during the data analysis. This use of triangulation contributes to the trustworthiness of the research (Leedy & Ormrod 2005:150).

3.5   ETHICAL ISSUES

A researcher must at all times be ethical and professional. I obtained written permission from the Gauteng Department of Education (GDE) to conduct the research and obtained an ethical clearance certificate from the University of South Africa (see Appendix 1 and Appendix 2 respectively). Written permission was obtained from the two principals to carry out research at their schools, as well as from the teacher and the practitioner (see Appendices 3, 4 and 5).

Lincoln and Guba (1994:300 cited in Mahlo 2011:15) insisted that all participants be assured of "privacy, confidentiality, anonymity and the principal of trust."

Since minors are involved when doing research at schools, the children and their parents or guardians had to give their consent for the research to be carried out (assent forms are attached in Appendix 6 and Appendix 7). The parents were asked to read the assent form to their children, and to explain the purpose of the study to their children in their mother tongue. The parents gave their consent only if their child agreed to be observed in the classroom. On the day of the observation, the classroom teacher asked the children who

were invited to participate in the study whether they were still willing to be observed. All participants were informed that participation was voluntary, that they could withdraw at any time, and that anonymity was ensured.

3.6   TRUSTWORTHINESS

The aim of the researcher was to ensure a sense of trustworthiness throughout the research study period. Streubert and Carpenter (1995:318 cited in Venter 2012:168) affirmed that "a research study is considered to be trustworthy when others are convinced of its worth and if it accurately describes the experiences of the participants". The information selected to determine themes is trustworthy because of the extent to which the findings provide truth and prove the value of the information collected (McMillan & Schumacher 2006:374).

3.6.1   Reliability

When analysing data, the issues of internal validity, and the accuracy of the information and matching data should be addressed (Creswell 1994:158 cited in Yorke 2008:64) to ensure that the study is reliable. Reliability refers to the consistency of the measurement and the extent to which measures are free from error; if an instrument has little error, then it is reliable (McMillan & Schumacher 2006:183). My conclusions are reliable and credible because they were drawn from raw data and so correspond to the perceptions of the participants (Patton 2002).

3.6.2   Objectivity

'Objectivity' is both a procedure and a characteristic. It refers to the quality of the data produced by procedures that either control bias or take into account subjectivity (McMillan & Schumacher 2006:9).

3.6.3   Dependability

The extent to which the same findings could be repeated if the same research instruments were simulated with a similar population under similar conditions is called 'dependability of data' (Creswell 2003:220 as cited in Mahlo 2011:98). Observation, interviews, questionnaires and photographs were used to dependably document the 'real life' of the teacher and practitioner and the children who were living with cerebral palsy.

3.6.4   Transferability

Guba and Lincoln (1994:316 cited in Mahlo 2011:98) stated that the extent to which the findings of the results can be applied to other context and settings is referred to as 'transferability'. The results of my research could be transferred to any school, and especially to any Grade R class that offers inclusive education and that accommodates learners living with CP.

I chose to focus on the Foundation Phase, particularly Grade R, because I believe the earlier accommodations and interventions are introduced, the more the children can benefit from the interventions.

3.7   LIMITATIONS OF THE STUDY

The study was limited to two Grade R classrooms in Gauteng at two special schools that cater for children living with CP.

3.8   CONCLUSION

In Chapter 3, the qualitative research design was described, with specific reference to the case study, the research methods that were applied, the types of sampling, the selection of participants, and the reliability of the research.

Because of its reliability, the results of the study can guide debates about teachers' support in how to holistically assist children living with CP in the Reception Year. The findings can be used as a guide towards appropriate support, not only by teachers in special schools, but also by any teacher, be it in an urban school or a rural school in the remote parts of South Africa.

The chapter that follows presents and analyses the data collected for this study and considers the results of the interviews and observations, as well as the photographs that were taken in the classroom.

CHAPTER 4. PRESENTATION AND DISCUSSION OF FINDINGS

4.1 INTRODUCTION

The research focus was on understanding how a teacher and a practitioner accommodated children living with CP in the Grade R classroom and on the playground at two special schools. Of importance were the adaptions they made in their classrooms, and the assistive technology (AT), assistive devices (ADs) and augmentative and alternative communication (AAC) methods they used to accommodate the children.

The participants were selected because they were both teaching in a Grade R classroom at special schools and had young children living with CP in their classrooms. Interviews established how they accommodated the young children living with CP in their classes.

Two adults were interviewed and eight children living with CP were observed. The observation notes and the questions posed during the interviews were transcribed and the valuable data derived is analysed in this chapter according to the following categories:

- qualifications of the participants;
- barriers to teaching and learning;
- adaptation of the environment;
- accommodation of various types of CP;
- provision of practical training; and
- provision of AT, ADs and AAC methods.

4.2 DATA COLLECTION METHODS

The information collected centres around the main research question: "How do the teacher and the practitioner adapt the environment and incorporate ADs to accommodate the young child with CP in the Grade R environment?"

A short biological and information questionnaire completed by the practitioner and the teacher established their age, gender, level of education, years of experience, understanding of cerebral palsy, and the types of CP that they accommodated.

The formal individual interviews, which were conducted with the teacher and practitioner during break times and after school hours, were taken to saturation point, and there were

informal chats throughout the school day. During the formal interviews, 15 questions were posed (see Appendix 11 for the interview schedule).

Informal observation techniques were also used in the form of field notes taken, and photographs recorded the adaptions to the environment, ADs that were used by the learners, and the augmentative and alternative materials offered to those who had little or no speech.

4.3   DATA ANALYSIS METHOD

In this case study, the qualitative research methods were followed by qualitative data analysis, which is primarily an "inductive process of organising data and identifying the patterns or themes that arise" (McMillan & Schumacher 2001:483) in relation to the research question and the objectives of the study. The organised data from the interviews, questionnaires, observations and photographs is presented in the sections below, and each section ends with a brief discussion.

4.4   PROFILES OF THE SCHOOLS, PARTICIPANTS AND LEARNERS

The following information about the two schools, the two participants and the eight learners was derived primarily from the questionnaires completed by both participants.

4.4.1   Schools

School 1 was chosen for this research study because it is a special school for children living with CP. It is a primary school on the West Rand of Gauteng that has been serving the urban community for many years. It has a fully functional therapy department and a hostel.

School 2 was chosen for this research study because it is a school for children with physical impairments. It is a primary school on the East Rand of Gauteng and has been serving the township community for many years. At the time of the research, it did not have a fully functional therapy department, nor did it have a speech therapist.

4.4.2   Participants

The information about the two participants is derived from a questionnaire that they both completed.

Participant 1 was a young Afrikaans-speaking female who held a Bachelor of Education degree in Early Childhood Development and Foundation Phase, a 4-year degree earned at the University of South Africa. At the time of the research, she was a teacher at the primary school on the West Rand, which specialises in teaching learners living with CP. She enjoyed her job immensely and often researched by using the Internet or reading articles on classroom adaptation and how she could make her own simple ADs and AAC materials.

Table 4.1   Participant 1

Position	Experience	Highest qualification	Gender
Grade R teacher	7 years	BEd (Foundation Phase) degree	Female

Participant 2 was a young isiZulu-speaking female who held a diploma in Early Childhood Education. Her younger sister was born with CP and ignited an interest in pursuing a teaching career where she could assist other young learners living with CP. At the time of the research, she was a practitioner in the Grade R class at the primary school on the East Rand, a township special school for young children who live with physical disabilities.

Table 4.2   Participant 2

Position	Experience	Highest qualification	Gender
Grade R practitioner	14 years	Diploma in Early Childhood Education	Female

4.4.3   Learners

In Chapter 2, the different types of CP were researched and explained. Section 2.4.4 illuminated the different levels of motor function that the two teaching adults had to accommodate in their classrooms and on the playgrounds, as shown in Tables 4.3 and 4.4.

Table 4.3   School 1 children in Grade R and their types of cerebral palsy

Impairment	Boys	Girls
Diplegia	2	-
Ataxia	2	4
Athetosis	1	1
Total	**5**	**5**

Table 4.4   School 2 children in Grade R and their types of cerebral palsy

Impairment	Boys	Girls
Hemiplegia	1	-
Quadriplegia	2	-
Total	**3**	**0**

Altogether, there was one child with hemiplegia, one with quadriplegia, five with diplegia, three with ataxia and two with athetosis. This obliged the teacher and practitioner to understand the various types of CP and the kind of support each type of CP required in the classroom. Parents gave permission for eight of the children to be observed.

4.5   PARTICIPANTS' QUALIFICATIONS

The Grade R diploma teaching qualification is a stepping stone qualification to the Bachelor of Early Childhood and Foundation Phase degree. Students intending to become Grade R teachers should therefore register for the BEd (FP) degree rather than the Grade R teaching diploma. This degree is on NQF Exit Level 7 (Departments of BE and HET 2011:40).

Question 1 of the questionnaire was "Are you qualified to teach in the Grade R or the Foundation Phase?"

Participant 1: "*Yes, I have a 4 year ECD Foundation Phase degree*".

Participant 2: *"Yes, I have a diploma in Early Childhood Education*".

4.5.1   Discussion of qualifications

Both the practitioner and the teacher in this study had a qualification in ECD, therefore they both had an SACE certificate.

Both participants were female. In South Africa there do not seem to be many men who teach in the Foundation Phase.

Participant 1 held a 4-year degree in Early Childhood Development and Foundation Phase, level 7. Participant 2 held a diploma in Early Childhood Education, level 5. During the informal conversations during the day, both said that they would like to study further in Inclusive Education.

In sections 4.6 to 4.11, the various themes that arose from the data will be discussed.

4.6   BARRIERS TO TEACHING AND LEARNING

The *Universal access to Grade R: policy framework* (DBE 2011b:5) states that the ratio in the Grade R classroom should be 30:1. According to the GDE's *Annual performance plan 2016/2017* (2016:21) there is a shortage of 3 467 Grade R classrooms, based on a calculated learner to teacher ratio of 30:1.

4.6.1   Inadequate space in the classroom

Even though there were less than fifteen children in both the classrooms, there was no room for them to move around if they all had wheelchairs. In fact, those who had wheelchairs were taken out of them because of lack of space. There was not even enough space for all the display areas that are part of a normal Grade R classroom.

When I enquired about the space in the classrooms:

- Participant 1 explained, "*If the children were in their wheelchairs in the classroom, there would not be enough room to move around*".
- Participant 2 acknowledged, *"This classroom is too small for me to have all the learning areas set out all the time".*

4.6.2   Lack of individual classroom teaching

Ragonesi et al (2010:323) mentioned that the child in their study "was enrolled in a centre with 250 children, in his class were 10 to 15 children and 2 teachers".

In the two schools where the research took place, teachers and practitioners had teaching assistants who helped in the classrooms but they were not in each classroom permanently. Teaching assistants were usually rotated between as many as five different classrooms per day.

Participant 1 had to share a teaching assistant. In her school, the teaching assistant accompanied the children to the toilet when necessary, and the entire class of children had a toilet-and-washing-hands routine before each break and before going home.

Participant 2 had no teaching assistant. She said, *"I am forced to leave the class on their own when a child need[s] help in the toilet."* The toilets were in a bathroom area, which is an extension of the classroom but, because the disabled young children had difficulty with the actions of using the toilet, the teacher had to accompany the child. It was noticeable that the practitioner had mixed feelings about leaving her class of children living with an array of different disabilities to help the child also living with a disability in the bathroom. She was concerned for the safety of all the children under her care and was clearly torn between what she should do and what she could do.

It was observed that, while the practitioner was out of the classroom, the children carried on with what they were doing at first but, as time went on and they had completed their work, they become restless and began moving around the classroom.

4.6.3   Influence of socio-economic background in the classroom

South Africa is a developing country and therefore many households live below the breadline. There are also many single-parent homes where the mothers or the grandmothers care for the children. Many families survive on an old age pension and social or child support grants. Statistics from the 2016 South African Child Gauge indicated that the Child Support Grant reached 12 million children in 2014, costing the South African government R11 970 000; 6 out of 10 children (5.5 million) lived in households with no working adult, where the income was less than R923 per month (at 2014 prices) (Delany, Proudlock & Lake 2016:1).

Participant 1 said that the "*children often only bring bread for lunch; there is seldom any nutritious food or fruit for the children in their lunchboxes*". She often supplied fruit and sometimes shared her own lunch with hungry children. Her school had a boarding school attached, which did not provide lunch for day scholars. She said that, emotionally and financially, it was very hard for her as she did not receive a good salary and she felt that the parents took it for granted that she would take pity on their children and would not let them go hungry; she felt that it was a form of "emotional blackmail". She indicated that she had to purchase stationery for some of the children as their parents ignored her notes in the children's communication books requesting the stationery.

Participant 2 was concerned that the majority of children were "*hungry when they came to school in the morning*". She believed that the children and the staff needed more emotional support, "*as we get emotional with these children*". In the Grade R classroom, the daily timetable begins with a morning activity commonly known as a 'morning ring'. It is here that some of the children shared that they were not given any dinner the night before. Participant 2 indicated that the children shared their lunch with the group and that she brought extra food every day. She explained that all the children received lunch daily at her school. She added, *"We share food and the school provided food parcels for the families who were in need."*

I noted that all the children had sandwiches, some with cheese and some with jam. Some children had NikNaks™ (a South African snack), as well. No fruit was visible.

4.6.4   Poor collaboration with therapists

The study revealed that the teacher or practitioner took the children out of the classroom to visit the therapist in another part of the school. In the Grade R context in South Africa, it is alarming and even dangerous when classrooms full of children living with different levels of CP do not have the expertise of therapists in the classroom as full-time support and as accommodation experts. Rios-Rincon (2014:14) indicated, "rehabilitation services in the child's natural environment [are] becoming more common." This means that all children, including those with some form of impairment, should have the opportunity to take part in all the activities offered in their natural environments. The removal of children from the group alienates children living with CP from their peers. Having the speech-, occupational- and physiotherapist in the classroom and on the playground would afford the experts the opportunity to make modifications to resources, as well as to the physical characteristics of the classroom and the outside environment, while supervising the correct use of AT. This would enable learners living with CP to develop the skills they need in the classroom and on the playground. Parents would have easier access to the therapist if the therapist were in the classroom (McWilliam & Scott 2003), and the therapist could give expert instruction on AT, ADs and AAC methods to the practitioner, teacher and parents.

Participant 1 said that, at her school, the therapy department supported her and all the therapists went out of their way to assist her in her classroom whenever she requested their help. She had the following to say, *"The therapists are very busy and take an active role in the lives of the children. We have discussions every term. I can ask and they will*

come into my classroom and help with any question I ask of them". Participant 1 also said, *"A student therapist made a very comprehensive communication board for the child with non-functional speech. The other got a spit-cuff"* (see Photograph 4.6). The therapist taught the teacher and the child how to use the communication board. Participant 1 enjoyed seeing the smile on the face of the child when he could communicate with her and his classmates by pointing out his message on the board. Since using a spit cuff, the child who drooled constantly had gained more confidence in the classroom. She indicated that the entire therapy department and the teachers took time as a group every term to have a meeting where they discussed each individual child's needs.

Participant 2 said at the time of my visit, *"We do not have a speech therapist; the OT [occupational therapist] helps me if the child cannot sit properly.* There had been a speech therapist at the school but, since she left a few months earlier, the post had remained vacant. Participant 2 indicated that the therapy department was supportive and helped her with any situation.

I noted that, at both schools, the children were collected in a wheelchair and taken to the therapy section instead of the therapist's staying in the classroom. A therapist would be invaluable in the Grade R classroom and on the playground. Therapists would have a daily continuous opportunity to supervise the correct use of ADs if they are in the classroom. If there were a need for additional support in the classroom, the therapist would be able to see this first-hand and assist the teacher and the practitioner.

4.6.5   Discussion of barriers

Section 4.6 provides a partial response to Research Objective 4: To identify the challenges a Grade R practitioner and a Grade R teacher experience that may cause barriers to teaching and learning in their classrooms.

Children in Grade R are still largely in the gross motor phase, meaning that they need a lot of space to move around in. The child who uses a manual or electric wheelchair needs even more space as four- to five-year-old children do not easily manoeuvre wheelchairs. However, a wheelchair is very expensive and most families are unable to afford them.

4.7   ADAPTATION OF THE ENVIRONMENT

Young children need to undergo different kinds of experiences. According to Rossi and Stuart (2007:140), adults working in the Grade R classroom need to understand the importance of the 'windows of opportunity' or 'critical periods' at this stage of a young child's life, and should arrange and adapt the learning environment accordingly.

The teacher and the practitioner should accommodate critical periods by arranging the classroom and playground to expose children to a variety of learning activities and offer the materials for age-appropriate, continued learning and development. Children living with CP should receive the same learning experiences as any other child; the only difference is that the environment must be adapted to accommodate them. This means that AT, ADs and AAC methods and materials should be provided. This will enable the child with a disability to access all the equipment and allow the child to interact with the environment.

However, both classrooms in this case study were old and not very colourful, although both the teacher and the practitioner had decorated the walls with colourful posters. There were no battery-operated toys, no AT or toys that had been adapted for the moderately-to-severely disabled children to play with.

4.7.1   Fantasy area

The fantasy area plays an important role in any Grade R classroom, and can spill onto the outside play area (see Appendix 12 for the Grade R timetable).

Professionally trained teachers can offer many play/learning experiences on the playground if they are prepared to make an effort. There are opportunities for discovery learning and gross motor learning or they can play games with the children. However some teachers/practitioners use the children's free play time to take a tea break and just watch the children.

Playing is the way in which young human beings learn and the fantasy area allows children to create a fantasy world that they can control. The fantasy area should provide clothes and materials so the learners can role-play in real-life situations. The children need to act out what they believe will happen at the doctor or when they are admitted to hospital; the teacher or practitioner should guide their play by observing, and selecting appropriate questions to lead their playing situation to mimic a real-life visit to the doctor or

the hospital, thereby alleviating possible anxiety. The children can express themselves and explore language, develop their co-operation skills with other children, make choices and make decisions. Young children imitate the people closest to them and recreate scenes from their daily lives.

One of the most important skills an adult needs to have when working with very young children is a keen sense of observation. The fantasy area is an ideal area for discovering any unacceptable behaviour, and introducing social skills and acceptable behaviour, such as good manners and learning to share.

Lynch and Simpson (2010:3) describe social skills as "behaviours that promote positive interactions with others and the environment. Some of these skills include showing empathy, participation in group activities, generosity, and helpfulness, communicating with others, negotiating and problem solving".

The fantasy area must offer opportunities for real play as well, so the area should be well stocked with small brooms and real food to be served and cool drink to be poured into cups. The practitioner and the teacher should consider the children's culture when offering dolls and dress-up clothes.

The participants were asked to show me their fantasy areas, to which they responded:

- Participant 1 explained: "*I have a storeroom attached to my classroom, where I store the fantasy clothes in a large container. I take the container out daily to allow the children to indulge in fantasy play*".
- Participant 2 said: "*I do not have a fantasy area at the moment. The classroom is too small so I take out fantasy clothes for the children; I store these in my storeroom*".

From observation, it was clear that Participant 1 understood the importance of a well-stocked fantasy area and accommodated the children's sense of discovery by providing them with a variety of toys and clothes, thereby giving them the opportunity to discover their life world through play. Participant 1 understood how playing "pretend" assisted in the development of socialization skills. She knew that offering children an accessible and well stocked play environment means they are more likely to develop social skills, learn to take turns and share their toys with the other children.

However, Participant 2 acknowledged that there was no allocated fantasy area in her Grade R classroom. She clearly did not value the importance of play and the social and

language development opportunities a well-stocked accessible fantasy area can provide the young child.

4.7.2   Big block area

The construction and big block area is always abuzz with activity. Children enjoy building things and are always proud to show off their creations. The insightful practitioner or teacher has an opportunity to introduce different words such as prepositions, thereby building a wider vocabulary. They can sharpen the children's position and direction skills.

I noticed that the blocks in Participant 1's classroom were well within reach of all the children. They were stored neatly in large, easy-to-open containers. The containers were at a height that was accessible to all the children, in an open shelf that stood on the carpet. This made it easy for the children to build their creations on the carpet. Participant 1 indicated: "*The children can decide which blocks they would like to use and they are able to pack them back in the correct container. This gives them the freedom of choice and cultivates a sense of responsibility*". The children did not have to rely on the teacher to get the blocks.

In Participant 2's classroom, blocks were also stored in an open bookshelf. However, they were out of reach of the children and they had to rely on their teacher's reaching up to the shelves and getting the blocks down for them. This meant that there was no opportunity for spontaneous play and the children could not choose the size of their blocks; they had to be content with what their teacher gave them. The blocks were far away from the carpeted area. Participant 2 explained that the blocks were packed on a shelf *"because the classroom is so small, there is no space for a separate space for each learning area".*

From observation, Participant 1 was adapting her classroom more and the children had the freedom to choose their own blocks. The teacher became the facilitator and did not dictate which blocks the children could play with. The children were learning to make decisions and responsibility, as they had to decide what they wanted to build and had to pack their own blocks back into the containers when they had finished playing.

On the other hand, with regard to Participant 2, one should keep in mind that the construction activity that she could do was limited by a very small classroom. However, she did not give the children the opportunity to make their own decisions because she gave them blocks to build and play with.

4.7.3   Free play area

In Participant 1's classroom, the carpet served as the indoor free play area. The tables and chairs were to the one side of the classroom, leaving a large, open space for the children to enjoy free movement. She had provided puzzles and even adapted puzzles; for example, she had made a puzzle from soft metal that could be attached to a metal board by magnets at the back of each puzzle piece. Paper and crayons, books and toys, such as dolls and motor cars, were available for the children to enjoy. This particular school had a beautifully adapted playground (see Photograph 4.1 on page 69 and Photograph 4.10 on page 78). The children could engage in a variety of exciting and stimulating activities.

In Participant 2's classroom, too, the carpet served as the indoor free play area. However, the arrangement of furniture in this classroom did not lend itself to free play because the classroom was small and quite cluttered. The tables and chairs were in the middle of the classroom, which left little space to move around freely.

From observation, in both classrooms, the teachers acted as facilitators of the children's play activities. However, Participant 2 had a very small classroom and did not have a large enough area to allow the children to play with a variety of objects.

4.7.4   Sensory area

Adults who are involved with pre-school children should know that children discover their world through their senses by manipulating concrete materials. An environment rich in materials for children to sort, explore and classify need not be expensive; for example, they can smell a small amount of coffee in an empty baby-food bottle with small holes pierced into the lid. Teachers and practitioners can ask parents to supply similar items that allow tasting, touching, smelling and visually observing.

The sensory table should always have interesting materials; for example, empty perfume bottles to smell, a box of materials with different textures to touch or a box of sandpaper pieces, different thicknesses of wool and string, different leaves or a box of small stones in different sizes (see Section 2.2).

Participant 1 mentioned that she gave her class sensory stimulation opportunities from time to time, *"I do offer sensory materials such as different things to suck and eat to give the children the opportunity to experience and to distinguish taste such as sweet, sour and*

bitter". She purchased these materials from her own pocket and they were very expensive. However, at School 1, the adapted playground environment had a beautiful sensory area.

Participant 1 had an interest table where the theme was the weather and on the table were real beach balls and pictures and a poster of the four different seasons. Participant 2 had an empty interest table. When asked whether she had a sensory area, her answer was, *"To be honest I do not have them, a sensory area"*.

From observation, Participant 1 understood the benefits of affording sensory experiences to the children in her class, whereas Participant 2 did not seem to acknowledge the importance of sensory activities for learning experiences and for sensory development. By not making these experiences available, she denied the children the freedom to experience and explore.

4.7.5   Mathematics area

Mathematical concepts are important for everyday life. Play activities provide time for the teacher or practitioner to encourage mathematical songs, games and stories. The teacher needs to provide opportunities for the children to hear mathematical language as a natural part of conversations with adults who provide the appropriate mathematical equipment and materials. Number concepts can be enjoyed and learnt by reciting number rhymes and taking turns, first, second, third, for example.

For informal teaching of Mathematics, Participant 1 had set up the mathematical area by providing posters, paper, crayons, pencils, big blocks of Lego, different shapes and colours. There was an abacus, beads and small blocks for counting. Participant 1 shared the following with me: *"I made a magnetic board with magnetic shapes. This board allows the child who has shaky movements to also achieve when having to sort shapes, as they stick to the board"*.

Participant 2 indicated, *"the mathematic area is combined with the block area... I have a few abacuses, counters and pegboards. There is no space for me to set out the different areas, as my classroom is too small. I bring out what is needed when it is needed"*.

From observation, it was clear that Participant 1 was adapting her classroom more, by the mere fact that she had made a magnetic board and shapes that her husband helped her make. She showed innovation and empathy for the children in her class.

Participant 2, on the other hand, had a much smaller classroom than Participant 1. She did however have containers of additional mathematical equipment and materials in her storeroom, which she brought out during the day.

Both participants made use of the *Grade R Mathematics* books of the Department of Basic Education (DBE) during lessons (2011a).

4.7.6   Language area

An exciting and stimulating language, literacy and reading area is an asset to any Grade R classroom. Children in Grade R absorb their environment and learn through incidental learning so they need to be immersed in a print-rich environment. Because South Africa has a rich and diverse population, different languages and cultures need to be celebrated and acknowledged.

Reading enriches and encourages language development, listening skills, comprehension and expansion of vocabulary. For the child with non-functional speech, there should be communication boards (see Section 2.5.2.1) with pictures especially designed for the story they are all sharing. The pictures should be detachable so that the child can respond to requests such as, "Show me Goldilocks". This helps children feel part of the group, and they can interact with the lesson.

Teachers and practitioners can design individual activity communcation boards for unique circumstances, such as directions to follow when painting.

Participant 1 offered large reading books and a wide variety of big pictures, as well as magazines for the children to 'read'. She followed the theme of the week in the books and pictures.

Participant 2 said, *"Chalk and small blackboards are freely available, as well the Department of Basic Education workbooks"*. There was a small reading table in a separate quiet area. Blocks and literacy materials were together on an open bookshelf that was mostly out of reach of the children.

From observation, it emerged the size of the classrooms played a vital part in inhibiting the child's freedom of choice. Although Participant 1 had a bigger classroom than Participant 2, the lack of space prohibited the creativity of both adults.

In a special school, in the places where tables and chairs are to be set out, modified furniture should be available. Tables need to be of different heights to accommodate children in wheelchairs. In neither classroom was this possible, due to lack of space.

The literacy and reading area needs to be set up in a quieter area in the classrooms. There was no AT, although children who have difficulty manipulating a book or turning a page would benefit from a page-turner or listening to a tape recording of a story, using headphones, a computer or a CD.

4.7.7   Outside play area

The outside play area provides an ideal opportunity to create many tactile experiences, such as in the sandpit and the water. The area should be safe, varied and stimulating. It needs to provide children with a balanced programme that ensures progression in their learning. Learners in Grade R spend more time outside in the sunshine and fresh air than the rest of the grades because their break time is longer (see Appendix 12).

School 1 had a delightful adapted playground that catered for children living with different levels of CP. Much of the equipment had been especially adapted for physically disabled children. Participant 1 pointed out *"there are opportunities for children who are living with severe cerebral palsy to experience the thrill of playing as well".*

Photograph 4.1 shows some of the playground equipment at Participant 1's school, especially adapted for the severely disabled child.

Photograph 4.1 Adapted merry-go-round

At Participant 2's school, the children accessed the play area at break time only after they had eaten their sandwiches inside the classroom on the carpet. School 2 had the typical

Grade R playground for a mainstream school, with little to no adapted play opportunities for the children with moderate to severe CP. Participant 2 indicated: *"I have ordered new playground equipment from the District department but it has not come yet"*.

From observation, it was clear that the playground at Participant 1's school accommodated learners living with a physical disability very well, as it offered many adapted toys and the equipment was especially designed and adapted with the severely disabled child in mind. The staff took turns doing playground duty and there were additional teaching assistants to attend to the children.

Participant 2's school, on the other hand, had a regular playground and offered no adapted toys or playground equipment. The children ate their lunch indoors and did not play in the playground.

4.7.8 Theme table

The morning ring and the objects displayed on the theme table are intertwined because the theme table objects set the stage for the theme of the week. During the morning ring, the teacher or practitioner draws the children's attention to each item on the theme table and explains it. The items should be age-appropriate, stimulating and related to the theme of the week. There should be many concrete items displayed on the theme table that will stimulate discussions on the topic chosen. The children should be encouraged to explore and play with the items on the theme table. This interaction should build excitement around the items on display. Every day, new, interesting and age-appropriate concrete items should be added to the theme table. This keeps the children's attention and they look forward to seeing what the new items will be (see Section 2.2).

From observation on the day Participant 1's classroom was visited, the theme of the week was 'Weather'. There were posters of weather chart on the walls.

Participant 2 was discussing Heritage Day celebrations but there was no theme table set up for the topic of the week.

4.7.9 Discussion of adaptation

In Table 2.5 on page 32, one can see just how many different associated physical and cognitive issues the Grade R teacher or practitioner may have to take into consideration in

order to accommodate learners living with CP, both in the classroom and on the playground.

Sharp observation skills and good planning are therefore very important for Grade R practitioners and teachers. They need to have a clear idea of what the child is supposed to learn and, in the case of a child with CP, how the environment needs to be adapted and which AD or communication device the child would need to use.

4.8   ACCOMMODATION FOR DIFFERENT TYPES OF CEREBRAL PALSY

Some special schools are fortunate in that they could have an entire complement of specialists to diagnose the type of CP the child has and prescribe the appropriate accommodation for the individual child. However, with Inclusive Education now practiced in all government schools in South Africa, all practitioners and teachers, no matter which grade they teach in, need to be aware of the different types of CP and the associated physical and cognitive issues that any child could have.

The GMFCS (see Section 2.4.4, page 28) indicates what gross motor abilities a young child should have. This could help teachers and practitioners to make allowances for any lack of gross motor abilities, depending on the type and severity of CP the child is living with. The learners in this case study were living with ataxia, athetosis, diplegia, hemiplegia and quadriplegia, as explained below.

4.8.1   Ataxia

The main symptom of this form of CP is a lack of coordination and the inability to maintain balance, which accounts for the high-stepping gait of children with ataxia. Children present symptoms that make them appear drunk. Both fine- and gross motor movements are affected, and speech is slurred. The imbalance of the eye muscles makes reading difficult (see the literature review, Section 2.4.3.1, page 25).

Only Participant 1 had children with this form of CP in her classroom. She had arranged all the furniture against the walls, creating a clutter-free area for them to walk and play in without bumping into any hard furniture that could hurt them.

Although Participant 2 did not have any children with this form of CP at the time of the study, she had past experience of teaching them.

4.8.2   Athetosis

In the literature review (see Section 2.4.3.1, page 26), it was explained that this form of CP is marked by excessive, involuntary, jerky movements that do not follow a fixed pattern. The muscles of the face are usually distorted, and speech, chewing and swallowing are usually affected. The two main categories of this form of CP are those with or without muscle tension.

Participant 1 incorporated non-slip mats and correctly sized pencil grips to accommodate learners with athetosis. She had a magnetic board with magnetic shapes (see Photograph 4.2), and communication boards for the individual child's needs (see Photograph 4.7). She also secured books for them with double-sided tape or Prestik™.

During informal conversation in the classroom, Participant 1 said, *"I use straps that I receive from the therapy team at my school to help secure the child with balance problems in chairs or in their wheelchairs".* Participant 1 indicated that she gave these children weighted jackets and hand-weights (see Photographs 4.4 and 4.5), supplied by the school's Therapy Department. A therapy student had made a towelling spit-cuff for the child who could not control saliva production.

The therapists reviewed these devices regularly, as children of this age are still growing and continually need bigger sizes to keep up with their growth.

I observed that Participant 1 had a good understanding of the needs of athetoid children. She indicated that, because of poor muscle control, they needed to be secured in the wheelchair using straps. She knew that crutches, wheelchairs and walkers had to suit the individual style of the child, and that she had to report any accidents to the physiotherapist to ensure that there was no damage to the AD.

Participant 2 relied on the occupational therapist to assist her with the children. She did have an adapted chair and straps in her classroom, which she used.

Photograph 4.2 A homemade magnetic board that is slanted

The board in Photograph 4.2 enables the CP child who has shaky movements to arrange metal shapes. The magnetic action prevents the shapes from falling to the floor.

Photograph 4.3 shows a child who is unable to sit in a chair unaided. A Velcro strap is used to keep the child in an upright sitting position.

Photograph 4.3 Velcro straps prevent the child from falling off the chair

Photograph 4.4 is a picture of hand weights to help stabilise shaky hand movements.

Photograph 4.4 Hand weights give stability to shaky hands

The weighted vests in Photograph 4.5 were used to give the child a sense of stability and promote a sense of calm.

Photograph 4.5 A weighted vest

A spit cuff like the one in Photograph 4.6 was given to a child who was unable to control saliva production.

Photograph 4.6 A homemade spit cuff

4.8.3   Diplegia

Diplegia was the most prominent type of CP in the two Grade R classrooms at the time of this study. Section 2.4.3.1 (page 26) of the literature review found that children living with diplegia have muscle stiffness in their legs, but this is usually less severe in the upper body. The hands tend to be clumsy and the child's legs move with a scissor motion. However, intelligence and language skills are usually normal.

In both schools, the therapy department played a deciding role in choosing which AD and AAC methods and materials to give to these children. Both participants were given communication boards to communicate with learners who had difficulty speaking. Most of the children with wheelchairs or walkers could not use them to move around because of the space problem. There were adapted chairs and Velcro straps to help support them while sitting at a table with their friends. The teacher and the practitioner had to pick the children up from the floor and secure them on their chairs.

An occupational therapy student in the Therapy Department in Participant 1's school had made a communication board. It enabled the child to communicate with the classroom adult by pointing to the picture to indicate his or her needs and wants. An adult can easily make individual and design/activity specific boards using the Boardmaker™ program (available from http://inclusivesolutions.co.za/product/boardmaker-plus-v6/). These devices are considered low-tech AAC devices.

I observed that it took a young child a long time to find a picture depicting what he wanted to say. Participant 1 had to waste teaching time playing a guessing game and pointing to pictures in order to find the one that was right for the child. This suggests that the pictures in the communication board (shown in Photograph 4.7) are too small and cluttered; and that there should be separate boards for different activities and categories of wants and needs, such as pain, food and general classroom communication.

Photograph 4.7 Communication board made from Boardmaker™ symbols

Participant 2 used a 'communication file', with photographs of real children. However, the collection of photographs and pictures was very limited, making it difficult for non-verbal children to communicate their wants and needs.

As can be seen in Photograph 4.8, communication boards are easy to make by taking photographs of real objects or people in everyday life situations.

Photograph 4.8 Communication board compiled from real photographs

4.8.4   Hemiplegia

Spastic hemiplegia is considered the main form of CP. It is a neurological condition that weakens one side of the body (see the literature review in Section 2.4.3.1, page 27). Like a stroke, the weaker side of the body is opposite the damaged side of the brain. Seizures, scoliosis, delayed speech and visual impairments commonly go hand in hand with this type of CP. Intelligence is usually within the normal range.

It emerged from observation that the most popular accommodations made by both the teacher and the practitioner for the children living with hemiplegia were the use of different kinds of finger grips. These varied from narrow to extra-large, depending on the needs of the child. Photograph 4.9 shows a young learner using a broad, round pencil/crayon grip (see also Figure 2.10 on page 35)

Photograph 4.9 Young child using a large pencil grip

Participant 1 made available several finger grips and pencil grips of different sizes to ensure that the child could grasp the crayon or pencil and make a more controlled mark on the paper. Easy-to-open scissors, small nail scissors and non-slip mats were also offered to the children in her classroom. Participant 1 shared that she often did research on the Internet on ways to accommodate children living with CP, and sourced her own non-slip

mats, as well as improvising by winding insulation tape around the pencils, if no finger grips were available.

Participant 2 was familiar with the different sizes of pencils and crayons and realised that they assisted the child to grip the crayon or the pencil better. She seemed to rely on the occupational therapist to source or make the low-cost ADs for her.

A child with CP has difficulty with fine motor movements, which makes holding a pencil or a crayon in the normal way impossible. A large round pencil/crayon grip enables the child to better grasp and control the thick crayon.

4.8.5   Quadriplegia

In the literature review, Section 2.4.3.1 (page 26), it was reported that this is considered to be the most severe form of CP so learners living with quadriplegia are usually severely disabled and need many accommodations. They often have moderate-to-severe mental retardation, and require AAC methods if they have non-functional speech.

Participant 1 had no children in her class with this form of CP at the time of this study. She had previously had children with quadriplegia so she was familiar with their needs. Participant 2 had two children in her class with this form of CP at the time of this research study.

It emerged from the study that Participants 1 and 2 both had a good understanding of the needs of these children. They knew that, because of poor muscle control, the child needed to be secured in a wheelchair using straps. Both participants understood that crutches, wheelchairs and walkers had to suit the individual style of the child, and that they needed to report any accidents to the physiotherapist to ensure that there was no damage to the child or to the AD. They also mentioned that these devices need to be reviewed as the child's body grows.

Specially adapted playground equipment, like that shown in Photograph 4.1 and Photograph 4.10 (on pages 69 and 78 respectively), allows the child living with quadriplegia to experience the thrill of playing and the sensation of swinging.

Photograph 4.10   Adapted swings

4.8.6   Learners who cannot communicate verbally

Not being able to speak can be devastating, especially for a young child. Teachers who teach non-verbal children can introduce the child to a few hand signs. Communication boards can be made with the hand sign and a picture of its meaning.

Participant 1 informed me: *"I have been trained in a few signs (sign language)".* I observed that the participant signed to the children who had non-functional speech, and they signed back to her. She used individually designed communication boards, which were hand made by the occupational therapist for the children.

Participant 2 did not have any non-verbal children in her class at the time of this study. However, she had in the past used communication boards, pictures and Talk and Go20 (a portable device) to communicate with learners who had non-functional speech. The Therapy Department at her school did not currently have a speech therapist so the occupational therapist had helped the practitioner to make boards as ADs.

AAC methods are very beneficial for non-verbal children because they allow them to communicate with their peers, thereby not leaving them socially isolated. Technology can be a wonderful tool to draw non-verbal children out of their shells and into the world of communication. The teacher needs to be trained in the use of AT and should realise that the growing child may need a larger device from time to time or a device that offers more stimulation as the child matures.

4.8.7   Discussion of accommodation

Section 4.8 brought some answers to Research Sub-question 5: "What do teachers in Grade R know about assistive devices?" and Research Sub-question 6: "What do practitioners in Grade R know about assistive devices?"

The findings of the research suggest that the teacher and the practitioner would welcome some technology in their classrooms to make learning fun and exciting.   Today's generation learns through technology and MOST children these days have computers at home that they 'play' on.

4.9   PROVISION OF PRACTICAL TRAINING

Results from research conducted by Kotze (2015:3) on an audit done in 2013 established that only 10% of practitioners had a qualification over and above matric, and that a mere 25% of Grade R practitioners had received some training in ECD.   These results are of concern to the standard of teaching and learning in Grade R.

4.9.1   Training on using assistive devices

Participant 1 mentioned that she had received training on how to use the Grade R screening tool required by the Department of Education (DOE) (see Appendix 14). However, this tool was designed to be used mostly by mainstream schools and she felt that it was not necessary for her to have attended this workshop. She had also attended a workshop conducted by Autism South Africa but felt that she would have benefited more from receiving a practical workshop on how to use ADs instead, because most of her learners were not autistic but living with CP. She said: *"Not really for me".* She said she was disappointed in a special-needs module she took while studying through the University of South Africa, which she considered lacking in information on ADs; she also felt that the information she did have to study was not comprehensive enough. She had been teaching for many years but would like to have had some expert training. However, as she said, *"I would prefer a practical manual that I can refer to, if I need advice".*

Participant 2, on the other hand, shared that the DOE had arranged a 3-month part-time training course for her school on AAC skills. She had received training at the district offices on learners with barriers to learning, and had attended training at the University of the Witwatersrand for four Saturday mornings on children living with dyslexia. However,

she said, *"I would like more hands on practical teaching with the children in my classroom. I am an isiZulu mother-tongue speaker as I am not able to read English very well; a manual with pictures would be nice."*

I noted that, in both the Grade R classrooms, there was no technology and Participant 1 stressed that she would dearly love to have a SMART Board™ in her classroom and a few computers. She indicated that she would welcome training on how to operate a SMART Board™ and high-tech ADs, as well as children's computer games and toys.

4.9.2 Training on adapting the environment

Participant 1 indicated that she would like expert training on how to develop her own adapted environment and she would value hands on training by professionals who could teach her how to use the ADs so that the children in her class could get the maximum benefit from them.

4.9.3 Training on early childhood development

From the time all children are born, they try to make sense of their world. They are naturally curious about their environment and the people in it. They use their senses to explore the immediate indoor and outdoor environments.

The National Council for the Developing Child (2004:1) indicated that young children experience their world as an environment of relationships, and these relationships affect virtually all aspects of their young lives; the years from birth to six are the years when the human brain develops a vast majority of neurons and is at its peak for receptive learning.

Christie (2008 in Excell & Linington 2011:3) asserted that "the pedagogical decisions a teacher or practitioner makes will determine how the 'windows of learning' are opened". Maria Montessori called these windows of opportunity 'sensitive periods'. Research supports the importance of a stimulating environment that provides the young child with quality learning opportunities. The Reception Year can change a child's life, if a highly educated teacher sees to it that the environment is prepared so as to cater for the important development milestones reached during that year. Structured learning activities should be accessed through play and discovery learning. The Grade R teacher or practitioner needs to understand the sensitive periods for learning and the formative

stages of the children in their classrooms. Research has demonstrated that the sensitive periods for acquiring language and social skills are particularly critical at the Grade R age.

Participant 1 pointed out that the early years of a human being's life are a very important stage in children's development, and that a teacher or practitioner needed to *"understand the importance of brain development and the need to offer age-appropriate concrete experiences for the development of dendrite growth"*.

Participant 1 and 2 agreed that the early years are the formative years in a child's life and that the education the children receives at this age is very important for their future development. Participant 1 mentioned that it *"was the period in a child's life when brain development and personality are developing at an astonishing rate. We also work with the child's brain, we need to know the developmental stages of the child and offer concrete experiences to allow maximum brain and physical development to ensure maximum dendrite growth"*.

Participant 2 was of the opinion that early intervention strategies could decrease the child's disability; she stated that to *"identify the problem early is very important as then you can help the child and maybe decrease the disability"*. Participant 1 agreed, and added that the years between birth and nine years of age are the ideal time to employ intervention strategies; if one misses a window of opportunity, it is very hard to catch up during later stages of development; this would lead to the child's developing barriers to learning in the following grades.

From the discussions with the two participants, it was clear that they understood that the ECD period is an extremely important time for brain development, and that the quality of early interventions and accommodations can make a huge difference in the child's life.

4.9.4   Discussion of practical training

I noted that the teacher and the practitioner had a good understanding of the importance of the early years of development. However, neither of them mentioned that children learn through play, and that this was the period when language and socialisation development are at their peak (see Section 2.6). What emerged from this research is the fact that teachers and practitioners need more appropriate practical training. With the introduction of Inclusive Education, many teachers feel out of their depth and all need practical training on how to include and accommodate the young child living with CP in their classrooms.

4.10   PROFESSIONAL STATUS, SALARY AND RECOGNITION

Participant 1 stated that working with very young severely disabled children was exhausting, and that "*I work very hard*". She did not receive the same salary as the other teachers and this made her feel undervalued; she believed she was not given the same status and recognition as the other teaching members of staff.

Participant 2 on the other hand indicated she believed that "*one needed to be qualified as one ha[ve] to understand the curriculum and be able to adapt it for the children in your class.*" She indicated that she did not feel inferior to the other teachers and was very grateful to have a permanent teaching position.

4.10.1   Discussion of professional status, salary and recognition

During the informal discussions with the practitioner and the teacher, they expressed that they did not enjoy the same professional status as their colleagues who taught in the higher grades. They believed that they were considered mere babysitters. They did not receive a good salary and they did not have benefits received by the other teachers. Both participants believed that the Grade R child needed highly qualified teachers and practitioners, as this was an important period of growth and learning for the child living with cerebral palsy. They believed that their job was as important as, if not more important than, that of Grade 12 teachers.

4.11   USE OF APPROPRIATE RESOURCES

Resources such as ADs, AAC materials and AT are a necessity in a special school because children who have moderate-to-severe CP rely on them for daily activities. They can enjoy adapted toys but they may not be able to manipulate and control the usual toys.

Special schools usually allocate a budget to the Therapy Department for purchasing AT, ADs or programmes such as Boardmaker™, and do not usually consult teachers and practitioners for their input. When asked about the resources that she would like to buy for the children in her classroom, Participant 1 said, *"We know what to do and what the children need".* Participant 2 indicated that the district office sent equipment, materials and a first aid kit, amongst other things, to her school.

4.11.1   Discussion of resources

Resources are vital for children with moderate to severe CP. They give the young child the opportunity to interact with the environment, thereby assisting and promoting socialization, making friends and communication.

4.12   CONCLUDING REMARKS

When the people teaching children with CP lack the knowledge and expertise to prepare a stimulating and inviting classroom, this impacts on the holistic development of the children. These children, who are usually behind in their milestone development anyway, are further disadvantaged. It was clear from the outset that both the adults who participated in this research study were passionate about teaching young children living with CP. What was also evident was the devotion they both had to the children in their classrooms. Their compassion and dedication were obvious as both adults made their own assistive materials and tried to decorate their classrooms with colourful posters. They worked closely with their therapy departments.

The next and final chapter draws conclusions from the research study and goes on to discuss recommendations.

CHAPTER 5.

CONCLUSION AND RECOMMENDATIONS OF THE STUDY

5.1   INTRODUCTION

In the preceding chapter, the focus was on analysing and interpreting the results gained from the research in answer to the main research question: How do teachers and practitioners adapt the environment and incorporate assistive devices to accommodate learners living with cerebral palsy in the Grade R environment?

The research confirmed that teachers and practitioners who teach physically challenged young children face many obstacles, as indicated in Chapter 2, the literature review. In Chapter 4, I presented the findings of the data analysis, and discussed the major themes that emerged.   This chapter summarises the most important findings of the literature review and the empirical research, and links them to recommendations.

The following were the objectives of the study:
1.   To investigate the prevalence of cerebral palsy in South African schools;
2.   To define the term 'cerebral palsy';
3.   To describe assistive devices that can be used to accommodate cerebral palsied children in Grade R, including the different kinds of augmentative and alternative communication strategies that can be used to communicate effectively with them;
4.   To identify the challenges a Grade R practitioner and a Grade R teacher experience that may cause barriers to teaching and learning in their classrooms;
5.   To investigate the extent and type of practical training a teacher and a practitioner had received on the use of assistive devices in the Grade R environment;
6.   To assess the extent to which the lack of adequate practical training impacted on the ability of the practitioner and the professionally trained teacher to include children living with cerebral palsy in the Grade R environment; and
7.   To provide recommendations for the training of Grade R teachers and practitioners on the use of assistive devices to support young children with cerebral palsy.

The sub questions in this research were the following:
1.   What are the statistics of children living with cerebral palsy in South African schools?
2.   What is cerebral palsy?
3.   What are assistive devices?

4. Who is the young child in Grade R?

5. What do teachers in Grade R know about assistive devices?

6. What do practitioners in Grade R know about assistive devices?

7. How can teachers and practitioners be trained to use assistive devices to accommodate young children with cerebral palsy in Grade R?

5.2   SYNOPTIC OUTLINE OF THE CHAPTERS IN THIS STUDY

0 was an orientation to the study and explained the motivation to focus on whether the practitioner and teacher were able to incorporate ADs in the Grade R classroom and were able to adapt both classroom and playground in order to accommodate young learners living with CP.

In Chapter 2, I presented the findings of the literature study. Statistics were given on the prevalence of CP, especially in Gauteng where my study took place. The results of this statistical analysis showed an increase of CP in Gauteng. Causes of CP in developed countries compared to the developing world were discussed. The classification of CP and the six topographical and physiological classification systems were explained. Associated physical and cognitive effects were illuminated, as well as how they affect teaching and learning. I used photographs and figures to add to the information provided. I included as much information as possible from my experience as a Grade R teacher of children living with CP. Since the main objective of the case study was to determine what the practitioner and the teacher knew about how to adapt the environment to incorporate social and play opportunities, I also examined how they used assistive devices (ADs) and augmentative and alternative communication (AAC) materials to accommodate the young child living with CP. I deliberately did not use 'highbrow academic language' throughout my dissertation because my target audience is made up of South African practitioners and teachers, and I wanted to make it as accessible and reader-friendly as possible.

In Chapter 3, I described my research design and methodology, and explained that data was collected through purposeful sampling: a short biographical questionnaire, observation, face-to-face interviews and photographs.

In Chapter 4, I presented the analysed data and discussed the major themes that emerged: qualifications of the participants, barriers to teaching and learning, adaptation of the environment, accommodation of various types of CP, provision of practical training, and provision of AT, ADs and AAC methods.

Chapter 5 summarizes the findings derived from the study. I make recommendations and draw conclusions, based on the themes I discovered.

5.3   SUMMARY OF FINDINGS FROM THE LITERATURE

CP is a very complex condition and the disability can range from mild to moderate to severe. Practitioners and teachers in the Grade R setting need to understand, not only the condition called CP, but also the multitude of associated conditions, which include difficulty in moving around, speaking and eating (see Section 2.4.6 for associated conditions).

Introducing the correct AD into the Grade R classroom can help the child living with CP to adjust to the school environment and socialise with other children. ADs help level the playing field for learners living with CP, and the correct ADs can mean the difference between succeeding and failing.

Early childhood is the time in the lives of all human beings when brain development is at its peak. Parents, teachers and practitioners should nurture development during this time (see Figure 2.20 on page 42).

Research indicates that CP is the most common physical disability worldwide (see Section 2.4.2). South African research indicates that CP is the most prominent physical disability in Gauteng special schools today; and that children present with different kinds of CP in developed countries compared to developing countries.

5.4   FINDINGS AND RECOMMENDATIONS FROM THE CASE STUDY

It is clear from the interviews and informal conversations with the practitioner and the teacher that they experienced similar yet different challenges. They agreed that young learners living with CP need an adapted environment as well as special resources, such as ADs, assistive technology (AT) and AAC and professional support, especially in the Grade R classroom. They both realised the importance of early identification.

5.4.1   Lack of specialized knowledge on cerebral palsy

Results of the research indicate an apparent lack of specialized knowledge of the spectrum of CP, as well as of the associated conditions, and that these were not always fully understood. Children on Levels 3, 4 and 5 of the Gross Motor Function Classification

System, Manual Ability Classification System, Communication Function Classification System and Eating and Drinking Ability Classification System (see Section 2.4.4) were of particular concern. The participants indicated that most of the ADs were ordered by the therapists at their special schools from catalogues and, when sales personnel came to the school to demonstrate new products, the teaching staff were not invited to attend these demonstrations. In the end, the teachers are the ones who have to train the child, and even maybe the family members as well, how to use these ADs and AAC materials and methods.

5.4.1.1   Recommendations

- A team of highly trained professionals such as doctors, nurses and therapists should give on-the-job training at the induction of new staff members and bi-annually for existing staff members.
- All the classifications of CP and their associated conditions should be introduced by highly trained professionals (medical personal or therapists) at all training workshops.
- Teaching staff need to have input from and discussions with medical professionals on which ADs and AAC methods and materials can be beneficial for teaching and learning in the Grade R classroom and on the playground for the child living with CP.

5.4.2   Inappropriate training

During the interviews and discussions with the participants, it was evident that they lacked appropriate specialized training. Both women indicated that the degree and the diploma they held did not adequately equip them to include the severely disabled young children in their classes, and sometimes they felt very inadequately trained. They would like to attend workshops to address their specific training needs, amongst which they included adaptation of lessons and help with medical vocabulary and terminology.

The study found that the teachers were expected to attend many workshops and training courses, some of which did not really pertain to their specific needs. It became clear that less theory was needed and more practical hands-on instruction.

5.4.2.1   Recommendations

- Since more and more children are being diagnosed with CP in developing countries like South Africa, and the type of CP is severe (see Section 2.4.2), at least one

module on CP should be compulsory in all the teacher training programmes at colleges and universities.

5.4.3   Access to libraries, resources, materials and equipment

I found most of the toys and learning equipment in the classrooms the same as in a mainstream school's Grade R classroom. I could not find any adapted toys or modern AT in the classroom. Participant 1 and 2 indicated that the adapted equipment was in the therapy section. Only when the children were taken out of the classroom to the therapy section, were they exposed to the adapted toys and computers.

Both participants expressed frustration at not having adapted toys and AT in their classrooms.

5.4.3.1   Recommendations

- A teacher's library, which could be called an 'Inclusion and Accommodations Library', should be set up at designated special schools in each district. At these centres, teachers should have access to computers, a Boardmaker™ program, coloured paper, a colour printer and a laminator. This will help teachers and practitioners to develop their own individualised communication boards when preparing lessons.
- This Inclusion and Accommodations Library should incorporate an array of AT, ADs and AAC materials, where teachers could handle and explore the devices. This would allow them to familiarise themselves with an AD before introducing it to a young child (see Section 2.5 for ADs that could be used for communication).
- Inclusion and Accommodations Libraries should carry an array of AT, ADs and AAC materials that could be borrowed by the practitioners and teachers. Children in Grade R and the rest of the Foundation Phase grow so fast that they outgrow their devices regularly and a library such as this would save money.
- Inclusion and Accommodations Libraries should provide inclusive material, instructional books and videos, digital materials and manuals for Grade R and Foundation Phase staff, and make available the latest technology to enable groups to watch videos at training workshops.
- Inclusion and Accommodations Libraries should not be installed at district offices as there are limited parking spaces at most district offices. There could also be a

bottleneck if too many people want to use the facility simultaneously. They should be at selected special schools in each district because:

- schools have more secure parking space; and
- most schools have a computer classroom where the staff could have lessons and training workshops via Skype facilities.

- The libraries at schools should be used for training.
- Skype facilities should be used for all training sessions, and videotapes of the sessions should be kept as part of the reference library.
- Group training sessions should be arranged by appointment.
- Staff should receive points for giving or attending training.
- There should be specific appropriately trained personnel earmarked to give the practical training sections at the selected special schools. For rural schools, training sessions should be taped and burned onto computer discs, to be played via a television and used as a future reference.

5.4.4   Lack of funds

The practitioner or the teacher must provide a stimulating environment for the young child living with CP. They have an obligation to provide concrete materials and toys that are specially adapted for the child with CP. For instance, teachers and practitioners should expose the children to different colours, tastes and textures in the Grade R classroom. Fruit and vegetables in the tasting area allow sweet, bitter, salty and sour tastes to be experienced. However, these materials all cost money.

During the discussions, it was clear that the schools did not make funds were available to the practitioner and the teacher for necessities in their classrooms. Difficulties with obtaining small things such as fruit and vegetables for their tasting lessons caused embarrassment and frustration. They said they sometimes did not have the cash to purchase these items.

It was obvious that the teacher and the practitioner who participated in this case study were not consulted when the budget for ADs was drawn up.

5.4.4.1 Recommendations

- The Grade R teachers and practitioners should be consulted when the school draws up a budget for ADs.

- A budget for perishables should be available for teachers and practitioners. Schools should not expect the teachers and practitioners to buy items and claim back the cash; instead, they should be issued with school debit cards, loaded with an agreed-upon amount per week that can be used for purchasing specific items for lessons. Receipts should be kept and controlled each month by the school bursar.

5.4.5 Lack of support at school level

Grade R teachers and practitioners work with very young children who constantly need the bathroom and who are prone to accidents, especially children living with a physical disability such as CP. It is impossible for a human being to be in two places at the same time and it is dangerous to leave very young children unsupervised. Participant 2 had such a dilemma in her classroom (see Section 4.6.2).

The study revealed that both the teacher and the practitioner would welcome a classroom assistant with an SACE certificate.

Teachers and practitioners often ask the Foundation Phase departmental head to support them in parental interviews and meetings with the school-based support team. One of the participants mentioned that the departmental head is a teacher as well and therefore does not have time to give additional support to Grade R practitioners or teachers. Often the Departmental head has to rush their training due to lack of time.

The backing given by the school-based support team was appreciated but the study revealed that meetings of this body were often rushed as the panel of the team was made up of school personnel who had many other responsibilities, and often deadlines to meet, in other parts of the school.

5.4.5.1 Recommendations

It is recommended:

- that a classroom assistant be mandatory in each Foundation Phase classroom;

- that practitioners with an entry-level SACE accreditation certificate, who are unable to update their qualifications, would be a valuable resource in Grade R as classroom assistants;

- that these entry-level practitioners/teaching assistants should be responsible for helping children to the bathroom and ensuring that the Grade R environment and concrete materials and apparatus are clean and hygienic;

- that the Department of Basic Education's Personal Administration Measures (PAM) gazette (DBE 2016b:41–44) should be revised to include additional time allocated to departmental heads of the Foundation Phase for duties other than teaching. According to the PAM document (2016b:18), departmental heads (Post Level 2) teach for between 85% and 90% of their time, whereas deputy principals only spend 60% of their time teaching. The head of department of the Foundation Phase has been given an ever-expanding set of duties so there is very limited time available to support the Grade R practitioners or teachers. The Foundation Phase departmental head has had to shoulder the added responsibility of incorporating Grade R into the Foundation Phase, without being given additional time to assist and support Grade R practitioners or teachers. The Foundation Phase departmental head now has four grades (Grade R to Grade 3) to oversee, support and manage, whereas all other departmental heads from Grades 4 to 12 only have three grades to manage.

- that the Foundation Phase head of department should take on more of a supporting and administrative role to assist the Grade R practitioner or teacher, and take on the more pastoral role of informing and supporting parents and the school-based support team, representing the Foundation Phase.

- The Foundation Phase departmental heads should have the same time allocation for teaching as the deputy principal, or not teach at all, because the Foundation Phase departmental head sees more parents and grandparents than any other school-based departmental head.

- The panel of the school-based support team, which is made up of therapists, academic schoolteachers and learning support teachers, should be exempt from playground duty, scholar patrol duty, bus duty and sport duty. This would give the school-based support team the much-needed time in which to discuss each child's case in detail and give comprehensive thought to the individual educational and support plans for children in need of support - and to complete the Support Needs Assessment forms (see Appendix 14).

5.4.6   School-based therapy team

It cannot be too strongly emphasised that it is vital to the development of the young child living with CP that he or she be diagnosed as early as possible and the correct AD prescribed. This will not eradicate the symptoms of CP but will go a long way in improving the quality of life for the child. Special schools in Gauteng usually have a full complement of therapists and a well-equipped therapy department to diagnose the learners with special needs. The therapy departments usually consist of an occupational therapist, a speech therapist and a physiotherapist. To comply with the Department of Basic Education's new SIAS policy (DBE 2014) and the Department of Education's policy on Inclusive Education (DOE 2001b), schools will have to employ more therapists to accommodate the increase in young children needing support in Grade R.

The two special schools that formed part of this study both had a therapy department. Participant 1's school had a full complement of therapists and a well-equipped therapy department but Participant 2's school did not have a speech therapist at the time of the study.

The study found that understanding the medical terminology in therapists' reports could be quite intimidating for non-English-speaking parents and teachers.

5.4.6.1   Recommendations

- In-house therapists should be utilised more efficiently in Grade R classrooms to accommodate the increase in very young children who are experiencing barriers to learning in schools. They should divide their timetable to include at least 50% in-classroom support for children with barriers to learning. This will enable the therapists to support the teacher and the practitioner in the initial identification process in Grade R (see Appendix 14).
- Teachers and practitioners should be trained to read therapists' reports (see Section 2.4.3 for a discussion on the classification system of CP).
- The therapists should help the teachers explain medical terminology to parents, and they should also assist when the accommodations have to be implemented according to the SIAS forms (see Appendix 15).

5.4.7   Collaboration with district officials

Participants 1 and 2 both mentioned that it was difficult to attend all meetings because they could not leave school early to arrive on time for the meeting.

Participant 2 alerted me to the fact that it was part of her duties to draw up an IEP or an ISP for each child who had been identified as having a barrier. Because she worked at a special school, this meant that every child in her classes had to have an IEP. However, she was unsure what was expected of her as far as an IEP or an ISP plan at special schools was concerned.

Training on how to draw up an IEP should have been offered to Grade R teachers and practitioners before the new SIAS policy (DBE 2014) was rolled out. The research found that the heads of department attended the training and were expected to train the teachers and practitioners. The training was often rushed and there was little time to answer questions. It was found that some trainers were not well prepared and therefore some information was not understood so it seems that the message is not always carried over to all staff in the same way.

From the findings, it was evident that the participants would appreciate more frequent support from the Grade R district facilitators, as well as an occasional visit from the Inclusion Support Services Unit (ISS) in their local district office.

5.4.7.1   Recommendations

- All staff should watch the same training presented by the specialist district official via Skype to all school computer centres or teacher staff rooms. In fact, all workshops/training should be done via Skype or a recorded training session (sending a PowerPoint presentation is not sufficient for training or workshops). This will alleviate the problem of teachers having to leave school early to attend meetings. It will also ensure that all teaching staff receive the same quality of training.
- The district official concerned should attend a Foundation Phase meeting at schools once a term to assist the Grade R practitioners or teachers and clarify information or concepts. A new policy or programme should therefore be drawn up to allow the district office to make provision for regular visits.
- The district official for the Foundation Phase should attend Grade R open days to assist the practitioners or teachers.

5.4.8   Increasing administration workload

The study found that the Grade R teacher and practitioner and the Foundation Phase head of department are shouldering more and more administration work. In government schools, each child has a learner profile, which has to be opened in Grade R. This means that all the initial information has to be completed by the Grade R teacher or practitioner. With the introduction of the new SIAS policy (DBE 2014), the DBE expects Grade R practitioners and teachers to screen all the children in their class. When children are identified as having a barrier to learning, their parents need to be contacted and a meeting scheduled to discuss the child's future. The departmental head of the Foundation Phase, the teacher or practitioner and the parents must attend the meeting, as well as a scribe (because minutes of all meetings must be taken) and a therapist, if one is available. The teacher or practitioner must complete the SNA 1 form (support needs assessment – see Appendix 15) together with the child's parents. An individual educational programme (IEP) or an individual support programme (ISP) must then be drawn up with the help of all parties concerned to support the child and, if need be, accommodations will be recommended. The DBE expects an analysis of data in the form of an Excel spreadsheet to be sent to the relevant district office. This data needs to be captured and updated with the progress of all young children with barriers to learning every month.

The compulsory admission age for Grade 1 in South African schools used to be when a child turned seven years of age. In 2000, the outcome of a court case changed the admission age to five years old for a child entering Grade 1, on condition that the child turns six years old by June in the year of admission. The practice of admitting five-year-old children to Grade 1 (DBE 2013b:5) is placing an additional strain on the departmental head of the Foundation Phase, and on Grade R and Grade-1 teachers and practitioners. Children in Grade R are expected to be school-ready at a younger age and the five-year-olds in Grade 1 are struggling with the academic load. This is perpetuating the barriers to learning and causes an astronomical increase in administration.

5.4.8.1   Recommendations

- More office staff should be employed at schools to do the administration so that the Grade R practitioners and teachers (and classroom assistants) have the time to pack out the concrete materials and apparatus, arrange their classrooms for the following day, and prepare IEPs and ISPs for the children who need them.

5.4.9   Classroom factors

The study found that Participant 1's school building was old but very well maintained. The school was on one level and the corridors were wide and well maintained, facilitating wheelchair access. The Grade R classrooms had easy access to the playground area, and there were folding doors between the Grade R classrooms. However, although there were less than 15 children in each classroom, the space needed to accommodate wheelchairs, crutches and walkers was inadequate.

Young children need to move around and develop their gross motor skills but my research results show that, because there was not enough space in the classrooms, they were sitting in one classroom all day, every day.

Because of space problems, Participant 2 was not able to set out all the learning areas in her classroom.

Not all practitioners or teachers are proficient in all the learning areas. We need specialized teachers in the Foundation Phase, and the Foundation Phase learners should rotate just like the rest of the grades at school. Mixing with different teachers could provide more exciting and stimulating lessons and classrooms for the learners.

5.4.9.1   Recommendations

- The Foundation Phase should be reconstructed. Whereas, all Foundation Phase teachers now teach all the subjects in one classroom, I propose that all Foundation Phase teachers should become specialist subject teachers, i.e., they should specialize in Language, Mathematics or Life Skills.
- Each specialist teacher should have her own classroom, set up with her own needs for her subject. For example, a Language classroom would have a specialist Language teacher who only has equipment and materials for language studies, where she can immerse the children in a language-rich environment. The equipment and materials would range from Grade R to Grade 3 to ensure scaffolding language opportunities and provide the ideal environment to implement IEPs and ISPs. This would provide more space in each classroom because not all the learning areas would have to be displayed in every classroom. It would alleviate the need to buy several sets of the same materials or posters, etc.; only one of each would have to

be purchased. This would save the Department of Education hundreds of thousands of Rands per year.

- The money saved should be spent on advanced technology for the classrooms, such as interactive whiteboards, computers and computer games, as well as assistive and adaptive toys for children living with severe CP.

- Teachers who have the older classrooms that are divided by folding doors should each set up half of the learning areas in their own classroom and half in the adjourning classroom and, at certain times of the day according to their synchronised timetables, open the folding doors and swap classrooms. This would a) alleviate the problem of not being able to set out all the learning areas in a single classroom; b) allow the children to move around more; and c) allow expensive adapted equipment and toys to be brought into the classrooms, so that two Grade R classes would be able to access the equipment. This would be very cost effective.

5.4.10 Professional recognition

Through the course of the day spent at the schools and during informal unrecorded discussions, it became apparent that both participants enjoyed their jobs immensely. However, the feeling that their job was not considered as important as that of teachers in the higher grades caused some feelings of resentment.

5.4.10.1 Recommendations

- All professional teachers who hold a degree should receive the full salary package, irrespective of which grade they teach.

- All teacher-training modules (intermediate, senior and high school training) should include a section on how crucial the early years of development are in the lives of all human beings; and the value of attaining the developmental milestones and receiving the correct stimulation for the holistic development of the child.

- The DBE, parents and communities should recognise the valuable work done by teachers and practitioners in Grade R. This could be done during meetings and by means of the media.

5.4.11   Upgrading of working conditions

According to my observations, the physical environment at both special schools was old, out-dated and lacked enough space in the classrooms. The children in wheelchairs could not use their wheelchairs in the classroom but crawled around on the carpet. Both the teacher and the practitioner indicated that there was not enough space to display the different learning areas simultaneously.

5.4.11.1   Recommendations

• Classrooms at old government special schools should be adapted and modified to better accommodate young learners living with CP.
• Practitioners with Grade R diplomas should work the same hours as qualified Grade-R teachers.

5.4.12   Salary package

Participant 1 had made some low-tech adapted magnetic puzzles but indicated that she did not get a good salary and the magnetic strips were becoming very expensive for her to supply out of her own pocket. The study found that Participant 1 did not receive all the benefits that other teachers received, even though she was a professional teacher with a degree in Early Childhood Development and Foundation Phase.

5.4.12.1   Recommendations

• The DBE should pay the full salary and benefits to all professional teachers who hold a degree, irrespective of which grade they teach.
• Medical aid, a government pension and a funeral policy should be subsidised for all government employees and their families.

5.5   LIMITATIONS OF THE RESEARCH STUDY AND RECOMMENDATIONS FOR FURTHER RESEARCH

This research is a mini-dissertation and therefore I could not conduct an in-depth investigation with many participants on the topics covered in the research.

The most obvious limitation of the study is that it looked at a very specific age group, namely the 4- to 5-year-olds in a specific grade (Grade R) who were living with a specific disability, namely CP. Only two special schools were included in the study. Only one practitioner and one qualified teacher participated. However, they had excellent experience teaching young learners with disabilities, including children living with different types of CP.

The findings of this study can, however, provide directions for future research on this topic. Although this study was adequate, it is suggested that a larger sample be considered, as well as a control group. A sample of older children in the Grade 1, 2 or 3 classrooms at special schools could be selected for a similar study.

5.6   STRENGTHS OF THE STUDY

Despite the confinements of a mini-dissertation, the necessary data was gathered. The nature of the methodology gave me the tools and the opportunity to interact with and observe the subjects in this study, namely the teacher, practitioner and learners living with CP in their natural environment at school, i.e., in their Grade R classrooms and on their playgrounds. This enabled me to obtain a true reflection of the subjects and the environment.

This research study, while of limited scope, nevertheless contributes to providing an understanding of the dire need to introduce the young child to ADs and accommodations in the Grade R classroom.

I chose to highlight the ECD phase, as I believe that is where the most highly educated and knowledgeable teachers should be employed.

The DBE recognises the importance of Grade R and thus this study could contribute to a better understanding of the Grade R classroom, and specifically to a Grade R classroom where there are children living with CP.

As far as I am aware, this study covers relatively unexplored territory, and the findings of the research should be beneficial to all adults who have children living with CP in their Grade R classrooms. The study could also be used to train parents and guardians to understand and support their children living with CP.

5.7   CONCLUSION

The importance of quality teaching and learning in the early years of human development has been debated for many years, and therefore cannot be contested. Developmental theorists have for decades been shouting from the rooftops about the importance of good nutrition, safe, clean, places for young children to live in, and a stimulating and nurturing environment to grow up in. These requirements also apply to children with impairments, including CP.

I hope that this study will contribute to a better understanding of Grade R learners living with CP, who are also entitled to good quality education offered by well-trained teachers and practitioners. I hope that my research will motivate teachers and practitioners in the Grade R classrooms at special-, full-service- and mainstream schools to include the learners living with CP in their classrooms in the spirit of Inclusion. As more children are being diagnosed with CP, I hope that this study will lead to further studies in this field in South Africa.

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Appendices
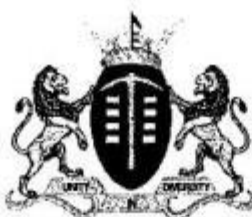
GAUTENG PROVINCE
Department: Education
REPUBLIC OF SOUTH AFRICA

For administrative use:
Reference no: D2015 / 426

GDE RESEARCH APPROVAL LETTER

Date:	5 March 2015
Validity of Research Approval:	5 March 2015 to 2 October 2015
Name of Researcher:	Stevens M.S.
Address of Researcher:	
Telephone / Fax Number/s:	
Email address:	michellestevens5@gmail.com
Research Topic:	Accommodation of Grade R learners with Cerebral Palsy by teachers and practitioners - a case study of two special schools
Number and type of schools:	TWO LSEN Schools
District/s/HO	

Re: Approval in Respect of Request to Conduct Research

This letter serves to indicate that approval is hereby granted to the above-mentioned researcher to proceed with research in respect of the study indicated above. The onus rests with the researcher to negotiate appropriate and relevant time schedules with the school/s and/or offices involved. A separate copy of this letter must be presented to the Principal, SGB and the relevant District/Head Office Senior Manager confirming that permission has been granted for the research to be conducted. However participation is VOLUNTARY.

The following conditions apply to GDE research. The researcher has agreed to and may proceed with the above study subject to the conditions listed below being met. Approval may be withdrawn should any of the conditions listed below be flouted:

CONDITIONS FOR CONDUCTING RESEARCH IN GDE

1. The District/Head Office Senior Manager/s concerned must be presented with a copy of this letter;
2. A copy of this letter must be forwarded to the school principal and the chairperson of the School Governing Body (SGB);

2015/03/06

1

Making education a societal priority

Office of the Director: Knowledge Management and Research
9th Floor, 111 Commissioner Street, Johannesburg, 2001
P.O. Box 7710, Johannesburg, 2000 Tel: (011) 355 0506
Email: David.Makhado@gauteng.gov.za
Website: www.education.gpg.gov.za

3. A letter / document that outlines the purpose of the research and the anticipated outcomes of such research must be made available to the principals, SGBs and District/Head Office Senior Managers of the schools and districts/offices concerned;

4. The Researcher will make every effort obtain the goodwill and co-operation of all the GDE officials, principals, SGBs, teachers and learners involved. Participation is voluntary and additional remuneration will not be paid;

5. Research may only be conducted after school hours so that the normal school programme is not interrupted. The Principal and/or Director must be consulted about an appropriate time when the researcher/s may carry out their research at the sites that they manage;

6. Research may only commence from the second week of February and must be concluded before the beginning of the last quarter of the academic year. If incomplete, an amended Research Approval letter may be requested to conduct research in the following year;

7. Items 6 and 7 will not apply to any research effort being undertaken on behalf of the GDE. Such research will have been commissioned and be paid for by the Gauteng Department of Education.

8. It is the researcher's responsibility to obtain written parental consent and learner;

9. The researcher is responsible for supplying and utilising his/her own research resources, such as stationery, photocopies, transport, faxes and telephones and should not depend on the goodwill of the institutions and/or the offices visited for supplying such resources;

10. The names of the GDE officials, schools, principals, parents, teachers and learners that participate in the study may not appear in the research report without the written consent of each of these individuals and/or organisations;

11. On completion of the study the researcher must supply the Director: Education Research and Knowledge Management with one Hard Cover, an electronic copy and a Research Summary of the completed Research Report;

12. The researcher may be expected to provide short presentations on the purpose, findings and recommendations of his/her research to both GDE officials and the schools concerned; and

13. Should the researcher have been involved with research at a school and/or a district/head office level, the Director and school concerned must also be supplied with a brief summary of the purpose, findings and recommendations of the research study.

The Gauteng Department of Education wishes you well in this important undertaking and looks forward to examining the findings of your research study.

Kind regards

Makado

....

Dr David Makhado

Director: Education Research and Knowledge Management

DATE: ...2015/03/06...

APPENDIX 2   RESEARCH ETHICS CLEARANCE CERTIFICATE (UNISA)

UNISA | college of education

Research Ethics Clearance Certificate
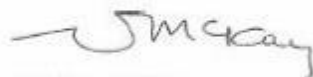
This is to certify that the application for ethical clearance submitted by

MS Stevens [7910258]

for a MEd study entitled

Accommodation of grade R learners with cerebral palsy by teachers and practitioners: a case study of two special schools

has met the ethical requirements as specified by the University of South Africa College of Education Research Ethics Committee. This certificate is valid for two years from the date of issue.

Prof VI McKay
Acting Executive Dean: CEDU

Dr M Claassens
CEDU REC (Chairperson)
mcdtc@netactive.co.za

UNISA
COLLEGE OF EDUCATION
2014 -11- 2 1
Reference number: 2014 NOVEMBER /7910258/MC
Office of the Deputy Executive Dean

17 NOVEMBER 2014

Open Rubric

APPENDIX 3 LETTER TO FIRST PRINCIPAL REQUESTING PERMISSION TO CONDUCT RESEARCH

Sir/Madam, Date:

As you are aware, I am a master's student at the University of South Africa my studies are on Inclusive Education. The topic of my research **"Accommodation of Grade R learners with cerebral palsy by teachers and practitioners-a case study of two special schools"**.

I am requesting your permission to conduct research in the Grade R class at Hope School on the above topic.

The following will be included in my research:

- ✓ Four children in Grade R, living with cerebral palsy will be part of my research.
- ✓ The parents will be asked permission to include their children as part of my research.
- ✓ Photos will be taken of the children in their daily classroom routine. (Written permission will be obtained from their parents). The children's faces will not be shown.
- ✓ An interview with the practitioner will be conducted, after school hours for + - one hour.

The research should not be disruptive to the school routine as my study will be on how to improve the learning and teaching environment of the Grade R classroom.

The normal protocol guided by the UNISA ethics policy will be followed. Participants will be sent letters of invitation to participate. Their privacy, anonymity and confidentiality will be guaranteed. Their participation is voluntary and withdrawal is permitted without any penalty.

I undertake to ensure strict confidentiality with the information collected and all respondents will remain anonymous. The participation of the practitioner in this research study is purely voluntary.

The research findings will be made available to you and other participating institutions. In case of queries you can contact me at michellestevens5@gmail.com (076 5932668) or my supervisor Dr MM Malale at malalmm@unisa.ac.za (012 429 2914)

Warm Regards,

_____.

Mrs Michelle Sharon Stevens.

I_____ (principal) hereby give Michelle Sharon Stevens permission to conduct her research in the Grade R class at this school.

_____. Signature of Principal

APPENDIX 4   LETTER TO SECOND PRINCIPAL REQUESTING
PERMISSION TO CONDUCT RESEARCH

Mr/Mrs_____.   Date:_____.

I am a master's student at the University of South Africa my studies are on Inclusive Education. The topic of my research is **Accommodation of Grade R learners with cerebral palsy by teachers and practitioners-a case study of two special schools.**

I am requesting your permission to conduct research in the Grade R class at your school on the above topic.

The following will be included in my research:

- ✓   The children living with cerebral palsy will be part of my research.
- ✓   Their parents will be asked permission to use their children as part of my research.
- ✓   Interviews will be conducted with selective parents
- ✓   Photos will be taken of the children in their daily classroom routine. (Written permission will be obtained from their parents and permission will be obtained from the children themselves).
- ✓   Interviews with the teachers/practitioners will be conducted.

The research should not be disruptive to the school routine as my study will be on how to improve the learning and teaching environment of the Grade R Inclusive classroom.

I undertake to ensure strict confidentiality with the information collected and all respondents will remain anonymous. The participation of the educators/practitioner in this research study is purely voluntary.

The research findings will be made available to you and other participating institutions. In case of queries you can contact me at michellestevens5@gmail.com (076 5932668) or my supervisor Dr MM Malale at malalmm@unisa.ac.za (012 429 2914)

My contact details are: Cell no: 076 593 2668 and e-mail address: michellestevens5@gmail.com

Warm Regards,

_____.   Date:_____.

Mrs Michelle Stevens.

I _____ (principal) hereby give Michelle Sharon Stevens permission to conduct her research in the Grade R class at this school.

_____.   Date: _____.

Signature of Principal.

.

APPENDIX 5   LETTER REQUESTING PARTICIPATION IN THE STUDY FROM PRACTITIONER/TEACHER

Dear Practitioner/Teacher,

This letter is an invitation to consider participating in a study I, Michelle Sharon Stevens am conducting as part of my research as a master's student entitled **Accommodation of Grade R learners with cerebral palsy by teachers and practitioners-a case study of two special schools.**

I am requesting your participation in this research as I have purposefully identified you as a possible participant because of your valuable experience and expertise related to my research topic

Your participation in this study is voluntary. It will involve an interview of approximately *60* minutes in length to take place in a mutually agreed upon location at a time convenient to you. You may decline to answer any of the interview questions if you so wish. Furthermore, you may decide to withdraw from this study at any time without any negative consequences.

With your kind permission, the interview will be audio-recorded to facilitate collection of accurate information and later transcribed for analysis. Shortly after the transcription has been completed, I will send you a copy of the transcript to give you an opp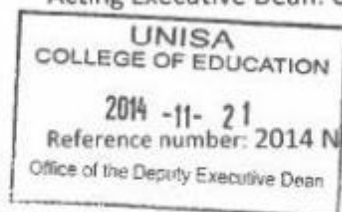ortunity to confirm the accuracy of our conversation and to add or to clarify any points. All information you provide is considered completely confidential. Your name will not appear in any publication resulting from this study and any identifying information will be omitted from the report. However, with your permission, anonymous quotations may be used. Data collected during this study will be retained on a password protected computer for 12 months in my locked office. There are no known or anticipated risks to you as a participant in this study.

In this interview I would like to have your views and opinions on this topic. This information can be used to improve and add to the knowledge base of the early childhood development phase and stress the importance of using assistive devices for young children living with cerebral palsy.

I will be conducting the following with your permission in your Grade R classroom.

- I am concentrating on the child living with cerebral palsy and will need your assistance in identifying four children who have hemiplegia, ataxia, and athetoid and mixed cerebral in your Grade R classroom.

- I will then ask you to give the children you have identified a consent form to take home. I will call at your school (at a time which is convenient to you) to collect the forms.

- I need to observe your daily routine with the children; this will be for one school day only.

- Take photos of the classroom and playground, focusing on any assistive devices and augmentative and alternative communication (Low or High Tech) you use or have made in your Grade R environment.

- Ask you to complete a short questionnaire. (This should take 10 minutes at the most).

- Take photos (with the parents' consent of the children in their daily classroom and playground activities) their faces will not appear on the photos.

As I am a teacher myself I know what it is like to have someone in my classroom observing me. However, I am assuring you I am not judging you in any way. I am only collecting data for my research.

The research findings will be made available to you and other participating institutions. In case of queries you can contact me at michellestevens5@gmail.com (076 5932668) or my supervisor Dr MM Malale at malalmm@unisa.ac.za (012 429 2914)

I thank you for your time and in anticipation of your kind co-operation.

Warm Regards,

_____.   Date: _____.

Mrs M. S. Stevens.

CONSENT FORM

I have read the information presented in the information letter about the study titled

Accommodation of Grade R learners with cerebral palsy by teachers and practitioners-a case study of two special schools.

I am aware that I have the option of allowing my interview to be audio recorded to ensure an accurate recording of my responses. I am also aware that excerpts from the interview may be included in publications to come from this research, with the understanding that the quotations will be anonymous. I was informed that I may withdraw my consent at any time without penalty by advising the researcher. With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

Participants Name (Please print):_____.

Participant Signature: _____.

Date: _____.

Researcher Name: (Please print) _____.

Researcher Signature: _____.

Date: _____

APPENDIX 6   LETTER REQUESTING ASSENT FROM LEARNERS

Date:

Dear _____.

Did your Mommy and Daddy talk to you about me coming to visit your classroom to – day?

How do you feel about me being here? Can I carry on talking to you?

My name is Mrs Michelle Stevens and I have come to your classroom to- day to learn from you. I am studying at the University of South Africa. Teachers study at University to teach young people like you and your friends here in your Grade R classroom. The teachers need you to help them learn about what you and your teacher use in your classroom to help you do your school work and to play.

This means that I want you to show me what you use in the classroom to help you read and write and play. I want to watch you in the block area and when you do your school work at your desk.

I need to see how you do your work and play with your friends because I need to help the other teachers in other classrooms and teach them how to help all children to enjoy school.

I am taking photos to- day, so that I can help other teachers and children to see what and how you do your work and play in your Grade R classroom.

If I take photos of you, would you like me to make some for you and send them to you?

I am going to put my tape recorder on now and I am going to read you this letter and then I am going to ask you a question, OK?

If you decide that you do not want me to watch you or take photos of you, then you can say "No" and that will be "OK".

If you want to talk to me about anything ask your Mommy or Daddy to call me or send me an e mail on: 076 593 2668 or at michellestevens5@gmail.com

Thank you for teaching me and showing me what you did in your Grade R classroom to –day.

WRITTEN ASSENT

The parents or Guardian has signed the consent form. This assent form is signed by the researcher and the witness. The child if they are able to write their name will write their name.

Verbal assent will be taped by the researcher in the presence of the witness.

Learner's name: _____   Date: _____

Witness's name (print)   Witness's signature   Date: _____

_____.   _____.
(The witness is over 18 years old and present when signed.)

Researchers name (print)   Researcher's signature: Date: _____

_____.   _____.

APPENDIX 7   LETTER REQUESTING CONSENT FROM PARENTS

Dear Parent/Guardian,

Your child is invited to participate in a study entitled **Accommodation of Grade R learners with cerebral palsy by teachers and practitioners-a case study of two special schools.**

I am undertaking this study as part of my master's research at the University of South Africa. The purpose of the study is to highlight the need for more practical training for the practitioner or teacher in the grade R classroom, focusing on including the young child living with cerebral palsy and the possible benefits of the study are to improvement the knowledge and understanding of teachers on the importance of early intervention and the value of using assistive devices and augmentative and alternative communication with young children living with cerebral palsy in the Grade R environment. I am asking permission to include your child in this study because your child is living with cerebral palsy. I expect to have seven other children participating in the study.

If you allow your child to participate, I will need to:

- Observe at a distance how your child is included in the daily Grade R classroom activities
- Observe at a distance how your child interacts with the teacher and his/her peers in the main areas of a Grade R class for example the fantasy, block and free play areas.
- I am focusing on how the practitioner/teacher includes and adapts the environment in order to include the cerebral palsied young child, in the holistic daily programme.
- Take photos of assistive devices (e.g. splints or special pencil grips etc.)Or any type of augmentative and alternative communication equipment your child may use to communicate with. The reason for taking the photos is that a photo speaks a thousand words. These photos will reflect the assertive devices that the teacher uses in the classroom to include the young child living with cerebral palsy e.g. I pads, adaptive chairs, desks, hand grips, walkers, wheelchairs, etc.
- Your child's face will not show on the photo and their identity will be protected at all times.

Any information that is obtained in connection with this study and can be identified with your child will remain confidential His or her responses will not be linked to his or her name or your name or the school's name in any written or verbal report based on this study. Such a report will be used for research purposes only and photos may be used in educational literature or teacher training publications and power point presentations presented by the researcher.

There are no foreseeable risks to your child by participating in the study. Your child will receive no direct benefit from participating in the study; however, the possible benefits to education are that the value of assistive devices and their benefits are acknowledged by education institution and teachers in the Early Childhood Development Phase. Neither your child nor you will receive any type of payment for participating in this study.

Your child's participation in this study is voluntary. Your child may decline to participate or to withdraw from participation at any time. Withdrawal or refusal to participate will not affect him/her in any way. Similarly you can agree to allow your child to be in the study now and change your mind later without any penalty.

The study will take place during regular classroom activities on a date still to be decided upon, with the prior approval of the school and your child's teacher. However, if you do not want your child to participate, an alternative activity will be available.

In addition to your permission, your child must agree to participate in the study and you and your child will also be asked to sign the assent form which accompanies this letter. If your child does not wish to participate in the study, he or she will not be included and there will be no penalty. The information gathered from the study and your child's participation in the study will be stored securely on a password locked computer in my locked office for five years after the study. Thereafter, records will be erased.

If you have questions about this study please ask me or my study supervisor, Dr MM Malale at malalmm@unisa.ac.za (012 429 2914) at the University of South Africa. My contact number is 076 593 2668 and my e-mail is michellestevens5@gmail.com. You are making a decision about allowing your child to participate in this study. Your signature below indicates that you have read the information provided above and have decided to allow him or her to participate in the study. You may keep a copy of this letter.

I am enclosing a request form that I will read to your child before I begin with my research in the classroom. I will give a request form to the teacher so she/he can forward it to you. Please complete the form and send it back to your child's registered teacher. You are however, under no obligation to give your permission.

I thank you in advance for your permission to include your little one in my research. I am sure that the data collected will be a great asset to the Inclusive teaching community.

Sincerely

_____

 Mrs. M.S. Stevens.

Name of child: _____.

Date of Birth: _____.

_____   _____   _____
Parent/guardian's name (print)   Parent/guardian's signature: Date:

_____   _____   _____
Researcher's name (print)   Researcher's signature   Date.

APPENDIX 8   OBSERVATION SHEET / CHECKLIST - GRADE R

1. What assistive devices are used to include the child living with cerebral palsy?
   a. Fantasy area
   b. Big Block area
   c. Free play area
   d. Sensory area
   e. Mathematics area
   f. Language area
   g. Reading area
   h. Outside play area
2. How do the children with cerebral palsy participate in the morning ring activity?
3. Is the environment arranged in such a way as to allow free access to all the areas in the classroom?
4. How do the cerebral palsy children who have little or no functional communicate with the teacher and class mates?
5. Is socialization encouraged between the children? During fantasy and free play? If so how?
6. Which assistive devices are available and how do the children and the teacher use these in the classroom?
7. What kind of technology is available in the classroom?
8. Are there any augmentative and alternative communication strategies in the classroom and in the playground?
9. Is the environment inviting, stimulating and challenging for the child with cerebral palsy?
10. Are assistive devices used for pre writing and pre reading skills?
11. Are the children taken to therapy, if so what therapy is available and how frequently?
12. What if any adaptive devices are used at feeding and toilet time?
13. Describe which low and high tech assistive devices are used.
14. Does the teacher make her own assistive devices; is she creative and thoughtful?
15. Are all the children included or are some left out and isolated?

APPENDIX 9   QUESTIONNAIRE FOR THE GRADE R CLASSROOM
PRACTITIONER/TEACHER

SECTION A

Personal Background

Kindly place a cross (X) in the box to indicate your answer.

Gender

Male	1
Female	2

What is your highest qualification?

Grade 12	1
ECD Certificate	2
Teaching Diploma	3
Bachelor's Degree	4
Other (specify)	5

Number of years teaching experience?

Below one year	1
Between 1 – 5 years	2
Between 6 – 10 years	3
Between 11 – 15 years	4
Above 15 years	5

Please answer the questions as honestly as possible and keep in mind that your identity will not be revealed. You will be known as participant 1 or 2.

Question 1.

Are you qualified to teach in the Grade R or the Foundation Phase? Provide details.

Question 2.

How many children with different kinds of cerebral palsy do you have in your classroom?

Impairment	Number of boys	Number of Girls
Monoplegia		
Hemiplegia		
Triplegia		
Quadriplegia		
Diplegia		
Paraplegia		

I thank you for taking the time to grant me an interview. The above information will be kept strictly confidential.

Yours,

Michelle Stevens.

APPENDIX 10   SEMI STRUCTURED INTERVIEW QUESTIONS FOR THE TEACHER AND THE PRACTITIONER

These interviews will be taped.

1. Describe two adaptions per area that have you made in your Grade R classroom to include the child living with cerebral palsy? Under the following headings.
    a.   Fantasy area
    b.   Big Block area
    c.   Free play area
    d.   Sensory area
    e.   Mathematics area
    f.   Language area
    g.   Reading area
    h.   Outside play area

2. Describe how you use assistive devices and adaptive strategies in your classroom? Finger grips or easy open scissors as an example.

3. Match the most beneficial assistive device to the categories of cerebral palsy below. Please give examples for each category?
    a.   Hemiplegia for example (pencil grip)
    b.   Athetoid (Walker or crutches)
    c.   Ataxic (Taping down books on desk)
    d.   Mixed (any of the above and more)

4. Describe which type of augmentative and alternative communication you use with children who cannot communicate due to cerebral palsy in your classroom? For example what low tech or high tech technology do you use?

5. What kind of training have you received in Inclusive Education focusing on assistive, adaptive devices, alternative strategies and augmentative and alternative communication skills?

6. Describe the support given to you as a Grade R teacher by the Inclusion Support Services Unit? Or any official at your local district office.

7. Describe to what extent you receive support from your therapists at school. Explain support given to you from speech, occupational and physiotherapy for your information and practical support for the child to use in the classroom.

8. Give details of workshops and training you have received by the D.o.E or district offices or have you or your school had to arrange training in barriers to learning yourselves?

9. Describe what kind of training and support you would like to have and why? For example.
    a.   In house training/ practical hands on training
    b.   A manual for the different kinds of cerebral palsy and practical activities on how to use assistive devices in the Grade R classroom?
    c.   Training of how to adapt the environment for the cerebral palsied child?
    d.   Training on augmentative and alternative communication skills.
    e.   Top up training on the latest assistive devices and how to use then effectively in the classroom
    Maybe you can think of something else?

10. Describe in your own words why you believe that early Childhood Development teachers/practitioners should have professional status.

11. How important do you believe early intervention strategies are in the development of the young child living with cerebral palsy?

12. In your own words how important do you believe the Early Childhood Development and Foundation Phase is?

13. Explain the support you receive from the principal and the Department of Education as far as the budget allocation for assistive devices and the latest technology in the Grade R classroom?

14. Is there anything that you would like to add about Inclusion and the Grade R teacher?

15. Describe your role in contributing to the holistic development of the whole child?

I thank you for taking the time to grant me an interview.

Yours,

Michelle Stevens.

APPENDIX 11   INTERVIEW SCHEDULE

	Participant 1	Participant 2
Fantasy area	The fantasy clothes are stored in a large container and are taken to the carpet area. There are dress up clothes and wigs. The teacher has also provided a portable rail for those children who are able to stand up.	None at the moment
Big block area	Blocks are well within reach of all the children. They are stored neatly in a large easy open container	Blocks are stored in an open easy to reach bookshelf. In front of the tables and chairs. The practitioner carries the blocks to the carpeted area for the children
Free play area	The carpet is used as the free play area. Children have access to the reading area, block area as well as fantasy container.	The carpet is used as the free play area.
Sensory area	None was visible in the classroom. Teacher said that she bought sensory materials from time to time. These were expensive as she has to purchase these from her own pocket. There was a beautiful sensory area on the playground	To be honest I do not have them. No sensory area was set out.
Mathematics area	Posters, paper, crayons, Lego , different shapes and colours. Abacus and beads and small blocks for counting	Mathematic area is combined with the block area.
Literacy area	A well-stocked library. But no adapted books. Big books were available. Small chalk boards and chalk.	Chalk and the Department of Basic Education workbooks are available
Reading area	Big reading books and a large variety of big pictures.	There is a reading table separate in a quite area. Block and literacy materials are combined in an open bookshelf
Outside play area	The outside play area in this school is wonderful. Much of the equipment has been especially adapted for the physically disabled child.	Children access the play area only at break time. After they have eaten their sandwiches inside in the classroom on the carpet. Playground had no adapted equipment.
Theme table	The weather. A ball and various posters on the seasons.	None

APPENDIX 12   GRADE R DAILY PROGRAMME

Figure 1: Grade R daily programme
(From ± 7:30 – 13:00)

	ARRIVAL AND FREE PLAY
36 min	Greeting Birthdays Register News Weather chart TEACHER-GUIDED ACTIVITY Language, Mathematics, Life Skills
50 min	• ART ACTIVITY (every day: 1 MAIN + 2/3 supporting activities) • FREE PLAY INSIDE • TIDY UP INSIDE
30 min	TEACHER-GUIDED ACTIVITY Language, Mathematics, Life Skills
10 min	Toilet routine Language, Mathematics, Life Skills
20 min	REFRESHMENTS: Language, Mathematics, Life Skills
60 min	Free play outside and Tidy up
10 min	Toilet routine Language, Mathematics, Life Skills
30 min	TEACHER-GUIDED ACTIVITY Language, Mathematics, Life Skills
30 min	STORY every day
	Rest/quiet time and departure

Mathematics, Languages Life Skills

- Fantasy play
- Role play
- Construction play
- Blocks
- Educational Toys
- Perceptual games
- Puzzles
- Book corner
- Quiet time
- Quiet area

- Water play
- Sand play
- Role play
- Balls
- Swings
- Wheel toys
- Educational toys
- Jungle gym
- Tyres
- Physical Education
- Games

MATHEMATICS

- Activities designed from CAPS (mathematics)
- Songs and music activities
- Perceptual activities
- Counting rhymes
- Theme discussions
- Science experiments
- Free play
- Routines

LANGUAGES

- Activities designed from CAPS (home language)
- Stories
- Dramatisation
- Books/pictures
- Picture reading
- Picture discussions
- Perceptual activities
- Parent poster
- Parent letter
- News
- Poems/rhymes
- Music/songs/rhymes
- Tapes
- Theme discussions
- Human movement activities
- Routines
- Free play

LIFE SKILLS

- Activities designed from CAPS (life skills)
- Human movement activities
- Songs and music
- Poems and rhymes
- Theme discussion
- Birthdays
- Routines
- Free play

(DBE 2011a:15)

Communication 4 All: You can tell and be heard English

- I can't speak, but can hear and understand you.
- Please contact my family.
- Ask me questions if you need to, but please wait patiently for my answers
- I will point where...

night	food	gun	money/sweets	mother	secret	school work	father
family	home	I/me/mine	police	toilet bathroom	alcohol	car	day
in	out	under	man/himba	sore	woman shelter	clothes	doctor
sad hurt feelings	angry	forced	scared	alone	ashamed shy	bad	friendly
get	know	lock	sex	shout/scream	steal	swear	threaten
burn	don't	help	please/beg	stop	tell	touch	bleed
how	what	when	where	who	they	not on this board	hit/punch

APPENDIX 14   GRADE R SCREENING ASSESSMENT

GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

EARLY IDENTIFICATION TO ENSURE APPROPRIATE SUPPORT
TO BE COMPLETED FOR ALL LEARNERS ENTERING Gr R

School Principal:		Educator / Practitioner:	
Name of School:		Tel No:	Area:

Learner - Surname :	First Name:	Second Name:

Date of Birth - Year:	Month:	Day:	Gender: Male / Female	Admission No:

Year (201)	Gr	(A, B, C, D, E) (Cross)	Is the learner repeating this grade? Yes / No

LOLT:	Home Language of learner (HL):	No. of HLs in class:

Total learners in class:	Males:	Females:	Are there learners in wheelchairs : Yes/No	Number:

	Does the learner (1 .. 8) Can the learner (9 .. 20)	YES	NO	COMMENTS	CONCERN (RED △)
1	Know his/her name & surname?				
2	Know his/her age?				
3	Understand and respond to instructions?				
4	Speak clearly?				
5	Play well with others?				
6	Make friends easily?				
7	Appear healthy?				
8	Cry easily?				
9	Visit the toilet independently?				
10	Name basic body parts?				
11	Tell a story				
12	Separate easily from parents				
13	Count up to 10?				
14	Build a tower with 4 blocks? / Build a 4 piece puzzle?				
15	Sort 3 coloured objects (Red, blue, yellow)				
16	Throw and catch a big ball using both hands?				
17	Walk on a straight line? (Heel and toe)				
18	Visit the toilet independently?				
19	Name 2 shapes?				
20	Copy a pattern?				
	OBSERVATIONS:				

basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

SUPPORT NEEDS ASSESSMENT FORM (SNA)

SNA 1 & 2: SCHOOL LEVEL

Surname and Names of Learner	DOB:
	ID No.:
	LURITS/CEMIS No.:
Name of School:	EMIS No.

CONFIDENTIAL

This is a confidential document that must be kept in the Learner Profile

SUPPORT NEEDS ASSESSMENT (SNA 1 & 2)
(School-Level Intervention)

Both SNA 1 and 2 must be completed at school level

A Learner Profile, SNA 1 and SNA 2 will be required when support is requested from the districtbased Support Team (DBST).

SNA 1: ASSESSMENT AND INTERVENTION BY TEACHER

- *To be completed by the class teacher and/or subject teachers if the learner is taught by more than one teacher.*
- *To be completed if the Learner Profile or Screening Report or teacher observation shows that a learner has additional support needs.*
- *Captures information that will be needed when support is requested from the School-based Support Team (SBST) by the teacher concerned.*

1. AREAS OF CONCERN

Describe your concern about the learner.

_____

_____

_____

When did you become aware of this? _____

How did you become aware of this - own observation or was it reported?

_____

_____

How is this observation currently affecting the learner's learning and development? Describe.

_____

_____

_____

_____

Complete the following table with regard to the learner's scholastic profile (information extracted from Learner Profile)

YEAR									
GRADE	R	1	2	3	4	5	6	7
RESULT (Pass/more time/progressed)									
NUMBER OF SCHOOLS ATTENDED									

Has any disability been diagnosed by a healthcare professional?
(as captured in *the Medical and Health Assessment Form (Annexure D)*

If Yes, complete the following and attach reports.

Healthcare Professional	Date of assessment	Summary of results

2. STRENGTHS AND NEEDS OF THE LEARNER

Indicate the strengths and needs of the learner by completing the sections below.

2.1 Communication:

- The learner's ability to understand what other people are saying as well as to express him/herself in a way that other people understand - receptive and expressive language.

Strengths	Needs/at risks factors	Support needed

2.2 Learning:

- The learner's ability to participate satisfactorily on grade level regarding subject content and assessment

Strengths	Needs/at risks factors	Support needed

2.3 Behaviour and social competence:

- The learner's ability to interact and work with other learners, as well as follow classroom routines

Strengths	Needs/at risks factors	Support needed

2.4 Health, wellness and personal care:

- The learner's physical appearance (looking healthy, clean, well-fed), emotional well-being and health status (consult School Health Screening Report/Road to Health Card)

Strengths	Needs/at risks factors	Support needed

2.5 Classroom and school:

- Factors within the classroom and school environment (policies, ethos, attitudes, skills, resources, safety, etc.) that are impacting on the learner's effective participation in the learning process and programmes offered at the school

Strengths	Needs/at risks factors	Support needed

2.6 Family, home and community situation:

- Factors that may be impacting on the learner's ability to achieve satisfactorily at school (e.g. family structure, family stability, biological parents, siblings, other significant adults, orphan, child-headed household, number of schools attended, homeless, in foster care, refugee, immigrant, substance abuse, domestic violence, divorce, neglect, disabled/ill parents, poverty stricken home background)

Strengths	Needs/at risks factors	Support needed

3 TEACHER INTERVENTIONS/SUPPORT

3.1 Curriculum Intervention:

What curriculum interventions have you as teacher implemented to address your concerns?

3.1.1 Comment/explain how the curriculum content was differentiated, e.g. taking into account that every learner should have access to the grade level teaching and assessment best suited to his/her needs: were the learner's needs met by a differentiated curriculum? Did the learner's abilities determine what is expected of him/her without discrimination? Etc.

Successes	Challenges

3.1.2 Comment on how teaching methods were adapted/differentiated, e.g. how classroom management was changed to accommodate learners working at different levels of knowledge; how activities were modified to ensure that they are meaningful; how a range of graded materials was used, material was modified to allow for a learner's disability for instance; how the presentation was modified (e.g. by using pictures/pictures with descriptions/explanations etc.)

Successes	Challenges

3.1.3 Comment on how the **assessment** was modified e.g. by organising the learner's tasks, using different methods of assessment, without compromising the curriculum standards.

Successes	Challenges

3.2 What interventions have you as a teacher implemented in the **learning environment** (classroom/school) to address your observations and concerns about the learner?

Comment, for example, on how the following was modified: classroom management (e.g. culture/class rules/attitudes/awareness of disabilities); playground management, e.g. buddy system, etc.

Successes	Challenges

3.3 Comment on how the **physical environment** was modified/adapted

E.g. the seating arrangement of the learner was changed to limit distractions, use of flexible grouping(s) to accommodate learner, the environment was made wheelchair friendly etc.

Successes	Challenges

3.4 Any additional comments that you want to make about the barrier(s) to learning experienced by the learner, the support/interventions provided and continuing challenges that are experienced.

_____
_____
_____
_____
_____
_____

3.5 What additional support/intervention do you as a teacher require from the School-based Support Team (skills, resources, knowledge about curriculum differentiation (both in teaching and assessing)?

_____
_____
_____
_____

3.6 Schedule/Log of consultation(s) with: Parent/Legal Guardian/Caregiver/Learner himself or herself.

Date	Purpose	Outcome

3.7 Views expressed by Parent/Legal Guardian/Caregiver/Learner during the consultation(s):

_____
_____
_____
_____

Role player	Initials and surname of person (print)	Signature	Date
Teacher/Manager:			
Head of Department:			
Parent/Legal Caregiver:			
Principal:			
SBST Coordinator:			
District Assessment Team:			

DAT recommendation (Mark appropriate block with an "X")	Learner needs additional support in the following year		Learner must be retained in the current grade in the following year	

School Stamp