

**Creating meaningful learning opportunities for children with
Cerebral Palsy in South African rural schools**

by

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PRETORIA

DEDICATIONS

I dedicate my thesis to the following people who have, without fail, been there as the wind beneath my wings:

My husband, Christian, for your unwavering love, support and understanding during the time that I have spent pursuing this degree. Unfortunately, you passed on in the week I was preparing to submit this thesis. I know how much you were looking forward to me achieving this degree; however, God had other plans for our lives. You have left a void in my life that I will struggle to fill. I will not question God's decision to take you away from me; all I can ask is that He blesses your soul. Thank you for the beautiful life I lived with you. I will forever love you, till we meet again.

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DECLARATION

I, Nkhensani Susan Thuketana, declare that the thesis titled
“Creating meaningful learning opportunities for children with Cerebral Palsy in
South African rural schools”,
which I hereby submit for the degree Philosophiae Doctor, is my work and has not
previously been submitted for a degree at this or any other tertiary institution.

.....
Nkhensani Susan Thuketana

.....
Date

ETHICS STATEMENT

I, Susan Nkhensani Thuketana, declare that I have obtained the applicable research ethics approval for this thesis. I have observed the ethical conditions stipulated by the Research Ethics Committee in terms of the University of Pretoria's Code of Ethics for researchers and the policy guidelines for responsible research.



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This Ethics Clearance Certificate should be read in conjunction with the Integrated Declaration Form (D08) which specifies details regarding:

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ABSTRACT

Inclusive education is a strategy aimed at ensuring equal education for all children, regardless of race, colour, gender or ability. Many countries internationally are in the process of implementing this approach, but progress has been much slower in developing countries such as South Africa. Challenges of implementation are, among others, attributed to the Western origin of this approach, with the result that more than twenty years after its conceptualisation, little progress has been made.

Even after the implementation of inclusive education, children with disabilities, particularly those with cerebral palsy, are still being excluded from accessing the general curriculum in rural schools; neither is teacher training sufficient in equipping teachers with the necessary skills to teach children with diverse educational needs in inclusive classes; therefore, children with cerebral palsy experience numerous barriers to their academic progress compared to children without disabilities.

It is, thus, the aim of this research study to use Bronfenbrenner's Ecological Systems Theory as a theoretical lens in order to elicit qualitatively the perceptions of rural school teachers towards inclusive education and how to teach children with cerebral palsy in those schools. Piaget's theory of cognitive development and Vygotsky's social constructivist theory are used as accompanying theories to review the development of children with cerebral palsy and the support they require to progress in rural schools.

The empirical data collected have provided rich insight in informing factors to improve curriculum accessibility for children with cerebral palsy and to facilitate the implementation of inclusive education in rural schools.

Keywords:

Cerebral palsy; curriculum accessibility; coordinator of the school-based support team; inclusive education; full-service schools

ABBREVIATIONS AND ACRONYMS

AAC	Augmentative and Alternative Communication
DBST	District-Based Support Team
HOD	Head of Department
ICF	International Classification of Functioning, Disability and Health
NCESS	National Committee on Education Support Services
NCSNET	National Commission on Special Needs in Education and Training
SASA	South African Schools Act
SBST	School-Based Support Team
SIAS	Screening, Identification, Assessment and Support
SWOT	Strengths, Weaknesses, Opportunities and Threats
UDHR	Universal Declaration of Human Rights
UN	United Nations
UNCRC	United Nations Convention on the Rights of the Child
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations International Children's Emergency Fund
WHO	World Health Organisation
ZPD	Zone of Proximal Development

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CHAPTER 1

INTRODUCTION AND ORIENTATION OF THE STUDY

1.1 INTRODUCTION

Disability is a condition that continuously restricts participation and is attributable to sensory, motor, cognitive, neurological, intellectual and/or a combination of these impairments (WHO, 2011). Cerebral palsy is frequently a common cause of disability in children; as a result, children with cerebral palsy require educational support in order to participate and progress in full-service schools with their typical peers (Cruickshank & Raus, 1955). However, Holownsky (1979) maintains that it is imperative for teachers to understand the limitations experienced by these children in order to provide the necessary educational support for children with cerebral palsy to be able to access the general curriculum in full-service schools.

During the apartheid era, from 1948 to 1994, when the white population group enjoyed benefits at the expense of other population groups, the education system in South Africa supported segregation, as there were different schools not only for the various ethnic groups, but also for children with disabilities (Daniels, 2010; Engelbrecht, 2006; Engelbrecht, Oswald & Forlin, 2006; Lomofsky & Lazarus, 2001). Former white schools were adequately equipped in terms of financial, human and infrastructural resources (Perumal, 2009; Yamaunchi, 2005). As a result, white children received the kind of education that promoted “skills development, critical thinking, attitudes and understanding” (Nekwevha, 1999, p. 498). On the other hand, education for black children was characterised as focusing mainly on “rote learning” that prepared them to be “hewers of wood and bearers of water” (Perumal, 2009, p. 36).

There was also segregation in the education of children with disabilities. While white children with disabilities enjoyed educational support in well-resourced schools, special schools for black children with disabilities were scarce and difficult to access (Muthukrishna & Schoeman, 2000). These special schools mainly admitted children who were deaf and those with visual disabilities (Gwala-Obisi, Nkambinde & Rodrigues, 1998), and no provision was made for children with cerebral palsy. Consequently, the majority of children with disabilities attended regular schools supported by teachers trained inadequately in the epistemology of disability (Abosi, 2007), or dropped out of school, with no opportunity to join the labour market (Perumal, 2009; Yamauchi, 2005).

With the dawn of democracy in 1994, a new Constitution (Republic of South Africa, 1996) and Bill of Rights (Act No. 108 of 1996) were adopted by the South African government in an attempt to address the disparities in its education system (Engelbrecht, 2006). Equal access to education, namely education for all, became a fundamental rights matter in the Constitution, especially for previously marginalised groups (Daniels, 2010). In trying to redress these past imbalances, the government faced not only the challenge of including children with disabilities in full-service schools, but also the responsibility to provide quality education to these children (UNESCO, 1994). An inclusive educational policy, which welcomed children with disabilities in full-service schools, was, therefore, adopted, allowing these children to be educated with their peers while acknowledging a different trajectory to be followed in their learning process (Department of Education, 2011). Key to these children progressing with other children without disabilities was the acknowledgement that they should have access to the general curriculum (Department of Education, 2010).

The Department of Education regards access to the general curriculum as “an ongoing effort to finding effective ways to ensure that children access and make progress in the general curriculum while receiving individualised instruction and supports” (Department of Education, 2010, p. 30) and as a distinguishing characteristic of inclusive education. However, Ntombela (2011) maintains that the majority of teachers in South Africa are not equipped to deal with children with

diverse learning needs, with the result that these children continue to be excluded from mainstream classes. The primary aim of this study was, therefore, to explore rural schoolteachers' perceptions regarding inclusive education and to determine how they teach children with cerebral palsy in order to create meaningful learning opportunities and improve curriculum accessibility for these learners.

1.2 RATIONALE

It is becoming increasingly difficult to ignore the benefits of inclusive education as inclusion is integral to the process of changing social perceptions and is crucial for effective and progressive development (Evans & Lunt, 2002). Inclusive education is deemed to be a strategy to remove educational barriers for children with disabilities in order for them to participate in school activities with their counterparts. The Department of Basic Education also endeavours to level the inequalities that exist between mainstream and special schools with the implementation of inclusive education (Department of Education, 2011). In line with the White Paper 6: Special Needs Education, Building an Inclusive Education and Training System, both the Department of Education (2001) and Jordan, Schwarts and McGhie-Richmond (2009) reveal in their research on disabled children that communities which practise inclusive principles in their schools manage to change perceptions about disabilities. Furthermore, developing children without disabilities benefit from intervention strategies applied in inclusive classes, and so their performance improves.

Aguerrondo (2008) asserts that the implementation of inclusive education facilitates the provision of services for children's diverse learning needs and eradicates inequalities brought about by anti-discriminatory laws; consequently, segregation can be eradicated. However, Aguerrondo (2008, p. 58, 61) further identifies new challenges that emanate from the implementation process, namely "political-ideological, epistemological, pedagogical and institutional" problems. He proposes a "new vision" of developing an inclusive culture that will facilitate the implementation process and offer accessible and quality education for all.

Section 29 of the Bill of Rights in the South African Constitution (Republic of South Africa, 1996) states that every child has a right to basic education. The Department

of Basic Education subsequently created a Screening, Identification, Assessment and Support (SIAS) tool to identify educational barriers in time to provide the required support for children with special needs (Department of Basic Education, 2014). Regardless of the fact that teachers are considered to be crucial for the implementation of inclusive education and curriculum delivery, a lack of the required skills to synergise policy, practice and culture acts as a deterrent in providing support to children with disabilities in mainstream classrooms (Abosi, 2007). The inefficiency was caused, among other things, by the inadequate teacher training that these teachers received (Aguerrondo, 2008).

Du Toit and Forlin (2009, p. 645) assert that until “customs and practices” embedded in a specific society are changed, the implementation of inclusive education will remain a challenge. In this regard, these authors suggest that schools need “to be stabilised, made functional and require a strong authoritative education department, particularly at district level” to make the curriculum accessible to all (Du Toit & Forlin, 2009, p. 648). As a former deputy principal of a special school and a member of the district-based support team (DBST), I have come to agree with Engelbrecht (2006) as well as Lomofsky and Lazarus (2001) that the collaboration of all the stakeholders in education is necessary to make inclusive education work. These critics assert that more than twenty years after the implementation of inclusive education as a strategy to improve educational access and participation for children with disabilities, no progress has been made as these children are still excluded from mainstream classrooms.

The exclusion of children with disabilities is more evident in rural areas where there is a scarcity of resources (Goduka, 1997). Studies, such as those conducted by Lomofsky and Lazarus (2001) and Pather (2011), focus mainly on the inclusion of children with disabilities in rural South African schools. However, studies addressing meaningful learning opportunities for black children with cerebral palsy, particularly in rural contexts, are a topic that researchers have not investigated hitherto. While Holowinski (1979) addresses curriculum accessibility for children with cerebral palsy, his study focuses on affluent schools with sufficient resource

provisioning. No studies were found addressing meaningful learning opportunities for black children with disabilities in the context of rural schools.

This study was, accordingly, motivated by contextual variances in the requirements between the ideal context for curriculum accessibility, as suggested by Holowinski (1979), and the South African rural context. The political history of South Africa has had an impact on the institutional, pedagogic, political-ideological and epistemological requirements for education success (Aguerrondo, 2008). As such, this study aimed to fill a contextual gap in creating meaningful learning opportunities for children with cerebral palsy in rural schools cognisant of the aforementioned factors.

Cerebral palsy is believed to be one of the main causes of child disability (Cruickshank & Raus, 1955), and it can be assumed that there may be many children with cerebral palsy in the classrooms with teachers who are unable to educate them (Lee & Low, 2014). It can further be assumed, as in all the other disabilities, that the prevalence of cerebral palsy in South Africa is not well documented (Census, 2011). This study, therefore, took a pragmatic stance to elicit the empirical data to allow the creation of meaningful learning opportunities for a growing number of children with cerebral palsy in rural schools.

While learning difficulties or special needs are on the increase (Meynert, 2014) and the characteristics of cerebral palsy range on a scale from mild to severely disabled (Cruickshank, 1976), curriculum delivery for these children needs to be adapted for accessibility. In 1979, Holowinsky proposed an adaptation of the curriculum for children with cerebral palsy and concluded that unless teachers understand the strategies to support participation and remove educational barriers for children with cerebral palsy, these children will remain excluded from accessing the curriculum. The idea, thus, was to provide guidelines for the teachers in rural schools to improve curriculum accessibility for children with cerebral palsy. While this study aimed to address the curriculum needs of the children with cerebral palsy, it also indirectly addressed the needs of other children with special needs in a South African rural context.

1.3 PROBLEM STATEMENT

It was foreseen that it would take 20 years to implement the White Paper 6, which undertook to build an accessible education system and provide quality education for all (Daniels, 2010; Department of Education, 2001). However, to date, South Africa is still grappling with the implementation process. This does not mean that the vision of the country is wrong, but affirms that the implementation of policies in a country with deep historical divisions and a lack of the required skills presents challenges (Engelbrecht, 2006). It had not been anticipated that the teachers in full-service schools would not have the pedagogical skills to meet the inherent needs for inclusive education (Nishimura, 2014). The bearers of the consequences are the children with disabilities, particularly those with cerebral palsy in rural areas who are unable to access the curriculum in full-service schools.

The inclusive education policy expects teachers to be versatile and to be skilled in adapting and differentiating the curriculum for access to all children (Lee & Low, 2014). Although there have been various curriculum changes in South Africa, which ranged from Outcomes-Based Education (OBE) and the National Curriculum Statement (NCS) to the Curriculum Assessment Policy Statement (CAPS) (LePage & Courey, 2010), the culture of schools has remained the same (Lotz-Sisikta & Schudel, 2007). A mismatch between the skills requirements for quality curriculum delivery in an inclusive context and the training of the teachers has become apparent (Reindal, 2008). The results are that although children with disabilities can attend full-service schools, they are still unable to access the curriculum.

In this regard, Du Toit and Forlin (2009, p. 657) call for the “re-education” of teachers, while Ntombela (2011, p. 8) recommends “retraining” to enable teachers to see their roles as holistic interventionists, rather than simply teachers (Engelbrecht, 2006; Pijl, 2010). In support of the above, McMaster (2013, p. 4) calls for the “re-culturing” of the whole-school system to ensure inclusive sustainability. In view of the above, the research questions set out below guided this study.

1.3.1 Main research question

What are the key requirements for meaningful learning opportunities for learners with cerebral palsy in rural schools?

1.3.2 Sub-questions

- What are the perceptions of teachers in rural schools regarding inclusive education?
- How do teachers in rural schools teach learners with cerebral palsy?
- How can meaningful learning opportunities be made accessible to learners with cerebral palsy?

1.4 CONCEPT CLARIFICATION

In order to understand the context of this study, the following concepts are explained: curriculum accessibility, Cerebral Palsy and inclusive education.

1.4.1 Curriculum accessibility

Curriculum accessibility is a difficult concept to define since the term “curriculum” comprehends many factors, and not only physical access to curriculum material (King-Sears, 2001). King-Sears (2001, p. 68-73) outlines curriculum accessibility as involving “clear strategies for adjusting learning goals, teaching methods, materials, assessment methods as well as individualised training for individualised learning”. He outlines three steps to improve curriculum accessibility for learners with disabilities as “analyzing the general education curriculum, enhancing areas of the general curriculum that are poorly designed and considering active ways in which students with disabilities can access the curriculum, including minor to major modifications of outcomes” (King-Sears, 2001, p. 68-73).

In an inclusive education context, Pugach and Wager (2001) define curriculum accessibility as the adaptation of teaching methods and assessment to allow the participation of children with disabilities in the prescribed mainstream curriculum. The gist of the two definitions overlaps; however, the apparent mention of children with disabilities by Pugach and Wager (2001) in their definition falls within the ambit of this study and was, therefore, used for the purpose of this study.

1.4.2 Cerebral palsy

There have been many attempts to define cerebral palsy in literature. In 2004, an international symposium met to revise the definition and classification of the term in Bethesda (Bax, Goldstein, Rosenbaum, Leviton & Paneth, 2005). Regardless of all these efforts to revise the definition of cerebral palsy, there is still an ongoing pursuit of finding the best definition and classification of cerebral palsy (Morris, 2007). It was initially agreed that cerebral palsy was a motor disorder, but it was later realised that this might also be accompanied by other developmental and secondary disorders. Keats (1965) and Kapp (1989) classify cerebral palsy as spastic, athetoid, rigid and ataxic tremors as well as atonic, mixed and unclassified types of disorders.

As the discourse for refining and classifying the term progressed, cerebral palsy was classified into three main types of disorders, namely spasticity, athetosis and ataxia. It was also classified according to the affected body parts and movement disorder, namely hemiplegia, diplegia and quadriplegia (Keats, 1965). If the premise that cerebral palsy has a neurobiological origin (Kapp, 1989), and damage to the nervous system may result in an affected working and short-term memory (Baddeley, 2003), it can be assumed that the condition may have an impact on curriculum accessibility for these children.

For the purpose of this study, however, cerebral palsy will be defined, according to Cruickshank and Raus (1955), as a physical disability that has an impact on the not yet fully-grown brain prior to or during birth or during the early post-natal period. It includes a spectrum of disabilities embracing those associated with problems of coordination, paralysis, functional deviation of the motor system, including disabilities, such as sensory, mental and perceptual problems and convulsions.

From the above definition, it can be presumed that cerebral palsy not only is a motor disability, but also a physical disability that manifests itself in many processes of performance. The manifestation of this disability is dependent on which area of the brain is injured (Peacock & Goldstein, 2000). The concomitant nature of these impairments prevents children with cerebral palsy from participating in activities and

learning compared to their typically developing peers (Peacock & Goldstein, 2000). The assumption is that, by modifying the environment in which these children participate, the development of their own potential will be secured. The World Health Organisation (WHO) supports this viewpoint and developed the International Classification of Disability and Functioning (ICF), a framework that aims to identify barriers and provide support in the context of participation (WHO, 2001). For the purpose of this study, the learner with cerebral palsy is viewed as having the cognitive ability to learn, but experiencing learning difficulties, such as dysgraphia, dyslexia and dyscalculia. These affected children require additional educational support in their schooling career.

1.4.3 Inclusive education

Despite overwhelming discourse around the world regarding the definition of inclusive education, it remains a difficult concept to define (McMaster, 2013) as it is an “evolving concept”, which countries struggle to agree in defining (Operti & Balalcazar, 2008, p. 114). However, the difficulty in defining inclusive education can be regarded as its strength as the more it evolves, the more “its deeper meanings and value” will surface (McMaster, 2013, p. 19). While Pather (2011, p. 1105) defines it as a “historically system-imposed ideology”, many researchers agree that inclusive education is about including children with disabilities in full-service schools to be educated with their typical peers (Ntombela, 2011).

The Individuals with Disabilities Education Act (2004) defines inclusive education as a practice of placing and educating children with disabilities in full-service schools. The results of research conducted by the international conference of the United Nations Educational, Scientific and Cultural Organisation (UNESCO) held in Geneva in 2008 concurs with the results of Individuals with Disabilities Education Act (2004). However, the latter recommends that the definition should continuously evolve to give relevant meaning to its contextual environment. As the authors may seem to concur in the definition of inclusive education, the context of its implementation is a crucial consideration to ensure its sustainability (Florian & Black-Hawkins, 2011).

There have also been many attempts to define inclusive education in a South African context. Du Toit and Forlin (2009) define inclusive education as a strategy to fulfil the democratic and human rights mandate of South Africa. The White Paper 6 on Special Needs Education (Department of Education, 2011) concurs with the above; however, it further argues that inclusive education is about acknowledging diversities in children and removing barriers in the environment to promote opportunities for participation in order to ensure maximum development. These two definitions will be used interchangeably because of their South African contextual status.

1.5 LITERATURE REVIEW

The literature review serves as a background to understanding the context of the South African educational situation and the various factors that have an impact on the implementation of inclusive education – and thus, curriculum accessibility for children with cerebral palsy in rural schools. The international and national policies and acts are discussed in this study to reveal and explain the aforementioned factors in a South African context. Furthermore, an overview of cerebral palsy and also the theoretical framework underpinning this study are presented.

A larger number of children with disabilities are found in developing, rather than developed countries (Mukuria & Korir, 2006), where low socioeconomic status and scarcity of health care services increase the number of children with disabilities (Abosi, 2007). South Africa, as a developing country, faces a growing population of children with physical and learning disabilities (Panther, 2011). Initially, these children were supported in racially segregated special schools funded by churches and non-governmental organisations (Walton, 2011). Daniels (2010) laments that more than 20 years later, disparities in terms of teacher qualifications and also in the way these schools are resourced are still evident (Daniels, 2010).

A medical model, with a clinical approach, was used to exclude these children from mainstream education (Muthukrisna & Schoeman, 2000). The model concerned itself with intrinsic barriers as being factors affecting participation for children with disabilities, overlooking the challenges associated with the social system. The

model has been widely criticised because it justifies the exclusion of children with disabilities, demanding a cure for the disability as a prerequisite to entry. The medical model maintains that unless the disabilities are sufficiently treated and cured, these children cannot participate in mainstream settings (Muthukrisna & Schoeman, 2000). Muthukrisna and Schoeman supports Kaufmann (2007) in that the model promotes an understanding of atypical development in order to provide the necessary support.

Both nationally and internationally, educational support is considered to be indispensable for successfully including children with disabilities in full-service schools and the implementation of inclusive education (Nekwevha, 1999). This being said, Nekwevha (1999, p. 498) argues that “a country’s future... is to integrate its polity, economy and critically its education system into the standardised structure of the world system”. However, it is crucial for countries to find contextual solutions in order to “balance trade-offs between educational reforms and longstanding traditions” (Rotberg, 2005, p. 618). In this regard, Nekwevha (1999, p. 500) further argues that, for these solutions to be progressive and sustainable, they have to respond to the contextual challenges of the country “since each country has its own values, parameters, norms and logic within which it operates”.

More than ten years after the inception of inclusive education, Lipsky (2005, p. 156) asks the question, “Are we there yet?” Since South Africa is still grappling with the implementation process, this study aims at looking at contemporary factors considering cultural aspects impeding the implementation of inclusive education, particularly in rural contexts. Although the implementation of inclusive education is a global challenge, Muthukrishna and Schoeman (2000) believe it is even worse in the rural areas, where poverty, scarcity of support services and cultural practices predominate.

As this study explores the accessibility of curriculum in the rural areas, the factors identified by Aguerro (2008) above were used to discuss the status of inclusive education both in rural and urban South African settings. These factors, according

to Aguerrondo (2008), are key elements for the successful implementation of inclusive education.

1.5.1 Political-ideological factors

Initially, segregation laws governing the education system of South Africa also facilitated special needs education along racial lines (Muthukrishna & Schoeman, 2000). After democracy, South Africa faced enormous challenges of striking a balance between the inclusive education policy and the practicality of its implementation (Lomosky & Lazarus, 2001). As a signatory to the Salamanca international protocol, the Department of Education was compelled to implement the treaty. Education, which is a basic human right, is supposed to be accessible to all and the implementation of inclusive education is profound (Naicker, 2006). While attempting to provide quality education for children in all schools, contradictions between policy and practice emerged when the necessary human, financial and infrastructure resources did not meet the requirements for implementing this task (Abosi, 2007).

The new policies that emerged in the educational arena had the responsibility of ensuring equal access for all the learners to inclusive education regardless of race, gender and cognitive ability (Department of Education, 2011). However, the magnitude of contextual disparities in South African schools, more especially between rural and urban areas, posed an enormous challenge to its implementation (Muthukrishna & Schoeman, 2000). The political demarcations of the country into various racial groups also acted as a demarcation system for resource provisioning, resulting in widening the gap in the availability of resources between rural and urban schools (Department of Education, 2011). This, therefore, called for the closing of the existing economic and resources gap to ensure the implementation of equal access.

Undeterred by all this, South Africa had to move from a political rhetoric and formulate with “intellectual tools, principles, aims and goals” (Naicker, 2006, p. 5) for children with disabilities to be able to access the curriculum in full-service

schools. Naicker (2006, p. 5) asserts that these tools should be backed by “sound theoretical frameworks” to ensure the sustainability of the intended results.

1.5.2 Pedagogical factors

An Integrated Strategic Planning Framework for Teacher Education and Development in South Africa found that teacher training colleges in the rural homelands produced underqualified teachers (Department of Education, 2011). In 1988 already, the strategic planning framework presented recommendations and claimed that the restructuring of teacher education was fundamental. While no curriculum consensus for teacher training was reached, a debate concerning its requirements to meet the diverse needs of learners in inclusive settings was at an advanced stage (Keating & Oakes, 1988).

Researchers, such as Hiebert, Gallimore and Stigler (2002), agree that empirical evidence is crucial to building a sound basis of knowledge to serve as guidance for a teacher-training curriculum. The curriculum needs to benefit all the learners and must also produce teachers with skills to diversify content delivery to “coaching, demonstrating, tutoring, symbolical representation and role-playing” (Keating & Oakes, 1988, p. 9). Hannaway, Steynand Hartell (2014) maintain that the proficiency and inadequacy of teachers produced in South Africa are inherent in the problems experienced in education. They aimed at exploring the influences of ecosystemic factors on black teachers’ perceptions and experiences of early childhood education and identified a lack of proper training as a serious matter to address.

Although early childhood education forms the foundation of learning for children, most centres in rural South Africa are run by staff who lack the required skills to implement stimulation programmes for learning (Goduka, 1997). While this may be the case, it does not only apply to teachers in early childhood education, but also to the general education system, including inclusive classes. The lack of pedagogic skills in inclusive classes has been identified as a contributory factor in increasing learning disabilities within schools in Africa (Abosi, 2007).

In this regard, the Department of Education (2011) in South Africa proposed the following key strategies to facilitate the implementation of inclusive education:

- Thirty special schools, 30 full-service schools and 30 districts offices were identified in order for teachers to share their best practices and cascade intervention strategies to peer teachers through the district offices.
- A Screening, Identification, Assessment and Support (SIAS) strategy was introduced.

The rationale behind this strategy was to identify educational challenges and provide essential support early in the child's educational career. However, due to the lack of implementation skills, the effort remained a "compliance exercise" (Du Toit & Forlin, 2009, p. 649). If the principle that "pedagogically skillful teachers" (Maatta & Uusiutu, 2012, p. 28) are committed and have the confidence to remove educational barriers for all the learners is true, it justifies the rationale behind this study, namely the following:

- First, the dearth of skills among teachers exacerbates the effects of the learning disabilities in inclusive schools.
- Second, the lack of skills contributes to these children's inability to access the general curriculum in inclusive classes.

A study conducted in a rural KwaZulu-Natal, ravaged by the prevalence of HIV/AIDS and the high mortality rate of teachers, and identified the low motivational levels of teachers (Mitchell, De Lange & Thuy, 2008). Teachers deal with traumatised learners, large classes and a lack of psychosocial support as added responsibilities in the classroom (Abosi, 2007). Worsened by the type of teacher training that these teachers have received, these factors do not only fuel the increase in the numbers of children with learning disabilities (Mitchell et al., 2008), but also act as possible stressors for the teachers in these schools (Engelbrecht et al., 2006). The lack of pre-service and in-service training and emotional support services in the rural areas aggravate negative attitudes and demotivates teachers concerning the implementation of inclusive education (Daniels, 2010). The evolution of the economic, educational and social status of the country calls for teachers who are equipped with these contextual challenges (Abosi, 2007). It also calls for teacher

training to include epistemological theories in its curriculum to equip teachers with the required intervention strategies (Naicker, 2006).

1.5.3 Epistemological factors

Naicker (2007, p. 1) describes epistemology as the “branch of philosophy that studies knowledge”. Naicker (2007) believes that theory in the epistemology of disabilities is an essential component for transforming an education system as it widens methodological strategies for intervention. In this regard, Ashton (2014, p. 60) states that an inclusive education system without an epistemological basis will be considered “a transformative inclusive talk yet walk traditional exclusion”. The teachers in the rural South African schools face challenges of multigrade teaching, a lack of parental support for learners, socioeconomic realities and learners with a spectrum of cognitive abilities, among others (Department of Education, 2011). Regardless of these challenges, teachers still use inappropriate traditional teaching methods to teach these learners (Naicker, 2007).

Relevant teaching methods have the potential for rural development by changing the socioeconomic status and affecting the general economy of the country (Department of Education, 2011). Botha (2011, p. 68) upholds an assumption that indigenous and Western knowledge is epistemologically and cosmologically different; as such, a paradigm shift from just content training to assimilating theories about knowledge and enforcing the relationship between theory and practice is crucial (Naicker, 2006). While Abosi (2007) argues that teachers need training in matters of disability, the Department of Education (2011) maintains that the curriculum for teacher training should encompass disability matters in order to produce future teachers who are responsive and adaptive to change as well as being capable of differentiating the curriculum to accommodate accessibility to all the learners.

1.5.4 Institutional factors

Effective teaching and learning, according to Muthukrishna and Schoeman (2000), take place in schools that are structured in such a way that they address the educational needs of all the learners. McMaster (2013) argues that there is a strong

relationship between the culture of schools and the sustainability of inclusive education. He believes a culture that is receptive to inclusion promotes, among other things, curriculum accessibility and thus learning. Ainscow (2007) opts for a “schools for all” concept to facilitate the accommodation of learners with diverse needs in all the schools.

In this regard, Booth and Ainscow (2002, p. 1) proposed a conceptual framework to serve children with disabilities in inclusive schools, which they named an “index for inclusion”. A conceptual framework is a tool with different variables that clarifies a theoretical framework in a study (Miles & Huberman, 1994). It is used to explain a complex phenomenon during data collection and to espouse the relationships and the meaning of variables under investigation.

Booth and Ainscow (2002, p. 1) define the index for inclusion as a “resource to support the inclusive development of schools”. The index for inclusion consists of three reciprocal dimensions, namely producing inclusive policies, evolving policies and creating an inclusive culture (Engelbrecht et al., 2006, p. 122). This study used the index for inclusion as its conceptual framework to collect the data during the complete observation stage as it assumed that evidence-based results to improve the curriculum accessibility for children with disabilities can be generated in inclusive schools (see section 5.4.3.3).

1.6 THEORETICAL FRAMEWORK

A theoretical framework is a research-based model that provides the variables to collect, analyse and make sense of the data collected in a study (Anfara & Mertz, 2006). Bronfenbrenner’s ecological systems theory (1979), Piaget’s theory of cognitive development (1969) and Vygotsky’s social constructivist theory (1978) were used as the lens to understand the factors influencing the accessibility of the curriculum to children with cerebral palsy.

1.6.1 Bronfenbrenner’s ecological systems theory (1979)

In his ecological systems theory, Bronfenbrenner, a Russian-born psychologist, provided a framework for understanding child development from a perspective of

interacting with his or her context, environment and the community at large (Bronfenbrenner, 1979). In his theory, Bronfenbrenner (1989) discusses the confusion created in trying to understand the development of a child in isolation from his environment. Bronfenbrenner (1979) maintains that indirect influences of the environment affect the individual's human development. Since children with disabilities require considerable developmental and participation support (Kapp, 1989), the contribution of three of the systems from Bronfenbrenner's theory was indispensable. The following systems acted as a lens through which the context of the learner with cerebral palsy was investigated, namely the microsystem, the mesosystem and the exosystem.

According to Bronfenbrenner (1989), a microsystem is the most proximal system with which a developing child interacts. It consists of a child's home, school, peers and teachers. In this study, children with disabilities, typically developing children in full-service schools, teachers as well as parents of children with disabilities constitute the microsystem.

Dawson, Carver, Meltzoff, Panagiotides, McPartland and Webb (2002) assert that typically developing children process both familiar and unfamiliar stimuli early in their developmental stages compared to children with disabilities, who do not. Therefore, in order to close this gap and facilitate the development and support for children with disabilities, a concerted and collaborated effort between the school, peers, teachers, families and services in the community is key (Dawson et al., 2002). This study, thus, set out to determine whether full-service schoolteachers from the proposed schools understand the early professional services that children with disabilities require in order to facilitate the implementation of inclusive education. I also wanted to determine whether these services are available in the context of the proposed rural areas. Access to developmental services for children with disabilities potentially facilitates development, improves participation and promotes curriculum accessibility in full-service schools (Booth & Ainscow, 2002).

The mesosystem is the second layer of the five levels in Bronfenbrenner's theory. It is the reciprocal interaction of different microsystems in a developing child's life

(Bronfenbrenner, 1989). Bronfenbrenner regards this level as important as he believes a developing child collaborates two unrelated microsystems and is expected to transit from one system to another (Bronfenbrenner, 1979). A disconnection in collaborating different system levels affects outcomes in the reaction and response to the learning of a developing child (Gabard & Krebs, 2012). I also aimed at determining the microsystem level to see whether teachers understand how collaborating one or more microsystems affects a developing child, particularly a child with disabilities in a full-service school.

The exosystem is the most important distal of the three systems that the proposed study discusses. Although the child is not directly involved in this level, it contains elements affecting a developing child (Sontag, 1996). It encompasses a larger social system that has an impact on the disabled learner, and includes education, economic, political and religious systems in a developing child's life (Bronfenbrenner, 1989). Culture, considered to be fundamental for development by the WHO, is embedded in this level of the theory (UNESCO, 1994). The theory considers cultural aspects in order to help understand a developing child's ability and disability holistically (Sontag, 1996).

It has already been mentioned that inclusive education is a policy that governs the inclusion of children with disabilities in full-service schools; however, its successful implementation depends on collaboration with other policies, government departments and the private sector. The development and support of children with disabilities cannot be divorced from healthcare, transport, early childhood development and participation in cultural activities (UNESCO, 1994). The Human Science Resource Council identified a gap in human, financial, information and physical resource constraints in supporting children with disabilities (Department of Social Development, 2008). Although a SIAS strategy (Department of Basic Education, 2014) is in place to identify and source services from other departments, it appeared to be interesting, for the purposes of this study, to reveal whether collaboration amongst these services in a rural environment is indeed in place.

It is on this system level that policies about disabilities are discussed. Although the Department of Education is responsible for delivering the curriculum for children with disabilities in full-service schools, it cannot fulfil all the economic and social needs for inclusive education to be realised in South Africa (Department of Education, 2011). Disability rights policies advocate for the intradepartmental collaboration of services to address matters of funding, assistive devices, transport and medical requirements to close the existing gaps and support these children for access to the curriculum.

1.6.2 Theories of cognitive development

The theory of cognitive development, also known as the “cultural-historical theory” (Gindis, 1999), is discussed based on the thinking of two psychologists, namely the Swiss-born Jean Piaget (1953) and the Russian-born Lev Vygotsky (1978). The two psychologists agreed about the route which children follow in their development; however, Piaget’s theory is underpinned by intrinsic development, while Vygotsky regards the social environment as an integral part of the child’s co-construction of knowledge (Gindis, 1999). Piaget believed that biological maturation is essential for cognitive competence to learn, while Vygotsky regarded a social context as an “integral part of learning” (Gindis, 1999, p. 334). While these two theories may seem to contradict each other, Fischer and Wozniak (1993) believe they are complementing each other.

1.6.2.1 Vygotsky’s social constructivist theory

Although Vygotsky’s theoretical conception was premised on the data collected in special needs education, it never received the support it deserved from the sector of special needs education (Gindis, 1999). The theory emphasises that all children can develop through education; however, it acknowledges that children with disabilities follow a different route to development. The impairments embedded in their disabilities create a disconnection between social and natural development, which manifests itself as developmental delays and learning disabilities (Bottcher, 2012). Bearing in mind the aforementioned perspective, it is clear that, if children with disabilities follow a different trajectory to learning, teachers need to have an epistemological understanding of this development.

Understanding the different trajectory that learners with disabilities follow in learning has long been a matter for debate (Morcom & MacCallum, 2012). Hence, theoretical frameworks, such as the one developed by Vygotsky, help to achieve further understanding of these atypical routes. Vygotsky (1978) identified the zone of proximal development (ZPD). He argued that the ZPD is situated between the child's actual and potential development. He stated that, in order for children to move to higher cognitive levels, instruction should be pitched at their cognitive development (Reid, 1998). It can, thus, be argued that, unless teachers are unable to identify children's ZPD, effective teaching and learning are not possible.

Apart from the ZPD, Vygotsky introduced the concept of scaffolding (Vygotsky, 1978). He contended that children learn well when both adults and their peers are involved in the process. The teacher has to provide opportunities for learning, while the learner and his or her peers navigate the process and scaffold one another to higher developmental levels. Vygotsky's theory may not be a solution to the challenges in inclusive settings, but it can, in the first place, offer teachers an understanding of atypical development. Secondly, it may provide children with disabilities with the opportunities to learn the necessary skills required for an undertaking from typically developing peers (Morcom & MacCallum, 2012; Reid, 1998). Nevertheless, Reid (1998) advises that scaffolding may not be applicable to all children as each child is unique.

1.6.2.2 *Piaget's theory of cognitive development*

Piaget's theory provides a platform for understanding child development and its capabilities and weaknesses (Piaget, 1953). The theory is mainly concerned with biological individual child development, where a child constructs meaning from personal experiences, develops an understanding of perceptions and moves to higher levels until he or she adapts to the world through assimilation and accommodation (Piaget, 1953). Unlike Vygotsky's sociocultural theory, the intrinsic or biological factors determine the progress that the child makes in development.

Piaget's theory of cognitive development assigns the sensory, preoperational, concrete operational and formal operational stages to the development of a child and identifies ages in which these should be developed. However, these stages are not detached from one another; each developed stage forms the foundation for the development of the next stage. This has implications for children with disabilities in full-service schools. The discrepancy between the developmental and the chronological age (Siegel, 1998) affects the working memory (Siegel & Ryan, 1988) and the progress of these children in full-service schools. It is from this perspective that their development should be understood in order to provide the necessary support.

1.7 RESEARCH METHODOLOGY

Research methodology refers to the entire process of data collection, including the data collection tools that are used to answer the research questions (McMillan & Schumacher, 2010). The research design, research methods and data analysis are discussed in the section below.

1.7.1 Research design

Yin (2011) describes research designs as procedures to gather evidence to answer the research questions. There are three main types of research designs, namely the qualitative, quantitative and mixed methods research methodologies (McMillan & Schumacher, 2010). However, a research design is not only confined to the process of data collection, but also includes theory analysis in the research process, among other things (McMillan & Schumacher, 2010). This study used a qualitative research approach to collect data.

1.7.1.1 *Constructivist research paradigm*

A constructivist paradigm is a theory that assumes that individuals construct knowledge through actively interacting with knowledge and ideas (Creswell, 2013). There are multiple realities in the environment that can be expressed by the participants in different research projects. These realities are organised and interpreted through paradigms that are of supreme importance in forming the belief systems of individuals and societies (Sefotho, 2015).

The aim of this research study was to elicit the perceptions that the participants attach to inclusive education in order to improve curriculum accessibility for children with cerebral palsy in rural schools. Although a constructivist paradigm acknowledges that there are multiple realities in the world, it also cautions that not all these realities are important for all the contexts (Sefotho, 2015). These multi-realities need to be explored vigorously in context to develop a co-constructed meaning within specific cultures and communities (Creswell, 2013). Furthermore, a co-constructed meaning potentially generates theories for these communities (Creswell, 2013); hence, Creswell (2013) cautions against being biased and maintains that the researcher should present the facts as represented by the respondents in a study.

1.7.1.2 Research approach

Qualitative research is an inquiry into a phenomenon that occurs in its natural environment where the researcher is not trying to manipulate it, but is rather investigating it as is (Creswell, 1998). Qualitative research involves different data collection methods, embracing interviews, observations, focus group interviews and field notes (Patton, 2002). Qualitative research is believed to give rich contextual descriptions of individual experiences and perceptions as they occur in the individuals' environments of operation (Patton, 2002).

This study explored the perceptions of teachers in Limpopo rural schools regarding inclusive education, with the aim of developing guidelines for curriculum accessibility for learners with cerebral palsy. The qualitative research design was chosen in this study as there is limited evidence of descriptive research about including learners with cerebral palsy in rural contexts. I also assumed that this methodology would provide rich descriptions of contextual experiences regarding the phenomena under study. In order to elicit rich data from the research sites, schools identified by the Department of Basic Education as pilot project sites for the implementation of inclusive education were identified.

1.7.1.3 Research type: Multiple case study

There are many approaches to elicit rich data in qualitative research designs, such as inquiry-narrative, phenomenology, grounded theory, ethnography and case study approaches (Creswell, 2013). Case studies, according to Maree (2007, p. 75), answer the why and how questions and give a platform to a “multi-perspective analysis” of the phenomena under investigation. However, regardless of the number of research sites or schools chosen, the researcher needs to identify one site that will give depth to the investigated phenomena during data analysis and answer the research questions (Maree, 2007; McMillan & Schumacher, 2010). This study employed a multiple case study in order to achieve its purpose.

A multiple case study is a variant in types of case studies that aims to research two or more settings of the same characteristics in detail in order to gain a better understanding of the phenomena under investigation (Yin, 2003). In multiple case studies, the researcher studies phenomena with similar characteristics in their contexts and compares the various differences and similarities, and advantages and disadvantages in order to gain deeper insight into the phenomena (Baxter & Jack, 2008). The data collected in multiple case studies give depth, richness and complexity to the answers gained from different settings investigated, but, there must be a commonality between the different chosen settings (Stake, 2006). Stake (2006) goes on to state that multiple case studies allow the researcher to explore categories, patterns and themes and analyse cross-case findings from these settings.

Three schools constituted the cases for this study, namely a special school for children with disabilities and two full-service schools. Full-service schools are mainstream institutions required by the Department of Basic Education to provide quality learning to both typically developing children and children with disabilities (Department of Basic Education, 2014). The three schools were identified because of their inclusive education status. The special school and one full-service school were identified by the Department of Basic Education (DBE) as pilot schools for the implementation of inclusive education. The second full-service school was included as it was later included by the DBE as the pilot project for the implementation of inclusive education.

1.7.1.4 Role of the researcher

While the main role of the researcher is to collect and analyse the data in order to formulate a clear understanding of the phenomena under investigation (Maree, 2007), the researcher resumes different roles depending on the chosen research design (Maree, 2007). In qualitative research, the researcher him- or herself serves as an instrument for data collection. However, he or she also has to be a “sensitive observer” who records the phenomena as faithfully as possible “while at the same time raising additional questions” (Maree, 2007, p. 41). I used different data collection methods to collect the data, including observation, individual interviews and focus groups from different research sites (cf. Lincoln & Guba, 1985).

1.7.2 Research methods

Mouton (1996) defines research methods as being specific ways in which the data are collected inclusive of the instruments used for a specific study. As part of the research methods for this study, the selection of research sites, the selection of the participants, the process of gaining access to the research sites and the participants and data collection instruments are all discussed.

1.7.2.1 Selection of research sites

A non-probability, purposive sampling, where not everybody has an equal chance of being selected, was used for this study. Although generalisation is not an element of qualitative studies, the knowledge-rich perspective brought about by the participants in purposive sampling can be generalised or transferred to a larger population of “homogeneous characteristics” (McMillan et al., 2006, p. 319). Three schools, namely a special school, two full-service schools were selected for this study. The special school was chosen because of its pilot resource centre status for the implementation of inclusive education. Special school teachers are trained according to the White Paper 6 (Department of Education, 2011), as a policy to govern the implementation of inclusive education. Such teachers receive in-service training regarding intervention strategies for children with disabilities, and they study the theories of development as a requirement for teaching at the special school. Consequently, the special school context provided a benchmark for these meaningful learning opportunities in a rural context.

Like many schools in South Africa, the full-service schools are expected to admit children with disabilities; as such, the experiences of the teachers in the implementation of inclusive education in a rural context were highlighted.

1.7.2.2 Selection of participants

Teachers, coordinators of the DBST and the parents of children with cerebral palsy participated in this study. Five teachers from each school, of whom one was the coordinator of the school-based support team (SBST), participated in this study. The SBSTs are structures in schools responsible for identifying both the learning and developmental barriers of children with the aim of referring them to other professionals and designing or outsourcing intervention programmes for them (Department of Education, 2001). Addressing these barriers improves the participation of children with special needs so that they can progress through school with their typical peers (WHO, 2007).

The coordinator of the DBST, mandated by the process of inclusive education to support teachers with curriculum delivery, monitors the implementation of inclusive education and outsources professional intervention for children with disabilities in collaboration with their parents (Department of Education, 2001). One district official and one parent of a child with cerebral palsy per school were included in order to enrich this study and to understand the meaningful learning opportunities from the parents' perspectives.

1.7.2.3 Data collection

The following data collection methods were used in this study: observation, individual interviews, focus group interviews and document analysis. Multiple data collection strategies are those that enhance the trustworthiness of a research project as they lend themselves to the triangulation of the collected data (Baxter et al., 2008).

(i) Observation

Observation is a process of “systematic recording of events and behaviours” in the context of their naturalistic occurrence (Maree, 2007, p. 83). Observation in

research allows the researcher to understand closely the context within which the research will be conducted and also to form cordial relationships with the participants to enable the researcher to elicit rich data from these settings (Creswell, 2012, p. 81). Observation in qualitative research is intentionally unstructured and free-flowing; it offers the researcher flexibility to uncover the hidden data to enrich the study (Leedy & Ormrod, 2005). The observation methods described below were used in this study.

(ii) Participation observation

Participation observation is a data collection method used in qualitative research. De Walt and De Walt (2002) are of an opinion that participation observation was initially used in cultural studies; only recently has this method gained momentum in educational research. The above authors define participation observation as a method in research where the researcher learns about the phenomena through participating in the activities under investigation. These authors attribute the impetus to the many advantages of the aforementioned method in research. These authors note that this method lends itself to the rich description of the phenomena under investigation. Additionally, it offers the researcher the opportunity to grasp the participants' lived experiences and also to interpret these in context.

(iii) Complete observation

The three research sites were visited with notebooks during the observation stage to record field notes, while being guided by the index for inclusion as the conceptual framework for collecting the data. Field notes were used to describe the context in which the interview took place without interviewing the research respondents (cf. McMillan et al., 2006). It is important for the researcher to know what he or she is looking for in research sites in order to gather only data that are relevant to the study and answer the research questions (Maree, 2007). I used field notes during this stage to record the findings in order to provide the relevant information on implementing the strategies to elucidate special needs education in context by referring to the curriculum accessibility.

(iv) Focus group interviews

Focus groups comprise individuals who are knowledgeable about a specific topic and have been identified by the researcher to answer research questions about a phenomenon under study (Stake, 2006). Leedy et al. (2005) identify focus groups as being representatives of the community under investigation. In this regard, these authors caution the researcher to record responses verbatim so that true perceptions may be captured. I established rapport during these interviews, as suggested by Leedy et al. (2005), to encourage the participants to produce valid responses to answer the research questions.

For the purpose of this study, focus groups were conducted with five teachers from each of the three identified schools, of whom one is the coordinator of the SBST. I assumed that the schools chose the coordinators of the SBSTs because of their enthusiasm and understanding of the processes to facilitate the implementation of inclusive education.

(v) Individual interviews

Individual interviews were conducted with the coordinator of the DBST and the parents of the children with cerebral palsy. McMillan et al. (2006, p. 352) argue that individual interviews are regarded as focused on persons that are “influential, prominent and well informed in an organisation or community” regarding the phenomena under investigation. In this regard, the coordinator of the DBSTs, as fundamental elements in the implementation of inclusive education (Department of Education, 2011), were interviewed. The coordinator of the DBST, in the successful implementation of inclusive education, is expected to source the required support for the parents, teachers and children in the schools under his or her jurisdiction.

1.7.3 Data analysis

After the data had been collected, the deductive and inductive analysis was performed according to the data sets. The primary aim of the data analysis was to order the data into exclusive themes and subordinate categories with the aim of making sense of the collected data (Creswell, 1998). Although it was challenging to

analyse the data from multiple settings (Merriam, 1998), Maree (2007) explains that the data analysis must be guided by the procedures used in the process of data collection. It was also crucial in the process of data analysis to perform what Merriam (1998) terms “data reduction”, which is a process of comparing the data and discarding those data which do not provide answers to the research questions.

The different sets of data from different research sites were compared in order to draw contextual requirements to improve curriculum accessibility for children with disabilities in rural schools.

1.8 TRUSTWORTHINESS

Unlike quantitative research, where questionnaires and other data collection instruments are used to collect the data, I, as the researcher, served as an instrument for data collection in this study (cf. Maree, 2007). Consequently, trustworthiness to circumvent researcher bias was essential (Creswell, 1998). In this regard, Lincoln and Guba (1985) discuss credibility, transferability, dependability and confirmability as being essential in ensuring the trustworthiness of the research results.

Credibility is equivalent to internal validity in quantitative research designs that aim to ascertain whether the study investigates what it claims to study (Lincoln & Guba, 1985). In order to find rich evidence from the settings being studied, it is important for the researcher to familiarise him- or herself with the culture of the organisation under investigation and create a rapport with the participants (Shenton, 2004). I used different data collection methods to collect the data, such as observation, individual interviews and focus group interviews (cf. McMillan et al., 2006). The data were tape-recorded, transcribed and triangulated to ensure the trustworthiness of the results.

Transferability can be equated to external validity or generalisability in quantitative research (Lincoln & Guba, 1985). Transferability refers to the extent to which research results can be transferred to other contexts (Maree, 2007). While the results of this study may not be transferable to other contexts, the identified sources

gave thick descriptions of the contextual requirements for the successful implementation of inclusive education, thus ensuring a chance of transferability to other sites with similar characteristics. Since all three research sites were chosen because of their pilot status for the implementation of inclusive education, the descriptions led to factors to improve accessibility to the curriculum for children with cerebral palsy in rural contexts.

Dependability, according to Merriam (1998), is defined as the degree of consistency that ensures the reliability of the study results. Merriam (1998) further affirms that consistency ensures the same results when the study is replicated in a different context with the same participants. To improve the dependability of this study, the exact process used in this study is given (see Chapter 5). The process mentioned ensures that the same results would be achieved if the study were to be replicated in contexts of similar characteristics.

Confirmability, according to Lincoln and Guba (1985), is the extent to which the research results present the participants' responses free from researcher bias. Although the researcher co-constructs meaning in constructivist qualitative research, Morrow (2005, p. 254) argues that it is important to "minimise researcher bias". Merriam (1998) and Morrow (2005) assert that reflection is a strategy to circumvent research bias. Owing to my emotional involvement with including children with disabilities in full-service schools, I declared my expectations and inclinations beforehand (cf. Morrow, 2005).

1.9 ETHICAL CONSIDERATIONS

It is the researcher's responsibility to ensure that the ethical principles of conducting research are adhered to (McMillan et al., 2006). Since educational research mostly involves humans, it is important for it to be based on the premise of beneficence and confidentiality (Terre Blanche & Durrheim, 1999). This research commenced only after ethical clearance for it had been granted by the Ethics Committee of the University of Pretoria.

Consequently, permission was sought to conduct the research from the head of the Department of Education in Limpopo and the principals of the three identified schools. Once the permission had been granted, the participants' consent to participate in this study was pursued. The participants were the five identified teachers, one of whom was the coordinator of the SBST of each school, the coordinator of the DBST and one parent of a child with cerebral palsy in each of these schools.

1.10 LAYOUT OF CHAPTERS

The chapter layout of the study is set out below:

- Chapter 1 presents an introduction to, and orientation of the study, as well as the concept clarification of certain key concepts.
- Chapter 2 presents an overview of a conceptual framework on disability and cerebral palsy is given in.
- Chapter 3 presents the perspectives and policies on inclusive education, as part of the literature review, to expose the development of the epistemology underlying this approach.
- Chapter 4 outlines the theoretical framework underpinning this study with the aim of exposing curriculum challenges with which children with cerebral palsy contend in rural schools.
- Chapter 5 presents the methodology that was used to explore the teachers' perceptions towards inclusive education and how they teach children with cerebral palsy to make the curriculum accessible to them, as well as the procedures employed for data collection, the research design, the research methods and the rationale behind the research methods.
- Chapter 6 presents the empirical data, analysis, interpretation and the findings according to the different cases that have been explored.
- Chapter 7 contains a summary of the literature and empirical findings, followed by the research conclusions that answer the research questions. Lastly, the recommendations for the study, limitations, recommendations for future research and final remarks are presented.

1.11 CONCLUDING REMARKS

Most countries, including South Africa, are in the process of implementing inclusive education in order to provide quality education to all children, including those with cerebral palsy. However, the challenge is whether the teachers are able to teach these learners in such a way that they can progress in rural schools. Since cerebral palsy is a broad-spectrum disability, and these children require support to be able to access the curriculum and progress through school with their peers, it is imperative that teachers understand the disability and the intervention strategies required.

It was, thus, the thrust of this study to investigate how teachers in rural schools teach these children to make the curriculum accessible to them.

CHAPTER 2

DISABILITY AND CEREBRAL PALSY: A CONCEPTUAL FRAMEWORK

2.1 INTRODUCTION

The aim of this study was to investigate how meaningful learning opportunities for children with cerebral palsy in rural schools can be created. A literature review on this topic is presented in Chapter 2 with an overview of a conceptual framework on disability and cerebral palsy.

According to Van Lieshout, Candundo, Martino, Shin and Barrakat-Haddad (2017), as well as Wood and Rosenbaum (2000), there has been a plethora of debates over the years on how cerebral palsy should be defined in the literature. In general, the literature conceptualises cerebral palsy as a disability of neurobiological origin that occurs just before, during or immediately after birth, and persists for a lifetime (Bax et al., 2005). Cerebral palsy manifests itself in motor, sensory or cognitive difficulties, affecting, among other aspects of life, children's ability to learn and progress through school compared to their typical peers (Martiny, 2015). As such, the South African inclusive education policy, promulgated by the Department of Education (2001), advocates the inclusion of children with intensive disabilities in special schools and those with moderate disabilities in full-service schools.

Since cerebral palsy is a disability already recorded as far back as "ancient history" (Rosenbaum, Paneth, Leviton, Goldstein & Bax, 2007, p. 8), the literature sources range from very old to the most recent studies in research. However, due to the paucity of research in rural areas, which is the context of this research study, most of the literature is situated in urban settings and/or developed countries. In spite of this, the research-based content provided through these sources supply succinct baseline variables for the creation of meaningful learning opportunities for these children in rural schools.

To this end, the forthcoming sections discuss the perspectives on disability and provide an overview on cerebral palsy and the theories of development with the aim of exposing the curriculum requirements for these children.

2.2 PERSPECTIVES ON DISABILITY

The 21st century has emerged with challenges requiring, among others, a paradigm shift in the conceptualisation of disability include these children in full-service schools (Zajda, 2015). The suggested shift emanated from years of debates and conferences around the development of legal frameworks and policies to govern the inclusion of children with disabilities into full-service schools. Paradigm shifts, according to Shakespear (2014), is a mind shift guided by the values of popular beliefs to a new understanding aligned to an envisaged vision. The shift, as proposed by the ICF, in this case, aimed at a new understanding of disability from a medical condition perspective to a perspective of an interaction between disability and the environment of participation (Shavaliyeva, Nasibullov & Kashapova, 2015). However, the success of this shift can only be realised through a commitment to identifying those barriers hindering participation and offering the required support to facilitate participation (Mittler, 2005).

In this regard, Helldin, Backman, Dwyer, Skarlind, Hugo, Nel and Muller (2011, p. 108) also argue that “a relevant, well thought theoretical framework for changing a system is of utmost importance” for sustainable implementation. According to these authors, a theoretical framework underpinning the implementation of inclusive education, firstly, has the potential to help develop teacher training programmes for school change. Secondly, it is necessary to align policy and practice in the implementation process, and lastly, it informs the development of a curriculum for inclusive schools as well as inclusive pedagogy.

While it is expected that member states conform to the proposed shift, citizens in many countries have been reluctant to change towards inclusive education, feeling it only benefited children with disabilities (Donoghue, 2003). However, by ratifying the Salamanca Statement, all the member states are expected to make the paradigm shift. According to Shavaliyeva et al. (2015), paradigm shifts inform policy

and, subsequently, they reposition the country to the new belief systems. The proposed shift, in this case, is aimed at giving teachers insight regarding disabilities, which implies, for the purpose of this study, creating meaningful learning opportunities for children with disabilities in rural schools.

The effectiveness of paradigm shifts, however, depends mainly on the holistic assessment of operational contexts, since different countries have different historical and contextual constraints (Curcic, 2009). Notwithstanding contributions made by research from developed countries, Nekwevha (1999), Curcic (2009) and Jansen (2009) argue that there are adverse consequences in implementing research results across cultures, constraints and contexts. Jansen (2009) holds the view that methods of teaching, intervention strategies and assistive technology are beneficial when resulting from a holistic needs assessment in the context of the implementation of measures. Crucial, therefore, is research to influence paradigm shifts in rural contexts – thus, to facilitate the implementation of inclusive education. In the following section, the paradigm shift is discussed through the conceptualisation of disabilities from a medical to a social model of disability, to illuminate the contribution of social factors as barriers to the participation of children with disabilities.

2.2.1 Medical model

A medical model is a pro-learner approach in the sense that the child is viewed as the problem and assessed away from the context of participation (Shakespeare, 2014). Mitra (2006), on the other hand, postulates that the medical model considers disability as being confined to the person affected ignoring the social environment of participation. Initially, the medical model was the “legitimate conceptual paradigm for understanding disability” (Donohue, 2003, p. 207). With time, the model has been seen to be a barrier to the participation of children with disabilities. However, while the medical model was a preferred model over the social model of disabilities, Donohue (2003) postulates that the two cannot be separated as they are in some way interlinked. Policymakers have preferred the use of the medical model as an instrument to provide a cure, assistive devices and social support for persons with disabilities (UNESCO, 1999). However, Law, Finkelman, Hurley, Rosenbaum, King,

King and Hanna (2004) have questioned the lack of empirical data proving the effectiveness of the medical model in providing services to children with disabilities. Stough (2015) insists on the need for continuous research in their context of participation in order to inform policy on the requirements for these children.

According to Donoghue (2003), one major criticism the medical model has encountered, is that disability has always been measured against what other members of society were able to do. These perceptions from society also created misconceptions and prejudices about disabilities as society believed that the exclusion of children with disabilities from full-service schools was justified. Additionally, Clark (2015) contends that the physical and emotional challenges embedded in disabilities restrict their participation outcomes compared to children without disabilities.

It was outside the confines of the medical model to offer support in order to aid participation for these children in a regular schools environment. Similarly, parents could not take a stand on which model to support fully as a consequence of the stigmatisation of their children (Manago, Davis & Goar, 2017). On one continuum, parents would understand the necessity of the proposed paradigm shift from the medical to the social model of disability. On the other, “medical deflection, medical challenging, social deflection, and social challenging – demonstrate the complex ways that parents navigate cultural definitions and social arrangements that value normative bodies and typical minds” (Manago et al., 2017, p. 176). While the paradigm shift necessitated social interactions, in their study, Kopala-Sibley and Klein (2017, p. 27) found “shyness and isolation” to be attributes with which these children had to contend.

Children with disabilities were further alienated from participating in society and full-service schools. It was against this backdrop that the WHO (2011) set an understanding of the effects the environment has on the person’s capacity to perform actions. Nevertheless, it is important to discern that the paradigm shift to the social model of disability cannot be viewed in isolation, but that it requires a buy-in from all the stakeholders, including the children with disabilities themselves.

2.2.2 Social model

The social model emerged from discussions held between human rights movements, academics and the Union of Physically Impaired Against Segregation (Shakespeare, 2014). Initially, disability was described according to the way society perceives “normal participation”. The paradigm shift to the social model in the conceptualisation of disabilities was necessitated by the realisation that the environment was a contributory factor to the lack of participation of children with disabilities. The aim of the social model was to remove barriers and enforce participation; thus, ensuring the cognitive and social development of these children. Contrary to the medical model, the social model of disability can be defined as the way in which society deliberately removes barriers in the environment to enforce the inclusion of children with disabilities (UNESCO, 2006). In the same breath, Shakespeare (2014) cautions that disability studies around the social model should be neither too political, nor too academic as it they then become biased and loses its purpose.

The contribution of the social model to disability studies is twofold. First, it campaigns for environmental considerations to be made before determining the potential or lack thereof for persons with disabilities in performing certain functions (Martin, 2015). Second, in agreement with Light and McNaughton (2014), the social model lobbies for support to be provided in order to aid participation, thus facilitating development for these children as compared to those children without disabilities. While the social model was highly recommended as the way to achieve maximum participation for children with disabilities (WHO, 2011), it also received a fair amount of criticism in the scientific literature.

Lindsay (2003) and Oliver (1996) mention that decisions to provide services for children with disabilities were initially taken at the societal level, excluding these children from making decisions concerning themselves. It is from this perspective that Lindsay (2003) recommends that including persons with disabilities in research that concerns them should become an integral part of the paradigm shift mentioned. Despite the criticism directed towards the social model, Oliver (1996) further mentions that including children with disabilities in research that concerns them

contributes toward the betterment of models to accelerate their social inclusion. It is therefore evident that research should be viewed as an integral part of the paradigm shift and the implementation of inclusive education. Furthermore, in order for equal participation to be ensured for all children in full-service schools, concepts such as “disability” and “inclusive education” need to be fully understood (UNESCO, 1994).

2.2.3 Redefining disability

The conceptualisation of disability in the literature became challenging as it was defined from different disciplines and contexts (Clark, 2015; Mitra, 2006). Since disability in its very nature encompasses a spectrum of abilities and different contexts in which these persons are expected to participate, it became cumbersome to define effectively (Anastasiou, Kaufman & Nuovo, 2015). The difficulty in defining disability did not only create misunderstanding in different sectors, but it also affected the provision of services to these children. Moreover, the literature used the concepts “cripple”, “imbecile”, “mongoloid” and “disorder” interchangeably (Brzuzny, 1997; Oliver, 1996); as such, negative connotations were directed towards persons living with disabilities. Not only is research responsible for ambiguity in terminology, but “society constructs disabilities by turning impairments into disabilities” (Harpur, 2012, p. 326), emphasising negative attitudes towards disabilities.

While the terminology evolved from “cripple, impairment” to “disability”, some communities defined disability as persons unable to fulfil valued social roles and obligations (Barnes & Mercer, 2014). To perpetuate the abovementioned, the WHO, in collaboration with the World Bank, posited in its World Report on Disabilities that persons with disabilities “generally have poor health, perform poorly in academics and are mainly found in poor communities” (WHO & World Bank, 2011, p. 11).

The argument above does not only give an indication of how negatively disability has been conceptualised both in the literature and society, but also explicitly exposes the negative attitudes of society and the definitions contributed to further ostracise persons with disabilities. Sharma and Das (2015) found in their study that

the slow progress in the implementation of inclusive education was exacerbated by a failure to define disability. Therefore, it can be assumed that years of exclusion and segregation for children with disabilities resulted from these negative connotations.

Acknowledging the effects definitions have had in perpetuating negative attitudes towards disabilities, the ICF coined a framework for a definition to be used across sectors. Although the ICF still included terms such as “impairments” in conceptualising disabilities, it also acknowledged the impediments in the environment limiting the participation of these children (WHO, 2002). The ICF has defined disability as an outcome of the interactions between impairments, activity and participation (UN, 2015). A discord between the three results in a failure by individuals to perform activities as expected – and thus, they are labelled as disabled.

Until the emergence of the ICF, disability was considered a health matter (Gallager, Connor & Ferri, 2014). The medical model was used as an instrument to measure the participation of these children. However, the medical model only perpetuated disabilities as it focused on the inability of these children to participate in contexts compared to their peers (see section 2.2.2.1). The outcome of ICF debates resulted in a paradigm shift in order to achieve an understanding of disabilities and the support these children need (Trepanier-Street, 2010). According to the ICF, support for these children was aimed at the individual, institutional and social levels (Trepanier-Street, 2010). The definition by the ICF above also provides a framework for a paradigm shift from a medical to a social model of disability.

While I agree with Gallager et al. (2014), Shakespear (2014), Trepanier-Street (2010) and the UN (2015) on the necessity of a paradigm shift from a medical to a social model of disability, I am also inclined to agree with Donohue (2003) in that there has to be a political will for society to acknowledge the shift and accommodate children with disabilities as being deserving members of society. Inclusive education is such a strategy that has been identified for the successful inclusion of

children with disabilities, particularly those with cerebral palsy, as is the purpose of this study into full-service schools.

To give additional perspective to this study, neurodisability is briefly discussed in the following section.

2.2.4 Neurodisabilities

It is clear from the discussion above that a stereotypical notion in society questioning the capabilities of children with disabilities has been perpetuated. This is evidenced by the time lapse between the development of the inclusive education policy and successfully including these children in full-service schools. This study argues that a balanced approach to understanding disability, particularly neurodisability, is necessary in order to successfully include children with cerebral palsy in rural schools. The abovementioned understanding will help to create meaningful learning opportunities for these children.

While the context of this study is the rural areas, the aim is not to compromise the standard or quality of the curriculum offered, but to improve its accessibility. Quality education, in this study, needs to be understood in the context of teaching children with neurodisabilities – cerebral palsy in this case. According to researchers such as Butterworth and Kovas (2013) and Atilola, Omigbodun, Bella-Awusah, Lagunju and Igbeneghu (2014), “neurodisability” is an umbrella term associated with disability of the nervous system, which affects the functioning and development of children. The impact thereof may manifest in communication, emotional, social and cognitive disabilities (Di Marco, Bonaccorso, Aloisi, Antoni & Catania, 2016). Di Marco et al. (2016) further postulate that autism, cerebral palsy, Alzheimer’s disease and muscular dystrophy are some of the disabilities associated with neurodisability. It is important to note that neurodisability coexists with other learning, physical and emotional difficulties. A multidisciplinary approach to support these children’s success in full-service schools is of paramount importance (Fitzgerald, Ryan & Fitzgerald, 2015). Atilola et al. (2014) stress the importance of sourcing strategies informed by research and compatible to the context of participation to facilitate the development of these children.

Furthermore, as a consequence of globalisation, the requirements for educational success are evolving to incorporate the use of technology (Chinnammai, 2005), holistic support that includes family, schools and the community at large (Chisholm, 2006) and also the importance of recognising culture as integral to improving curriculum accessibility (Avramidis, Bayliss & Burden, 2000). The concept of “globalisation” is discussed first, considering the challenges in the literature attached to finding an appropriate definition. Authors such as Patman (2006) state that, despite the vast literature on the subject, it is difficult to give a precise definition of globalisation. Tarabini (2010, p. 205) suggests that globalisation “serves as a catalyst for the introduction of new discourses, new practices and new agendas”.

The research-based global debates in which this literature review engages will strengthen the meaningful learning opportunities that I aimed to explore. However, the magnitude of challenges involved in including children with disabilities, particularly those with cerebral palsy, in rural schools cannot be underestimated. With this having been said, the research-based debates will put into perspective the meaningful learning opportunities that will emerge as the study explores how rural school teachers teach children with cerebral palsy to expose them to meaningful learning opportunities. The empirical data from this study will provide insight into the academic aspects as well as other factors embedded in disabilities affecting these children’s ability to access the general curriculum in rural schools.

The overview of cerebral palsy below describes the inherent characteristics of the disability and exposes the challenges that have an impact on these children accessing the general curriculum in rural schools.

2.3 AN OVERVIEW OF CEREBRAL PALSY

There have been many attempts to define cerebral palsy in order to make the disability understood and provide services for these children (Smithers-Sheedy et al., 2014). Initially, the literature defined cerebral palsy as a disability resulting from trauma caused by “a shortage of oxygen supply to the brain” (Bax, Goldstein, Rosenbaum, Leviton, Paneth, Dan, Jacobsson, Damiano & Rosenbaum, 2014, p. 572). Kruger and Botha (in Landsberg, 2016, p. 361) include a dimension of

“contaminators affecting the brain” that is not yet fully matured. Habiby and Aisen (2015, p. 892) define cerebral palsy as a “neurodevelopmental disability”. Although no specific gene has been identified as causing cerebral palsy, MacLennan, Thompson and Gecz (2015) identify genetics as being yet another factor causing cerebral palsy in children. While no consensus has been reached in this regard, the above authors postulate that since many individuals with cerebral palsy have children of their own, the claim that genes are a contributory factor to causing cerebral palsy will soon be backed or refuted by research.

Despite what may seem like contradictions in the conceptualisation of cerebral palsy in the literature, there is agreement that cerebral palsy falls within a spectrum and concomitantly exists with disabilities such as autism, epilepsy and other cognitive disabilities in children (MacLennan et al., 2015). Secondly, cerebral palsy manifests itself in the motor, sensory and cognitive disabilities affecting children’s ability to participate in activities compared to their peers (Sewell, Eastwood & Wimalasundera, 2014). According to Bax et al. (2005, p. 572), an international workshop in Bethesda reached consensus about describing cerebral palsy as

...a group of disorders of the development of movement and posture, causing activity limitation, that are attributed to non-progressive disturbances that occurred in the developing fetal or infant brain. CP is also associated with disturbances of sensation, cognition, communication, perception, and/or behaviour, and/or by a seizure disorder.

This definition suggests that children with cerebral palsy do not manifest the disability homogeneously; as such, two children with cerebral palsy may present completely different curriculum, caregiving and social needs. Worth mentioning is that many authors agree that cerebral palsy is a “non-progressive” disability; however, participation in many areas of life and learning is reduced significantly as affected individuals get older (Bantjes, Swartz, Conchar & Derman, 2015, p. 242). While there is no specific treatment for cerebral palsy, there are strategies to control cerebral palsy. Azad and Mathews (2016) mention that new possibilities are being investigated, which involve administering magnesium sulphate for the treatment and prevention of cerebral palsy.

Cerebral palsy is believed to be a common cause of disability in children (Dambi, Mlambo&Jelsma, 2015; Lauruschkus, Nordmark & Hallström, 2015). According to Donald, Samia, Kakooza-Mwesige and Bearden (2014), 1,5 to 2,5 children out of a thousand in the world are born with cerebral palsy. MacLennan et al. (2015) estimate the number of children born with cerebral palsy in the world as being between 2 and 2,5 in a thousand. Locally, Kruger and Botha (in Landsberg, Kruger and Swart, 2016, p. 363) assert that although “poor statistical reporting” is the case in Africa, two to eight children in a hundred are born with cerebral palsy in South Africa.

Donald et al. (2014) add that poor economic status, underdeveloped health facilities, children being born preterm as well as malnutrition all perpetuate the prevalence of cerebral palsy in Africa. Since many African countries are characterised by the above, it suggests that more children with cerebral palsy are born in rural than urban areas, which supports a claim by Smithers-Sheedy et al. (2014) that cerebral palsy is on the decline in developed countries.

It has already been mentioned that cerebral palsy affects the brain and impairs body functioning. Depending on the affected side of the brain, manifestations in movement difficulties, speech and language development, hearing, visual and learning disabilities, affecting participation in different environments, are reported (WHO, 2011). The WHO (2001) considers participation as being an opportunity for children to acquire vocabulary for communication and skills to carry out tasks and form social relations with other members of the community. These skills do not only promote the inclusion of children with cerebral palsy into society, but also provide opportunities to master skills that lay the foundation for successful learning.

The section below presents a concise overview of the types and classifications of cerebral palsy and its manifestations.

2.3.1 Types and classification of cerebral palsy

There are many types of cerebral palsy, ranging from mild to severely disabled, and these types are classified according to the way cerebral palsy is displayed (Gorter,

Rosenbaum, Hanna, Palisano, Bartlett, Russell, Walter, Raina, Galuppi & Wood, 2004). However, Randall, Harvey, Imms, Reid, Lee and Reddihough (2013) claim that the paucity of reliable tools, used to ascertain its classification makes cerebral palsy difficult to manage. According to these authors, proper classification provides a structure for reporting on the prevalence of cerebral palsy, generates common language across interest groups and potentially informs budgetary structures on the requirements. On the other hand, Anastasiou et al.(2015) are of the opinion that classifications only perpetuate disabilities. The latter authors state that, if disabilities could be classified according to their needs to maximise performance, support for effective participation would be easy to arrange.

However, it seems that classification may be preferable, as it prepares the parents of children with cerebral palsy for what to expect from their children's disability (Gorter et al., 2004). Cerebral palsy is classified into four main types depending on manifestations and the affected side of the brain. According to Gofer-Levi, Silberg, Brezner and Vakil (2014, p. 1956), classification is easy to manage because of the noticeable clinical characteristics, but they mention that there are types of cerebral palsies that are "invisible and coexist with other disabilities". The classification of cerebral palsy that is still used, is that of Minear (1956) who classified cerebral palsy into topographical, etiological, physiological, supplemental, neuroanatomical,therapeutic and functional capacity types.

2.3.1.1 *Etiological*

Etiology is described as the causes of diseases.Kruger and Botha (in Landsberg, Kruger & Swart, 2016, p. 361-382) consider the causes of cerebral palsy to be "diverse and multifactorial". Given the diverse manifestation of challenges children with cerebral palsy present, the above statement by Kruger and Botha (in Landsberg, Kruger & Swart, 2016, p. 361-382) gives perspective to understanding the disability within a broad spectrum. To clarify the etiological factors, Kruger and Botha (in Landsberg, Kruger & Swart, 2016, p. 361-382) further classify these into "prenatal, perinatal and postneonatal factors".

2.3.1.2 *Therapeutic and functional capacity*

Minear (1956) formulated the therapeutical and functional classification of cerebral palsy. He describes functional capacity as the degree to which the disability limits effective and voluntary functioning in affected individuals. He further refers to therapeutic classification as the extent to which these individuals require treatment and support to function maximally. Minear (1956) groups this class from A to D, where the latter group consists of individuals with cerebral palsy requiring high levels of treatment and hospitalisation. The extent to which this classification is informing recent research and support for children with cerebral palsy is interesting. The ICF of the WHO concurs and aligns this classification with its strategy. The ICF considers participation as the capacity, ability and opportunities children with disabilities are offered to participate in learning effectively.

2.3.1.3 Supplemental

Morris (2007) describes the supplemental classification of cerebral palsy as the associated conditions or impairments found in children with cerebral palsy and attempts to connect them to the physiological and topographic classifications. From this perspective, it is important to view these classifications as being interdependent to support children with cerebral palsy effectively.

2.3.1.4 Neuroanatomical

Minear (1956) describes neuroanatomy as the neurological structure by which the human brain is organised. However, in the context of this study, the organisational structure of the brain needs to be understood first from the premise of it being injured, damaged or dysfunctional. Second, it is necessary to understand its manifestation in a learning environment. The manifestations in a learning environment are discussed under Piaget's cognitive development theory below.

It is also interesting to note that, although mentioned above that injury in the brain is the common cause of cerebral palsy in children, studies, such as the one by Nelson and Blair (2015), are beginning to link neuroscience and genetics to broaden the understanding of the root causes of cerebral palsy.

For the purpose of this study, the symptoms of cerebral palsy are discussed according to the topographical and physiological classification. Although all the other classifications are important for the purposes of understanding cerebral palsy and the support structures required, the above provides an overview of the effects of these symptoms on rural learning contexts; that is, among others, the effects of the lack of support systems on the developing child with cerebral palsy and the implementation of inclusive education in these contexts.

2.3.2 Topographic classification

According to Kruger and Botha (in Landsberg, Kruger & Swart, 2016, p. 361-382), topographical classification refers to the “physical manifestations” of cerebral palsy in affected persons. These authors distinguish between the following types of topographic classification:

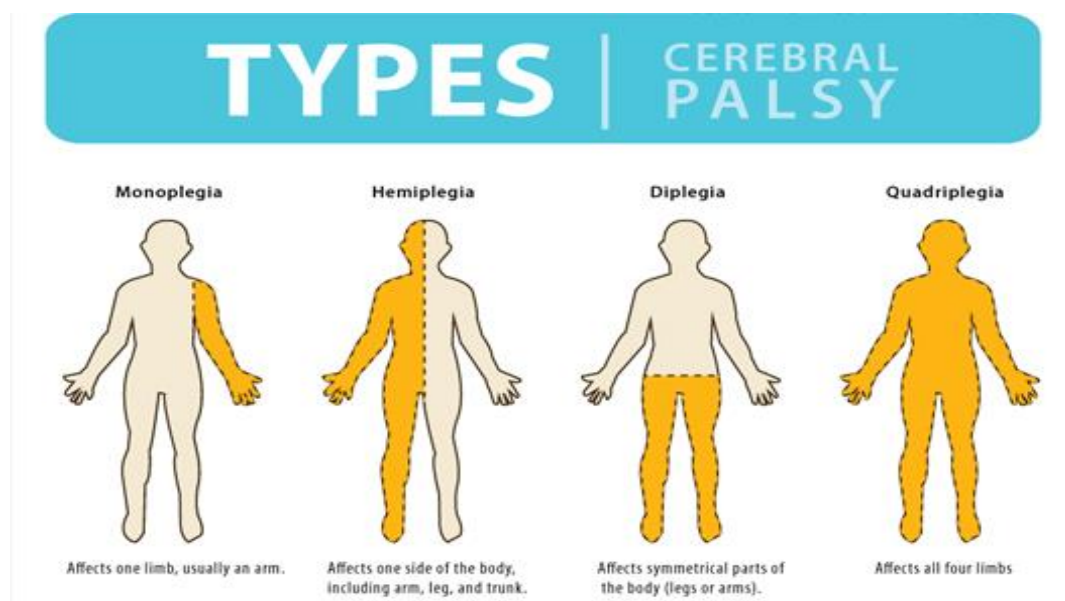


Figure 2.1: Visual representation of the manifestation of cerebral palsy in affected body parts (Kruger & Botha in Landsberg, 2016, p. 365)

The topographical definitions, according to Kruger and Botha (in Landsberg, 2016, p. 365), are discussed below.

- Monoplegia refers to the type of cerebral palsy where only one limb, either left or right, is affected.
- Hemiplegia affects either the right or the left side of the body. Depending on which side is affected, it is called “left or right hemiplegia”.
- Quadriplegia affects all four limbs.
- Paraplegia affects both legs, but not arms.
- Diplegia affects all four limbs, with the legs being more affected than the arms.

2.3.3 Physiological classification

This type of classification is done on the basis of how the brain affects the functioning of different parts of the body (Efrati & Ben-Jacob, 2014). It has already been mentioned above that injury in the brain is the common cause of cerebral palsy; therefore, it is important to understand brain functioning and the manifestations of cerebral palsy on the basis of the area of the brain that is affected or injured.

It is crucial to understand that the manifestations and types of cerebral palsy affect these children’s ability to benefit from traditional methods of teaching. One can, thus, emphasise that children with cerebral palsy require support, not only from teachers in schools to progress with other children without disabilities, but also a collaborative effort between parents, peers and communities for successful development. The theoretical framework in this study will expose the atypical development with the aim of emphasising their support needs. Cerebral palsy has already been presented as a motor disability accompanied by other cognitive disabilities affecting learning. Since this study gleans on curriculum accessibility for children with cerebral palsy, the spastic, athetoid and ataxia types will be discussed to highlight the spectrum of support that these children need.

2.3.3.1 Spastic cerebral palsy

“Spastic cerebral palsy” is the most common type of the different variations of cerebral palsy (Kruger & Botha in Landsberg, 2016, p. 361-382). Donald et al. (2014) mention that spastic cerebral palsy results from an injury to the motor cortex situated at the frontal lobe of the brain, while Tomita, Fukaya, Takagi and Yokozawa

(2016) mention that the muscles on both sides of the body are weakened, thereby causing discord in most bodily functions, such as movement and speech. Balaban, Yasar, Dal, Yazicioglu, Mohur and Kalyon (2007) postulate that due to uncoordinated movements, these children use up a great deal of energy in their bodies, resulting in fatigue and compromising the execution of other daily activities. It can be assumed that these children will require double the energy that typically developing children use for the same activity. This cannot be ignored as it has implications for teaching and learning. These children will need teachers to adapt the curriculum, timetables and assessments and provide assistive devices for reading and writing support. The children

will also require additional professional support, such as physiotherapists and occupational therapists to assist with proper seating, to access reading material and participate in classroom activities. Therefore, teachers in inclusive classrooms need to understand the inherent limitation of these children in order to arrange activities and assessments in accordance with learner capability.

2.3.3.2 Athetoid cerebral palsy

Athetoid cerebral palsy mainly attacks and weakens muscles, thus manifesting in uncoordinated movements and clumsy speech, and is mostly referred to as a “mixed tone” (Gofer-Levi et al., 2014). Disabilities associated with athetoid cerebral palsy are on a spectrum ranging from an inability to control movements and poor arm or head control (Ansari, Raghunathrao & Ansari, 2016). Gofer-Levi et al. (2014) further argue that these children display a developmental delay as huge as ten years compared to other children without disabilities. This has implications for learning in classes, where these children are expected to write, feed themselves and get involved in self-care activities without their caregivers’ assistance. Gofer-Levi et al. (2014) postulate that it is worse in rural areas where caregiving facilities and other professionals are scarce.

2.3.3.3 Ataxia cerebral palsy

Ataxia is the least common type of cerebral palsy and results from injuries occurring on the cerebellum, affecting the control of balance and coordination (Khan & Sadiq,

2017). According to Riedel, Ray, Dick, Sutherland, Hernandez, Fox and Laird (2015), the cerebellum is the largest part of the brain controlling most bodily functions, such as language acquisition, reasoning, memory, understanding, planning, thinking and those related to cognition. Some children with ataxic cerebral palsy present with more than one type; therefore, it is also referred to as a “mixed type” cerebral palsy. It is against this background that Riedel et al. (2015), in their study, investigated and found that, among other disabilities, children with ataxia also present with deafness.

Mentioned above are disabilities coexisting with cerebral palsy, affecting these children’s ability to socialise and develop those skills crucial to learning readiness. Bruwer, Hartell and Steyn (2014) found in their study that these children are not ready for school and struggle to progress successfully. These children need support from teachers equal to the task, a skill compromised by the historical realities in a South African context. According to Bruwer et al. (2014), there is a disparity between the outputs of qualified teachers versus the growing population of black children in South African schools. This disparity does not only result in teachers being exposed to large classes, but also denies children an opportunity to be taught by teachers sharing the same cultural backgrounds. A cognitive profile of the child with cerebral palsy is discussed below in order to expose the inherent academic challenges facing these children.

2.3.4 A cognitive profile of the child with cerebral palsy

This study assumes that since teachers in rural areas are not trained for these challenges, children with cerebral palsy continue being marginalised and are, therefore, not able to access the general curriculum in rural schools. In light of Piaget’s theory of cognitive development and the neurodevelopment of children with cerebral palsy, three learning disabilities associated with cerebral palsy and the difficulty for these children accessing the curriculum are discussed. Piaget’s view of cognitive development is linked to the experiences that children are confronted with and that influence their learning. The cognitive disabilities inherent in cerebral palsy, discussed in the section below, clarify the difficulties experienced by children with cerebral palsy in a learning environment. The outcomes, thus, provide

propositions to create meaningful learning opportunities for these children to access the general curriculum. These disabilities are dyslexia, dyscalculia and dysgraphia.

2.3.4.1 Dyslexia

According to Ramus (2014, p. 274), dyslexia is a “difficulty in processing and understanding language”, inclusive of reading and writing. Language acquisition, reading and the movements necessary for writing are located in the cerebellum (Stoodley & Stein, 2013). Damage to this part of the brain affects the learning of language, which is a building block for academic success. Dyslexia is inherent in many children with cerebral palsy. As such, early intervention and support in terms of the provision of assistive devices are basic requirements for these children to succeed in inclusive classes. In this regard, Bell (2013) insists that teachers in inclusive classes require specific training relevant to this challenge. Teachers who are well trained are confident about teaching children with diverse educational needs, as is the case in England where the attitudes of teachers were challenged through training (Bell, 2013). In the same breath, Bell (2013) argues that training equips teachers with not only the skills for inclusive classes, but also the realisation that with proper support, children with dyslexia can succeed.

2.3.4.2 Dyscalculia

In recent years, there has been a growing interest in understanding dyscalculia and the factors causing this learning disability. Anastasiou et al. (2015) and Wang and Du (2015) describe dyscalculia as an inability to process numerical concepts and understand mathematics. However, Shalev, Manor, Kerem, Ayali, Badichi, Friedlander and Gross-Tsur (2001) caution against a homogenous classification, but recommend the understanding of specific mathematical difficulties these children experience in order to provide appropriate support. It is interesting to note that these authors agree that dyscalculia is a neurocognitive learning disability affecting working memory and the ability to assign meaning to numerical concepts. Working memory is an important human function that affects attention, reasoning and reading comprehension, among others (Roux & Uhlhaas, 2014). In their study, Van Rooijen, Verhoeven, Smits, Dallmeijer, Becher and Steenbergen (2014) found

that children suffering from brain injury, such as cerebral palsy, experience difficulty in retrieving stored information, including mathematical concepts from memory.

Kucian and Von Aster (2015) maintain that a larger number of children with dyscalculia are found in developing rather than developed countries. While these authors presume that poverty and a lack of support exacerbate dyscalculia, they emphasise the importance of a holistic assessment to ensure the effectiveness of support required. Kucian and Von Aster (2015) re-emphasise the importance of teacher training to include competency in the use of assistive devices for the benefit of children with disabilities in inclusive classes.

2.3.4.3 *Dysgraphia*

Dysgraphia, according to Chung and Patel (2015) and Dhall (2016), is a learning disability associated with a difficulty in writing. While handwriting is an integral part of learning and development, there is very little research in the literature in this regard (Bumin & Kavak, 2010). According to the above authors, dysgraphia does not occur in isolation, but is linked to a lack of other skills, such as balance and involuntary movements. This has an impact on acquiring skills necessary to foster learning during play. For children with cerebral palsy, it is important that efficient time is dedicated to facilitate their participation and independence to teach these skills. Moreover, given the inherent physical disabilities that some of these children possess, handwriting is a skill without which they will live a lonely life.

The cognitive profile of the child with cerebral palsy, as discussed above, begins to reveal the possible inherent challenges that have an impact on these children's ability to access the general curriculum in rural schools. However, for the purpose of contextualising this study, theories of development are discussed.

2.4 THEORIES OF DEVELOPMENT

A holistic view to disabilities is key in understanding the needs and support these children require. Csikszentmihalyi and Rathunde (2014, p. 7) argue that a person

“cannot be defined by relying on the objective physical characteristics alone”. This being said, the physical appearance of children with disabilities cannot be assumed to mean that they are not educable. However, theories of development can be used as frameworks to understand their atypical development as well as the support they need to progress through school and achieve independence, like children without disabilities.

Two theories, namely Vygotsky’s sociocultural theory (1978) and Piaget’s cognitive development theory (1979), are discussed.

2.4.1 Vygotsky’s sociocultural theory (1978)

Vygotsky was a Soviet psychologist and the founder of the sociocultural theory. In the sociocultural theory, Vygotsky (1978) specifically emphasises the influences of social interactions inclusive of culture on a developing child. Vygotsky argues that it is during social interactions that a child develops, learns and is influenced. All learning, inclusive of language learning, according to Vygotsky (1978), thrives or is hampered during social interactions. Reinforcing Vygotsky’s theory, Fahy (2014) identifies language a crucial tool for this interaction, without which development is compromised. In line with the importance of social reactions, Vygotsky (1978) developed the concept of the zone of proximal development (ZPD). Vygotsky defines the ZPD as the distance between what a developing child can do without support and scaffolding, and what he or she cannot do in order to move to a higher cognitive level.

Howe (2013) postulates that to reach a higher cognitive level, children require scaffolding in the context of the skill taught. However, atypical development entrenched in disabilities has the potential to hinder progress for these children. Support, particularly for children with cerebral palsy, as in this study, becomes key to ensuring progress. It is from this perspective that Howe (2013, p. 3) argues that

peers and adults in the learning environment have a responsibility to scaffold children's attention, "keeping them on target, simplifying the tasks" to ensure completing the tasks and mastering the skills taught. In support of the above, Denton (2011, p. 849) reiterates "the role of adults" to be consistently reflecting on the children's developmental level and the contextual support required for the scaffold to be effective.

Understanding the different trajectories which learners with disabilities follow in learning has long been a matter for debate (Morcom & MacCallum, 2012). Hence, theoretical frameworks, such as the one developed by Vygotsky, help in shedding some light on understanding these atypical routes. Morcom and MacCallum (2012) argue that for children to move to higher cognitive levels, instruction should be pitched at their level of cognitive development. It can be argued that unless teachers are able to identify children's ZPD, effective teaching for learning and development cannot be realised. Secondly, if the development of children with special needs follows a different trajectory, standardised assessments and age cohort progression cannot be imposed for these learners in inclusive settings (Muthukrishna & Schoeman, 2000). Apart from the ZPD, Vygotsky (1978) introduces the concept of scaffolding. He contends that children learn well when both adults and peers are involved in the process. The teacher has to provide opportunities for learning, while the learner and his or her peers navigate the process and scaffold one another to higher developmental levels. Vygotsky's theory may not be a solution to the challenges in inclusive settings, but it can offer teachers an understanding of atypical development.

Furthermore, the theory may provide children with disabilities opportunities to learn the necessary skills required for an undertaking from typically developing peers in inclusive classes (Morcom & MacCallum, 2012). While it is not the aim of this study to investigate the effectiveness of the ZPD, I support Vygotsky's (1978) argument on the importance of adult supervision to ensure the sustainability of skills learned during child interaction with peers. Hence, this study holds the ZPD crucial as a tool for supporting children with cerebral palsy to develop to their maximum potential. According to Thompson (2013), time is essential for a skill to be learned and

performed at independent competence. His stance is that the developing child reaches an independent stage through social interaction with his or her peers, while an adult directs the interaction.

Although Vygotsky's theoretical conception was premised on data collected in special needs education, it never received the support it has deserved from the special needs education sector (Gindis, 1999). The theory emphasises that all children, including those with cerebral palsy, can develop through learning; however, Fahy (2014) is of the opinion that practices in learning in most institutions act as barriers to curriculum accessibility. The theory also acknowledges that children with disabilities follow a different route that manifests itself as developmental delays and learning disabilities (Bottcher, 2012). Bearing this in mind, it is clear that if children with disabilities follow a different trajectory to learning, the teachers need to have an epistemological understanding of the atypical development.

The figure below gives a visual representation of the process of scaffolding children with disabilities until they reach an independent stage. It starts with identifying the task to be taught until the task can be performed independently without assistance.

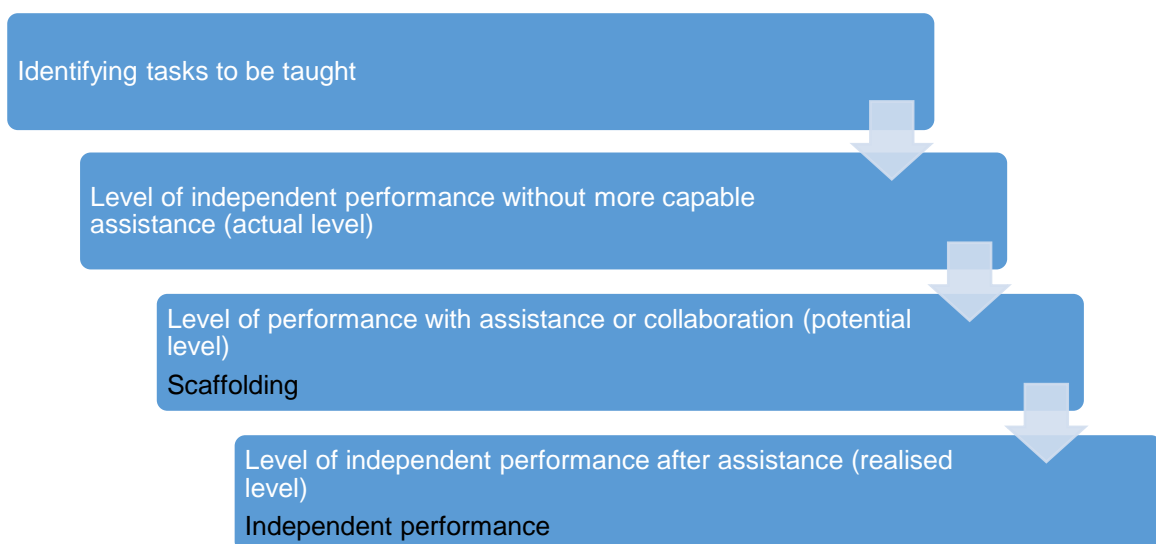


Figure 2.2: The process of learning (adapted from Thompson, 2013, p. 255)

2.4.2 Piaget's cognitive development theory (1979)

Jean Piaget was a Swiss psychologist who formulated the cognitive development theory. In his cognitive development theory, Piaget explicitly explains the origins of intelligence and processes in the environment that affect a developing child's thinking (Huitt & Hummel, 2003). Piaget's cognitive development theory is mainly concerned with biological development where a child constructs meaning from personal experiences, develops an understanding of formed perceptions and moves to higher levels until the child adapts to the world through assimilation and accommodation (Lourenço, 2012; Piaget, 1953). Piaget believed that a child is born with intrinsic reflexes that mature over time. These reflexes, together with life experiences, help the child later to navigate, master and make meaning of the environment (Bringsjord, Licato & Bringsjord, 2016). While this theory represents a positive contribution to the education of children and curriculum development, its critics argue against an acknowledgment of biological development without special consideration of its context as inadequate (Webb, 2002).

Piaget (1953) describes child development in different stages – the sensorimotor, preoperational, concrete operational and formal operational stages – and assigns periods of development to these. Although he acknowledges the possibility of an overlap between stages and ages, he maintains the importance of sequential development (Webb, 2002). Piaget affirms sequential development as being a propellant to quality learning, in a sense that building on existing knowledge helps teachers plan stimulation programmes (Phillips, 1973) and teaching specifically relevant to the child's developmental stage (Powell & Kalina, 2009). Likewise, Huitt and Hummel (2003) encourage teachers and parents to be vigilant always in exposing children to concrete sources to encourage learning. This has implications for children with cerebral palsy in rural schools. It can be assumed, first, that unless teachers understand atypical development, it will be difficult for them to prepare, differentiate and adapt lessons and assessment tasks for learners with diverse educational needs. Second, parents' low literacy levels in rural South Africa (Modisaotsile, 2012) compromise the support that these children need to access the curriculum.

It has already been mentioned that children with disabilities develop later compared to typically developing children. In this regard, in 2007, the WHO discussed the importance of identifying delayed developmental milestones in children with disabilities in order to provide early intervention. Similarly, in 2001, Holowinsky recommended a preparatory year for children with cerebral palsy who are of school-going age. According to Case (1978) and Gindis (1999), if curriculum content is arranged from lower to higher cognitive demands, it is important to understand atypical child development in order to support these children on their specific level of need.

It is evident that an effort to use Bronfenbrenner’s ecological systems theory as theoretical framework concurrently with these theories will yield results capable of holistically addressing the curriculum needs of a child with cerebral palsy in inclusive classes. In support, Lourenço (2012, p. 281) argues that while Vygotsky and Piaget are regarded as being architects of developmental theories in literature, there are both similarities and differences in these theories that have contributed a great deal to an understanding of child development and learning.

The following table displays the essence of the supporting two theories.

Table 2.1: Theories of Vygotsky and Piaget concerning child development

Vygotsky	Piaget
Vygotsky believes that development occurs through the developing child’s social interaction with other children and adults in the environment.	Piaget emphasises biological development occurring in different set stages.
According to Vygotsky, children can perform activities of higher cognitive levels with the help of other children and adults.	Piaget believes that children organise knowledge into schemas through assimilation and accommodation. In this way they adapt their worlds to a state of

	equilibrium and integrate new knowledge.
Both these theorists agree that development is crucial during the early childhood stages.They further agree that the child is an active participant in learning through play.	

2.5 CONCLUDING REMARKS

The literature has been perused regarding a conceptual framework on disability and cerebral palsy. This chapter begins to position the study within the framework that suggests curriculum support requirements for children with cerebral palsy in rural schools. In view of the paradigm shifts in disabilities that were discussed, it can be assumed that the above concepts cannot be conceptualised homogenously to all contexts.

Furthermore, it is evident from the reviewed literature that there is a need to take into account a belief system as well as cultural inclinations of African contexts, particularly rural areas, in order for children with disabilities, particularly cerebral palsy, and the implementation of inclusive education to succeed in rural areas. The cognitive profile of children with cerebral palsy provided above seems to support the assumption that teacher training and support are the central axis towards the inclusion of children with disabilities in full-service schools.

Similarly, variables such as teachers' negative attitudes and perceptions towards inclusive education persisted during the discussions above. Interestingly, even in research where positive attitudes were recorded, as a result of a lack of training, the teachers find inclusive classes overwhelming. While teacher training is key to inclusive education success, many authors argue that governments have a responsibility to create environments conducive to curriculum accessibility and offer support to all the stakeholders in education.

It is important to understand the development of inclusive education and what it entails. The perspectives and policies on inclusive education are discussed in Chapter 3.

CHAPTER 3

PERSPECTIVES AND POLICIES ON INCLUSIVE EDUCATION

3.1 INTRODUCTION

A conceptual framework on disability and cerebral palsy in the context of inclusive education was presented in the previous chapter. In this chapter, the perspectives and policies underpinning the implementation of inclusive education are presented, as this is the context in which the discussion of cerebral palsy is situated.

The inclusive education policy is still in the implementation phase in South Africa and supports the inclusion of all children, including those with cerebral palsy, so that these children may also have access to quality education in schools where they can be best supported (Lomofsky & Lazarus, 2001). While the implementation process is in progress in South Africa, like many countries, South Africa is still struggling with challenges involved in making the strategy work. Naicker (2007) defines inclusive education in the South African context as a strategy aiming at including children with disabilities in full-service schools, thereby, redressing the political and social injustices of the past. On the other hand, Engelbrecht et al. (2006), as well as Ntombela (2011), warn that teacher training in South Africa is not designed with inclusion in mind, and not all children are able to access and benefit from the general curriculum taught in full-service schools.

South Africa experiences various challenges with the implementation of this policy, which may also be ascribed to the fact that inclusive education originated from developed countries (Ntombela, 2011; UNESCO, 2006). The said origin means that the context of developing countries, particularly rural areas, was not considered when this policy was developed.

In order to explicate the challenges of the accessibility of meaningful learning opportunities in a rural framework, first of all, the development of inclusive education internationally, in Africa and in South Africa, and subsequently, the requirements for its successful implementation are discussed.

3.2 INCLUSIVE EDUCATION INTERNATIONALLY

Children with disabilities were regarded as “uneducable”, excluded from attending schools and cared for in hospitals, caregiving institutions and homes; the latter where parents, especially mothers, were responsible for their upbringing (United Nations [UN], 1993, p. 3). Although stress is inherent in mothers raising children with disabilities, Panerai, Zingale, Trubia, Finocchiaro, Zuccarello, Ferri and Elia (2009, p. 874) argue that mothers are paramount to the educational success of these children. The above authors are of the opinion that caregivers have a better view that can benefit these children’s academic journey.

Panerai et al. (2009) emphasise that rearing children with disabilities, particularly those with cerebral palsy, has an impact on the socioeconomic, social and emotional well-being of families. However, the self-sufficiency of these children relieves families of the added pressure and allows for the refocusing of resources and energy to other equally important responsibilities in the family (Radford, Bosanquet, Webster & Blatchford, 2015). In order for children with cerebral palsy to achieve the envisaged independence, meaningful learning opportunities need to be created for them to access quality education. Given the spectrum of needs inherent in these children, it is evident that families will need additional support in scaffolding these children to achieve this independence.

The emergence of human rights and, consequently, the quest for inclusive education called for schools to provide quality education that is accessible to all children, including those with special needs. It included, among other things, making available qualified staff and teachers who have a better understanding of disabilities in their institutions to facilitate educational participation, which would result in these children’s independence. Numerous researchers point to the fact that many countries did not have dedicated programmes to address the special

needs challenges of these children within mainstream classes (Grzynekowaz, Wirtz & Marling, 1979; Robinson, 2017; Sharma, Forlin & Loreman, 2008; Slee, 2010; Woodcock & Hardy, 2017), with the result that teachers had to bear the brunt of having learners with special needs in their classrooms, while not being equipped to teach them. Consequently, teachers in full-service schools were overwhelmed with classroom responsibilities, ignoring the curriculum needs of children with disabilities, thus derailing their independence. In responding to this challenge, numerous legal frameworks have been promulgated to facilitate the development and educational participation of these children.

In order to elucidate this argument, the different legal frameworks that have led to the development of inclusive education internationally are discussed. Although there are many legal frameworks that underpin the development of inclusive education, for the purpose of this study, the Universal Declaration of Human Rights (1948), the International Bill of Rights (1948), the United Nations Convention on the Rights of the Child, the Standard Rules on the Equalisation of Opportunities for Disabled Persons and the World Conference on Education For All are presented.

3.2.1 The Universal Declaration of Human Rights (1948)

The Universal Declaration of Human Rights (UDHR) was adopted by the UN General Assembly in 1948 (UN, 2015, p. 54). The objective was, among others, to promote relations between global countries in a bid to eradicate poverty, eradicate segregation and promote equal and accessible education for all citizens, regardless of race, colour or creed. Countries internationally adopted this document, but unfortunately, it was not legally binding. However, two notable matters emerged from this declaration, which was first, the universality by which the UN proclaimed these rights, and second, the status that was given to this document as the bedrock on which human rights were formulated.

The preamble of the UDHR (UN, 2015, p. 54) underpins the principles of human rights in education as follows:

- Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be

compulsory. Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit.

- Education shall be directed at the full development of the human personality and at the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the UN for the maintenance of peace.
- Parents have a prior right to choose the kind of education that shall be given to their children.

The UDHR further mandated member states with the responsibility of teaching and educating citizens with regard to the universality of human rights. Bajaj (2011) believes teaching human rights to citizens extends the accessibility of educational institutions thus, improving curriculum accessibility. Regrettably, while teachers are considered agents of change and responsible for teaching human rights in classrooms, authors such as Cassidy, Brunner and Webster (2014), Marimuthua and Cheong (2015) as well as Zembylas, Charalambous, Lesta and Charalambous (2015) have found that the majority of teachers did not have the capacity to interpret and understand the prescribed human rights. It is against this background that these authors recommend that teacher training initiatives need to equip student teachers with skills, not only to impart relevant knowledge, but also to interpret and include human rights in the context of their teaching practice. These authors further warn that human rights interpreted out of context may contribute to the violation thereof.

Many authors in the literature argue that there has been a decrease in human rights abuses since the signing of different treaties around the world (Barry, Clay & Flynn, 2013; Lupu, 2013). However, Fariss (2014) argues otherwise. This author states that while many of these countries have devised punitive measures with regard to the violation of human rights, the execution thereof is ignored. In this regard, Barry et al. (2013) mention that some of these countries sign treaties only to yield to and avoid sanctions but continue with their status quo.

The UDHR was not legally binding; as such, this declaration lacked genuine punitive effectiveness. Examples of human rights violations, more specifically for persons with mental disabilities, are still widely reported in the literature (cf. Freeman, Kolappa, De Almeida, Kleinman, Makhshvili, Phakathi, Saraceno & Thornicroft, 2015). According to Freeman et al. (2015), these children were segregated as it was believed they did not have the appropriate mental capacity to make their own decisions.

Duncan (2000) and Sewpaul (2016) further argue that culture, socioeconomic status and race are some of the factors exposing individuals with disabilities to human rights violations. In his conclusion, Sewpaul (2016) postulates that it is, nevertheless, every individual's responsibility to work towards fighting against human rights violations for persons with disabilities. In an attempt to instil effectiveness and hold member states accountable for the implementation and the monitoring of human rights access, the International Bill of Human Rights was developed and implemented.

3.2.2 The International Bill of Human Rights (1948)

MacNaughton, Gillian, Frey and Diane (2015) describe the International Bill of Human Rights as the framework aiming at declaring the universality of human rights for all citizens. The International Bill of Human Rights is also considered a framework for holding member states responsible for ensuring access to these rights. The Bill consists of the UDHR, the International Covenant on Economic, Social and Cultural Rights, the International Covenant on Civil and Political Rights and its two optional protocols (UNESCO, 2006). Examining the protocols and other rights encompassed in the International Bill of Human Rights, it is evident that this instrument aims to address a broad spectrum of cultural, economic and social rights issues. However, according to MacNaughton and Frey (2015), in general, citizens are not aware of their rights, and some countries get away with violating access to some of the rights enshrined in these protocols.

In this regard, Mohanty, Gurpur and Beerannavar (2014) advise that human rights are effective when taught to children as early as in their primary school years. These

authors are of the opinion that the earlier these are taught, the more these children are empowered and the access thereto is improved. Within rural contexts, where access to Human Rights is a challenge, Tamayo, Rebolledo and Besoain-Saldana (2017), as well as UNESCO (2013), agree that empowering rural communities would ensure the provision for the deserved rights from responsible governments. These authors further contend that the empowerment of communities necessitates the removal of barriers, and thus facilitates the participation and inclusion of children with disabilities in educational opportunities.

In this respect, the UN (2012) particularly urges government agencies to advocate awareness for human rights violations with the aim of empowering children, particularly those with disabilities. Similarly, Barry et al. (2013) are of the opinion that shaming countries that violate human rights may promote the consistency with which citizens are accorded these. In their conclusion, MacNaughton and Frey (2015, p. 24) further caution that these rights should be taught “holistically”. In their view, fragmenting and prioritising one right above the other, perpetuates the violation of these, particularly for vulnerable groups such as children with disabilities. This being said, the implementation of the United Convention on the Rights of the Child was necessitated to restrict the violation of the rights to which children are entitled.

3.2.3 United Nations Convention on the Rights of the Child (1989)

The United Nations Convention on the Rights of the Child (UNCRC) is a document that was widely ratified around the world, aiming at advocating children’s rights (UNCRC, 1989). It was opened for ratification in November 1989 and started operating in September 1990 (UNCRC, 1989). Since its ratification, 194 countries have signed the document, and it is legally binding. While the UNCRC aimed at protecting all children in a bid to enforce the protection of the rights of children with disabilities, the United Nations Convention on the Rights of People with Disabilities (UNCRPD) (2006) was adopted and implemented to address the violation of the rights of people with disabilities. Many countries, including South Africa, signed this protocol. As a consequence, South Africa created a ministry that worked with the United Nations International Children’s Emergency Fund (UNICEF) and allocated

the Department of Social Development, the Department of Women and Children and the Department of Persons with Disabilities to address the rights of all these vulnerable groups.

However, the implementation of this protocol proved to be challenging. It emerged that “disability” is a broad-spectrum term, requiring a myriad of considerations to be addressed effectively. Among other considerations, the ability of persons with disabilities to make choices became a matter of debate. In line with Article 12 of the United Nations Convention on the Rights of People with Disabilities, a debate ensued on whether these persons should be given full autonomy to make decisions or be subjected to what Davidson, Brophy Campbell, Farrel, Gooding and O’Brien (2016, p. 32) term “supported and substitute decision-making”. In this regard, researchers as Fyson and Cromby (2013) questioned whether individuals with disabilities were entitled to human rights.

Responding to this dispute, disability movements came up with a slogan – “nothing about us without us” (Stack & McDonald, 2014). This was confined to not only decision-making but also to participating in research involving people with disabilities. Butterworth and Kovas (2013) maintain that including these children with disabilities in matters concerning them, be it research or any choices of interest, will help in designing responsive individualised educational programmes thus improving these children’s participation and facilitating progress in the implementation of inclusive education. Furthermore, Butterworth and Kovas (2013) assert that including these children in matters that involve them will help policy developers understand the world from the perspectives of these children. With regard to education, the UNCRDP (1996, p. 16) in Article 24 committed all the countries that ratified the treaty to make certain that –

- persons with disabilities are not excluded from the general education system on the basis of disability and that children with disabilities are not excluded from free and compulsory primary education or from secondary education on the basis of disability;

- persons with disabilities can access an inclusive, quality and free primary education and secondary education on an equal basis with others in the community in which they live;
- reasonable accommodation of the individual's requirements is provided;
- persons with disabilities receive the support required, within the general education system to facilitate their effective education; and
- effective individualised support measures are provided in environments that maximise academic and social development, consistent with the goal of inclusion.

3.2.4 Standard Rules on the Equalisation of Opportunities for Disabled Persons (1993)

The Standard Rules on the Equalisation of Opportunities for Disabled Persons were adopted by the General Assembly in 1993. These rules were not only aimed at ensuring that equity and quality education is accessible for children with disabilities, but were also aimed at eliminating all kinds of abuse and segregation involving children with disabilities. The document on the plenary meeting, which took place in December 1993, defines the equalisation of opportunities as the process through which the various systems of society and the environment, such as services, activities, information and documentation are made available to all, particularly persons with disabilities.

Although this particular instrument was not legally binding, like the committee on Economic Social and Cultural Rights (1994), it consciously addressed matters ranging from the importance of finding a common definition of disability across disciplines to the access of the physical environment and support services for children with disabilities. Interestingly, the instrument was not only aimed at exploring challenges within the system, but also aspired to find solutions thereto. Roadshows for disability awareness, strategies for the adaptation of the environment for access, curriculum accessibility and employment opportunities were explored with the aim of including children with disabilities in the mainstream economy. Furthermore, it also included a section on monitoring progress with regard to the implementation of the recommendations proposed. As set down in the

plenary meeting document, these rules were also regarded as building blocks for policy development. It was envisaged, with the implementation of these rules, that education for all would be achieved.

These proclamations condemning segregation and advocating for the inclusion of children with disabilities necessitated the conceptualisation of the strategy termed inclusive education. The inclusive education strategy was conceptualised at a world conference in Salamanca (Spain) in 1994.

3.2.5 Salamanca Statement (1994)

The Salamanca Conference, held in Spain in 1994, was attended by 92 countries and 25 international organisations, joining together to conceptualise a strategy to enforce the inclusion of children with disabilities into full-service schools (UNESCO, 1994). This inclusion promised to remove educational barriers so that these children would have equal access to quality education, along with their counterparts, and also participate and progress with these children in full-service schools (Avramidis et al., 2000). However, this could not be achieved with the two streams of education systems, namely special and mainstream, concurrently running in many countries. Ainscow (2007, p. 3) names this “parallel education” and also attributes the segregation of children with disabilities to the separate education systems found in many countries.

According to Ainscow (2007) and Booth and Ainscow (2002) the implementation of inclusive education, as prescribed in the Salamanca Statement, would facilitate the acceptance of children with disabilities in society and enhance learning for all children in full-service schools. However, the heterogeneity of communities within which inclusive education was to be implemented, gave rise to other unforeseen challenges as different needs emanated from its successful implementation. It is, however, significant that the Salamanca World Conference already acknowledged in 1994 that the implementation of inclusive education would be a mammoth exercise.

While teachers are considered to be crucial for the successful implementation of inclusive education (Kurniawati, Boer & Mangunsong, 2016), negative attitudes developed, emanating from a lack of training and the absence of a clear definition of what inclusion should entail (Subban & Mahlo, 2017). With regard to attitudes, Avramidis and Norwich (2002, p. 132) maintain that teacher attitudes and beliefs towards inclusion can be changed through “well-planned training courses”. It is against this backdrop that these authors simultaneously mention the importance of teacher training and involving these teachers in decision-making regarding the implementation of inclusive education. In support of the above, Evans and Lunt (2002) maintain that including children with a spectrum of abilities in full-service schools requires funding, teacher training, support staff and infrastructural provisioning.

Hence, the Salamanca Conference, in its five-year review, obligated countries to focus attention on teacher training, funding and policy adaptation for the successful implementation of inclusive education (UNESCO, 1999). I therefore, support Pini, Carrington and Adie (2015) in their contribution that, as long as policy developers and scholars continue disregarding evidence-rich data from rural contexts, inclusive education will remain just a dream in those contexts, drawing on Veck’s (2014) argument that the snowball effect of disregarding rural contexts may potentially slow down development in affluent countries too. In this regard, Florian and Graham (2014) categorically state that research on inclusive education has been going on for a while now, and it is about time for the countries to make it work. Simply put, it is now time to look back and identify the strategies to facilitate the successful implementation of inclusive education from the findings of the years of research.

In this regard, Angelides, Charalambous and Vrasidas (2004) introduced a “reflection” concept in their work. Underpinning this is an understanding that reflection exposes matters that continuously derail progress in the implementation of inclusive education. Similarly, reflection exposes opportunities for the creation of meaningful learning opportunities. This will provide countries with frameworks receptive to including children with disabilities including those with cerebral palsy in rural schools.

Despite the challenges highlighted in the Salamanca Conference Review, schools in many countries are currently open to children with disabilities. The question to ask is whether these children are able to access the curriculum taught by these schools. Florian (2015) states that understanding disability in an inclusive education context describes different types of disabilities and the support that these children require. Such insight, according to Florian (2015), may improve the relevance of support provided, thus help create meaningful learning opportunities for these children. In order to facilitate the above, UNESCO (1994, p. ix) proposed the following principles to countries that attended the Salamanca Conference:

- Give the highest policy and budgetary priority to improve education systems to enable them to include all children, regardless of individual differences or difficulties.
- Encourage and facilitate the participation of parents, communities and organisations of persons with disabilities in the planning and decision-making processes concerning provision for special educational needs.
- Invest greater effort in early identification and intervention strategies, as well as in the vocational aspects of inclusive education.
- Ensure that, in the context of a systemic change, teacher education programmes, both pre-service and in-service, address the provision of special needs education in inclusive schools.

From the principles above, it is clear that an effective and facilitated implementation of inclusive education would emanate from countries understanding that a strategy to address inclusive education would depend on the contexts where this approach should be implemented. A few studies are conducted to illustrate what would happen if the contexts of implementation are not accounted for. An ethnographic study conducted in Bhutan around inclusive education and disabilities found that the implementation of inclusive education was slow as a result of the country's failing to define what the strategy in that context meant (Schuelka, 2015). The study recommends the importance of defining the strategy with the country's vision in mind, which facilitates the implementation process. Another example is that Ametepee and Anastasiou (2015) found that, although economic growth in Ghana was fairly good, the budgetary priorities of that country did not address the strategies

to remove educational barriers, thus slowing down the implementation of inclusive education.

It is from this perspective that researchers such as Ainscow, Booth and Dyson (2006), Ainscow, Dyson and Weiner (2013) as well as Ainscow and Kaplan (2005) also recommend in their work that factors such as teacher training too should be compatible to the contexts of implementation. Furthermore, support by teachers, children and the family need to be responsive to the challenges in those contexts.

In light of Lee's (1999, p. 13) statement that "disability and poverty are inextricably linked, and that poverty can never be eradicated until disabled people enjoy equal rights with non-disabled people", a paradigm shift was necessitated in the understanding of disability requirements in order to implement inclusive education successfully.

The anticipated result was equal education and access to the general curriculum for all children without any form of discrimination. Notwithstanding the human rights violations cited in the literature, the Dakar Framework for Action was implemented to monitor the implementation of strategies to ensure education for all.

3.2.6 Education for All (2000)

The Education for All Conference was preceded by the Dakar Framework for Action that took place in Thailand in 1990. The conference was held in Dakar, Senegal, in 2000 (UNESCO, 2002). Treaties with regard to the importance of human rights access for all had already been signed by interested states – it was time then for action. Many countries, government departments, non-governmental organisations and the World Bank were part of this conference (UNESCO, 2002). The conference acknowledged the commitments made by these countries regarding making education accessible to all. However, its mandate was broader in a sense that it was expected to "assess the achievements, lessons and failures of the past decade" (UNESCO, 2002, p. 12).

Furthermore, timeframes for the achievement of most goals were set. Notable are the 2015 targets regarding placing 75% of girls in schools, reducing adult illiteracy by 50%, reducing poverty in member countries and, significantly, the facilitation of rural development. However, according to the Education for All Global Monitoring Report, none of these targets has been achieved by 2015 (UNESCO, 2015). Since ensuring access to the general curriculum for children with cerebral palsy is the purpose of this study, it can be assumed that the elimination of barriers to facilitate the educational participation of these children has not been achieved. Additionally, the objectives of the World Conference on Education for All (UNESCO, 1990, p. 2) were as follows:

- To highlight the importance and impact of basic education and renew commitment to make it available for all.
- To enforce global consensus on a framework for action to meet the basic learning needs of children, youths and adults.
- To provide a forum for sharing experiences and research results to invigorate ongoing and planned programmes.

In an article titled “Understanding neurocognitive developmental disorders can improve education for all”, Butterworth and Kovas (2013) further postulate that, unless research into atypical development is conducted, education for all cannot be achieved. According to these authors, the research results have the potential to impart practice into the requirement of successful inclusion of children with disabilities into full-service schools. These authors further mention that it is necessary to adapt the environment to ensure equal participation for all children. It is from among others the perspective of authors such as Butterworth and Kovas (2013) that the Standard Rules on the Equalisation of Opportunities for Disabled Persons were conceptualised and implemented.

3.2.7 Inclusive education in Africa

The development of inclusive education in Africa mirrors that of many countries in the world in a sense that it emanated from the ratification of human rights treaties

and the Salamanca Statement (UNESCO, 2006). The commonality is that the whole continent of Africa experiences challenges in the implementation of inclusive education. It has been argued, in line with Ainscow et al. (2004) and Booth and Ainscow (2002) (see section 2.2.2), that the implementation of inclusive education requires a mind shift, including a change in attitudes, perceptions, and the whole school and system evaluation to improve its implementation. However, the unavailability of infrastructural and human resources, the imposing of standardised assessments and the lack of relevant teacher training continue to surface as barriers in the implementation of inclusive education and as factors affecting curriculum accessibility to children with disabilities in developing countries (Ametepée & Anastasiou, 2015).

The interdependence of global economic growth, access to human rights and quality education for all has been postulated as key factors for countries to achieve the aspired future. It has also been reiterated above that contextual consideration is crucial for the successful development and implementation of new strategies. However, in the African context, poverty is one of the main barriers to achieving the implementation of inclusive education.

According to Eleweke and Rodda (2002) and UNESCO (2006), the highest number of children with disabilities is found in Africa, and a correlation between disabilities and poverty has been established in the literature. Therefore, it can be assumed that, since countries in Africa face different contextual challenges, including poverty, intervention strategies relevant to those contexts are crucial for the successful implementation of inclusive education. Besides poverty, corruption is also an inherent characteristic of most countries in Africa, and insufficient funds have been found to be an obstacle to sustainable development and the eradication of poverty (Reich, Hein, Krivulskaya, Hart, Gumkowski & Grigorenko, 2013; Rosenbloom, Gudic, Parkes & Kronbach, 2017). While poverty is reported to be increasing in Africa, Beegle, Christiaensen, Dabalen and Gaddis (2016) argue otherwise; these authors believe that poverty is decreasing, but inequalities eternalised by corruption, self-enrichment and the greed of African leaders are increasing. This means that in many African countries, the fiscal buffers are being depleted for personal gains.

Because of this, strategies for sustainable development, such as the implementation of inclusive education, are compromised. Despite the aforementioned, Charema (2010), in line with Letseka (2014), argues that the socioeconomic status of a country is important for the implementation of new strategies; however, that alone cannot ensure the successful implementation of inclusive education in this case. The author singles out political will as key for the successful implementation of inclusive education.

In addition, Pini et al. (2015, p. 678) pinpoint “rurality” as being another factor for consideration in the successful implementation of inclusive education in Africa. In this regard, Tamayo et al. (2017) mention that due to the scarcity of resources in rural areas, the strategy is be more difficult to implement. That as it may be, the authors suggest that a concerted effort must be made to make it a success. Simply put, Tamayo et al. (2017) are of the opinion that the inclusive education policy should be adapted to formulate contextual-specific policies responding to rural challenges. Tamayo et al. (2017) confirm the argument by the UN (2015) that sustainable development cannot be claimed if the rural demographics are not attended to. The UN (2006) laments the failure to do so and further identifies it as a basic human right for the rural communities.

While there seems to be consensus in the literature on the importance of rural considerations during the implementation of inclusive education, Brann-Barret (2015) argues that, as long as the availability of resources is ensured and teaching methods are adapted to foster curriculum accessibility for all children, inclusive success can be ensured. In this regard, Veck (2014) maintains that countries across borders are somewhat interdependent in trade – economically and socially. It is important in this era of financial turndown to be inclusive. Inclusivity, according to Veck (2014), encompasses uplifting rural communities as segregation has proved to be the main cause of social injustices. However, Sengupta (2016, p. 14) claims that individuals at whom the strategy is aimed need to be “participants and not spectators of the process”.

While many African countries receive aid from developed countries, views on how the aid is utilised are widespread. The World Bank (2008) states that aid is helpful only in countries with sound financial management policies, but such aid increases corruption in those that divert the money for personal gain. In its report, the World Bank (2008) supports the above assertion and further proposes a solution for the mismanagement of public funds. The World Bank (2008, p. 7) proposes collaboration between “the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA), which together form the World Bank; the International Finance Corporation (IFC), the Multilateral Investment Guarantee Agency (MIGA), and the International Centre for Settlement of Investment Disputes (ICSID)”. The collaboration is threefold. According to the report, it aims at helping countries manage funds, improve accountability for the funds received and make sure organisations do not donate money to the same projects simultaneously.

While education is considered to be a vehicle for the eradication of poverty, Jorda and Nino-Zarazua (2016) state that more than half of the citizens in Africa are illiterate. Zambia is an example of this. Despite the stable growth in the Zambian economy, most of its citizens are illiterate and poor (UNICEF, 2008). However, Jorda and Nino-Zarazua (2016) are of the opinion that until available resources are used properly and punitive measures against transgressors are inflicted, poverty, among others, impedes the implementation of inclusive education in Africa and will be a permanent attribute. One of the countries in the process of implementing inclusive education is South Africa.

3.3 INCLUSIVE EDUCATION IN SOUTH AFRICA

The evolutionary pathways between international and local education systems are homogenous in the sense that children with disabilities were initially confined to special schools until the introduction of inclusive education (Muthukrishna & Schoeman, 2000; Webb, Greco, Sloper & Beechman, 2008). The development of inclusive education in South Africa, as in many other countries, was a consequence of the Salamanca Treaty signed in Spain at the inclusive world conference. Unlike many countries in the world, the signing of the strategy in South Africa coincided

with the dawn of democracy following the passing of the apartheid era (Hay, Smit & Paulsen, 2001; Muthukrishna & Schoeman, 2000). The era was characterised by white supremacy with segregated education, health systems and demarcated residential areas for black and white citizens (Barnes & Wright, 2012; Van der Berg, 2008). Before democracy, white schools were well resourced with maintained school infrastructure and equipped with support staff for the needs of the children in the schools (Soudien, 2007). The disparities between the black and white schools also led to substandard quality education being offered in predominantly rural black schools (Soudien, 2007).

The cumulated disparities from the apartheid era resulted in teachers who are not trained for inclusion. There were no support services for inclusive success, and the dilapidated infrastructure in rural areas affects the implementation of inclusive education. However, against popular belief that inclusive education only benefits children with disabilities in inclusive schools, Avramidis and Norwich (2002), as well as Forlin (2012), mention a mutual benefit to all the children in those environments. Similarly, Byrnes and Sigafos (2001, p. 409) state that the attitude of typically developing children regarding disabilities changes and the performance of children with disabilities improves when they share their “educational space” with children without disabilities. Ainscow et al. (2004, p. 131) refer to this as “learning from differences”.

With specific reference to rural areas, Slaymaker, Christiansen and Hemming (2005) state that, while poverty and a lack of employment opportunities and reliable infrastructure were the norm during the apartheid era, the rural residents developed those “resilience and collaboration strategies”, which characterise a community-based approach necessary for inclusive education success. A community-based approach, according to Slaymaker et al. (2005, p. 12), improves “efficiency, effectiveness and sustainability of interventions” in a compromised context. It can, thus, be assumed that since the community-based approach has the potential to yield sustainable interventions, it could benefit the successful implementation of inclusive education in the rural areas.

The section below discusses the documents that assisted the evolution process from the apartheid era in the implementation of inclusive education in South Africa. Concurrently, the policies affecting the implementation process as well as the ability of children with disabilities to access the general curriculum are discussed. The aforementioned process, documents and policies were initiated and informed by the Constitution of South Africa, 1996 (Act No. 108 of 1996).

3.3.1 The Constitution of South Africa, 1996(Act No. 108 of 1996)

As a consequence of the eradication of the apartheid era in 1994, a new Constitution was developed in South Africa. The Bill of Rights embedded in the Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996) advanced inclusive principles to redress the past inequalities, the right to quality education and curriculum access for all children. Aligning the Bill of Rights with the context of this study, which is redressing the past inequalities, inclusive education was also incorporated into the plan. Inclusive education, according to Hay et al. (2001) and Bines and Lei (2011, p. 420), is one of the strategies considered as a tool to achieving the vision of the country regarding quality education for all. However, the effective implementation of the strategy requires the adaptation of previous education policies, didactics in classrooms, availability of relevant teaching materials and educating communities on the importance of inclusive education.

Various challenges are associated with the implementation of inclusive education in a South African context. In this regard, Donohue and Bornman (2014) mention challenges with defining inclusive education, Engelbrecht (2004) refers to the dearth of needed teacher skills as well as the required support systems, Lomofsky and Lazarus (2001) refer to the lack of resources and poverty, and Singal (2006) mentions the diverse cultures, belief systems and illiteracy levels of South Africa citizens as possible barriers to the implementation of inclusive education.

It is evident that the Constitution alone could not address all the matters for the successful implementation of inclusive education. To strengthen the implementation process, other policies, guidelines and acts have been developed. They are presented as follows:

- The South African Schools Act (SASA), 1996 (Act No. 84 of 1996)
- The Admission Policy for Public Ordinary Schools (1996)
- The National Commission on Special Educational Needs and Training and the Education Committee on Special Support Needs (1997)
- The White Paper on an Integrated National Disability Strategy (1997)
- The White Paper 6: Building an Inclusive Education and Training System (2001)
- The National Policy on Assessment and Qualifications for Schools in the General Education and Training Band (2007)
- Guidelines for Full-Service and Inclusive Schools (2009)
- The National policy pertaining to the programme and promotion requirements for the National Curriculum Statement Grades R-12 (2012)
- The White Paper for Post-School Education and Training (2013)
- The Policy on Screening, Identification, Assessment and Support (SIAS) Strategy (Department of Basic Education, 2014)

In order to clarify the process and challenges of implementing inclusive education in a South African context, a few are discussed. The forthcoming discussion also reveals the concealed opportunities for the successful implementation of inclusive education in rural South Africa.

3.3.2 The South African Schools Act (1996)

The South African Schools Act SASA (1996) (Act No. 84 of 1996) was aimed at regulating service delivery and equalising resources in all the schools. According to the SASA, it is compulsory for children between the ages of seven and 15 to attend school (Republic of South Africa, 1996). The SASA addresses many other matters related to children in schools, but no specific clause addresses matters on disabilities, except that no child may be denied admission on the basis of his or her disability. Furthermore, the SASA addresses many other matters related to children in schools, but there is no clarity on how to adapt these for children with disabilities. It further gives the head of the department the mandate to make decisions on child placement if schools do not have the capacity to admit such children.

To create meaningful learning opportunities for these children, heads of department are expected to place them in schools with teachers who understand their learning requirements. Schools should have caregivers to take care of their physical needs, accessible infrastructure and relevant resources. Schools with such qualities are rare if they do exist at all in the rural areas, affecting these children's progression in schools compared to their typical peers. Agheshteh (2015) is of the opinion that placements should be preceded by assessments. In the same breath, the author questions the accuracy of assessments conducted without specialists in the field. He argues that in most cases, the outcomes of these assessments place children at levels where they struggle or they are not challenged by the work presented to them. Agheshten (2015) thus recommends continuous, rather than once-off assessments to get a better view of these children's capabilities. The SASA supports the assessment of children with disabilities, but reiterates that these assessments should not aim at excluding these children.

The type of assessment discussed above determines the placements of children with disabilities in grades and schools. The Admission Policy for Public Ordinary Schools (1996), as prescribed in South African schools, is discussed below.

3.3.3 Admission Policy for Public Ordinary Schools (1996)

Owing to inherent disabilities, children with disabilities are in some instances set years behind compared to other children without disabilities (Palmer, Wehmeyer, Gipson & Agran, 2004; Petersen, Kube & Palmer, 1998). In line with the SASA that no child may be denied admission on the basis of their disability, the Admission Policy for Public Ordinary Schools (1996) in this regard also highlights the importance of identifying challenges that affect curriculum accessibility for all children (Peterson et al., 1998). However, Peterson et al. (1998) are quick to mention the challenges in rural areas, where the identification of developmental delays and the availability of stimulation programmes and support professionals are challenges. Considering this, these children enter the school systems without the necessary skills to progress satisfactorily on their academic journeys.

Despite the delay in developmental age, the Admission Policy for Public Ordinary Schools (1996) requires that children with disabilities be admitted to schools with other children in the year they turn seven. Disparities in the developmental age exert pressure on these children in mainstream classes, and this has an impact on their ability to access the general curriculum. Developmental delays often take the form of learning difficulties, regardless of the nuances of the severity of the disability (Peterson et al., 1998).

Furthermore, in order to create meaningful learning opportunities for these children, the provincial head of department is expected to place them in schools with teachers who understand their learning requirements. However, this study has emphasised that most of the teachers in schools are not trained for this challenge, affecting these children's progression compared to their typical peers.

The challenges discussed above led to the review of how special education should be governed and managed in a democratic South Africa.

3.3.4 The National Commission on Special Needs in Education and Training and the National Committee on Education Support and Services (1997)

Until the commissioning of the National Commission on Special Needs in Education and Training (NCSNET) and the National Committee on Education Support and Services (NCESS) in South Africa, the education of children with disabilities and the required support were treated in a rather frivolous manner in the sense that the educational support required for children with disabilities was not accordingly provided (Department of Education, 2010). Subsequent to the development of the Constitution and the ratification of the Salamanca Statement, the above commissions, in which Marie Schoeman, Chief Education Specialist for inclusive education participated, were employed to investigate the status of the education system in terms of its quality. These commissions began work in 1995, following the approval of the Minister of Education. The mandate was to investigate from a multi sectoral point of view the functionality of the general education system, while specifically exploring the efficacy of the special needs education sector. The

investigation was responding to the findings that confining children with disabilities to special schools was dysfunctional and costly.

A participatory approach that embraced research, workshops, site visits and debates was adopted to gather information from stakeholders (Muthukrishna & Schoeman, 2000). According to Annan-Diab and Molinari (2017), the recommendations stemming from the mentioned approach ensures sustainability; therefore, academics, persons with disabilities as well as the parents of children with disabilities participated. Despite the inclusion of the parents and their important roles in the success of inclusive education (Salend & Dunahey, 2002), the voices of parents in SA were overshadowed by the political urge to make the strategy work during the information-gathering process (Yssel, Engelbrecht, Oswald, Eloff & Swart, 2007). While Annan-Diab and Molinari (2017) recommend collaboration, Slaymaker and Christiansen (2005) are of the opinion that careful consideration needs to be ensured in the compositions of these collaborations. Slaymaker et al. (2005) argue that dedicated responsibilities should be allocated to ensure both the functionality and sustainability of results investigated by these interdisciplinary teams.

The outcome of these two commissions was twofold in the sense that they reported both the findings and recommendations to the Department of Education. The findings included, among others:

- problems in the provision and organisation of education;
- an inflexible curriculum that is a serious barrier and relates to the rigid and inflexible nature of the curriculum, which fails to cater for the diversity in the learner population and leads to a breakdown in learning;
- inaccessible and unsafe building environments; and
- a lack of human resource development.

Recommendations (Department of Education, 1997) emanating from these commissions included:

- the notion of “special need” as reflective of an “individual change” model, which has resulted in highlighting personal inadequacies in individuals, rather than challenging social inadequacies in the system;
- the need for educational support to focus on the development of the system so that it can recognise and respond to diversity in the learner population, rather than merely focus on supporting the individual learners; and
- the need for a community-based approach to support that would draw on and maximise local resources and that would reflect a move away from the traditional expert model of support.

It is evident from these findings and recommendations that a paradigm shift was necessary to improve the education system in South Africa. Since inclusive education is the context within which this study is underpinned, the White Paper on an Integrated Disability Strategy is discussed.

3.3.5 The White Paper on an Integrated National Disability Strategy (1997)

In responding to the disparities in the educational requirements for typical and atypical developing children in South African schools, the Integrated National Disability Strategy (Department of Education, 1997) was developed. The strategy responded, among other things, to the slogan by the disability groups that “nothing about us without us”, as well as the difficulty in documenting the prevalence of disabilities. Persons with disabilities were included in drafting this strategy and although the Constitution of South Africa, 1996(Act No. 108 of 1996) protected this vulnerable group, it aimed, above all else, to monitor:

- the way regulations and governing-specific acts are drafted;
- the way acts and/or their regulations are administered;
- the inappropriate and/or ignorant interpretation of the law; and
- the poor management of the aim of the law.

These objectives, coupled with the findings of research conducted, led to the development of the Education White Paper 6 Policy as a conceptual framework to govern the implementation of inclusive education to empower children with disabilities to access quality education.

3.3.6 White Paper 6: Building an inclusive education and training system (2001)

The Education White Paper 6 was developed as a framework to govern the implementation of inclusive education in South Africa (Department of Education, 2011). Howell and Lazarus (2003) describe the White Paper 6 policy as a detailed document aimed at addressing the support of children with special needs in full-service schools. However, many challenges emerged and stalled the progress of the implementation process. Researchers, such as Engelbrecht (2006) and Swart and Pettipher (2000), have documented these challenges in the literature, referring to matters ranging from curriculum changes to teacher attitudes towards the strategy, a lack of training and support for teachers and the hostility of stakeholders towards change in favour of the status quo. Also strongly evident was that the teachers felt that they had not been consulted during the planning stages, but were expected to champion the implementation process (Swart, Engelbrecht, Eloff & Pettipher, 2002).

Researchers, such as Salend and Duhaney (2002) and Mahomva, Harris, Seebran, Mudge, Catlin and Davies (2017), regard the exclusion of teachers in decision-making, specifically in the implementation of inclusive education, as a factor ensuring failure. Similarly, the above authors state that not everybody is willing to work with children with disabilities; as such, teacher interests, among others, first need to be established. It is from this perspective that Mahomva et al. (2017) argue the importance of establishing teachers' interest working with children with disabilities before they are placed in those schools. The lack of understanding of disability is evidenced in a study conducted by Johnson (2008), which indicated that the teachers interviewed felt strongly that children with disabilities belonged in special schools. The consequent realisation of the above challenges led to the reorganising of these schools in a democratic South Africa.

3.3.7 Guidelines for Full-Service or Inclusive Schools (2010)

The findings of the NCESS and the NCSNET in South Africa necessitated the restructuring of schools to special and full-service schools. The White Paper 6 (2001, p. 22) defines full-service schools as “schools and colleges that will be equipped and supported to provide for the full range of learning needs among all our learners”. Full-service schools were granted the autonomy to differentiate the curriculum, assessments and apply concessions for children in need (Department of Education, 2010). Furthermore, full-service schools are expected to comply with certain conditions (Department of Education, 2010, p. 10-11). These conditions relate to factors such as:

- the physical condition of the school – access to water, the toilets, the condition of the buildings, playground and terrain;
- professional capacity within the school;
- other support services within the community, for example, hospitals, clinics, welfare agencies, sporting facilities and youth centres;
- access to or the existence of other support programmes run by non-governmental organisations and other government departments; and
- the full-service school should serve a mentoring role to other schools and must, therefore, have a level of human resource capacity that can be built on.

However, it was not predicted that service delivery in terms of providing educational support in these schools was going to be affected as a result of its decentralisation in the different provinces (Engelbrecht, 2004). The provinces were not equipped to support the schools as well as the children in the schools. The lack of teacher training and resources and “cultural variations” (Du Plessis, 2013, p. 88) had an impact on these schools’ ability to execute their mandate.

The following question arises: If full-service schools do not have the human and financial support, are children with disabilities in those schools able to access the general curriculum?

3.3.8 National policy pertaining to the programme and promotion requirements for the National Curriculum Statement Grades R-12 (2011)

The Department of Education (2011) determines standard requirements for children to progress from one grade to the next in schools, outlines the requirements and makes allowance for concessions to immigrants and children with disabilities. The compulsory attendance remain nine years as specified and the policy also determines the period a learner is allowed to stay in a phase, which is three years in both the Foundation and the Intermediate Phases.

The implementation of the policy has certain implications for children with cerebral palsy. This relates to accessing the general curriculum and progress with their peers. Children with cerebral palsy present with developmental delays (see section 2.4.6) and learning difficulties, such as dyslexia, dysgraphia and dyscalculia; therefore, progression with typically developing children without proper support cannot be ensured. While a paradigm shift in policy is required for teachers to be able to differentiate the curriculum and the development of assessment strategies for the benefit of these children, certain matters, such as teacher knowledge, beliefs and capabilities, have an impact on the successful implementation of this policy (Ntombela, 2011). Most teachers in schools are not trained in dealing with curriculum differentiation and the administering of alternative assessments for children with special needs (Smit, 2001), with the result that children with cerebral palsy struggle to access the curriculum and progress with their typical peers in full-service schools.

It is evident that the implementation of inclusive education in a South African context is besieged with many challenges. However, absent from the reviewed literature is the determination of the government to monitor progress with the aim to find solutions to these challenges.

3.3.9 The White Paper for Post-School Education and Training (2013)

An overarching aim of the White Paper on Education and Training was to create enabling environments for teaching and learning to take place in South African schools (Department of Education, 2001). Issues as inequalities in urban and rural areas, racism and gender inequalities and disabilities not adequately addressed are discussed in this document. According to Ntombela (2011, p. 231), it is the

government's responsibility to create "enabling environments" without which quality education for all cannot be achieved. The UN (2012, p. 4-5) reiterates that quality education "empowers" citizens and ensures access to inherent human rights.

Reverting to the findings by the NCSNET/NCESS (1997) regarding the lack of human resource development – teacher training and teacher support, in this case – it is important to understand this policy in context. The development of the White Paper 6 was in response to the skills shortages and the lack of teacher support identified during the commission's investigations. Since many teachers in South African schools are not trained to address inclusive challenges, the aforementioned White Paper identified in-service training as a strategy to address this challenge. However, different schools of thought regarding in-service training for teachers emerged in the literature. Authors such as Robinson (2017) and Schepens, Aelterman and Vlerick (2009) supported this strategy. These authors believe that traditional teacher training in many countries does not fulfil inclusive education requirements. Ntombela (2011, p. 14) supports in-service training for teachers, the author advocates for in-depth training and argues that "unfortunately, there are no shortcuts". She warns that should training not be accompanied by research, collaborations and the consideration of institutional cultures, in-service training will not meet the desired outcomes. In this regard, Swart et al. (2002, p. 187) agree that in-service training should not be a once-off occurrence, otherwise "it will underestimate the long-term commitment to professional development".

A comparative study by Malinen, Savolainen, Engelbrecht, Xu, Nel, Nel and Tlale (2013, p. 43) between China, Finland, and South Africa indicates that in-service training for teachers in South Africa is effective. It further argues that a collaboration between teachers in special, mainstream and full-service schools exists. The collaboration, according to Malinen et al. (2013), has a positive impact on the quality and accessibility of the curriculum offered in these schools. Since the purpose of this study is to interview teachers in the type of schools as mentioned above, the findings will either confirm or deny those of Malinen et al. (2013), specifically in South African rural area schools.

While strides are allegedly being made regarding in-service training for teachers in South Africa, the reality is that many classrooms in these schools are overcrowded. Furthermore, there is an unavailability of learning resources and standardised assessment procedures in these schools are administered (Bines & Lei, 2011; Hay et al., 2001; Jansen, 2001; Swart et al., 2002). These challenges leave teachers overwhelmed to the detriment of children with disabilities who are left to the care of unqualified staff in special classes.

While in-service training is recommended as a strategy, Hay et al. (2001) suggest pre-service teacher training to change teachers' attitudes towards inclusion and disabilities. Robinson (2017), on the other hand, recommends the involvement of teacher assistants and paraprofessionals as a way of improving curriculum accessibility and sharing of skills towards facilitating the development of children with disabilities.

It is against this backdrop that the SIAS strategy was developed to align support for children with learning challenges and garnering extra support for teachers in mainstream classes. It was envisaged that, with this strategy, teachers would be able to identify meaningful learning opportunities, and thus facilitate development for these children.

3.3.10 Screening, Identification, Assessment and Support strategy (2014)

In responding to the recommendations and findings of NCSNET and NCESS regarding support and curriculum inflexibility in South African schools, the Screening, Identification, Assessment and Support (SIAS) strategy was developed (Department of Basic Education, 2014). While its ultimate core purpose was to provide quality education for all to children, the mandate was threefold -first, to diagnose challenges experienced by children with disabilities participating in full-service schools; second, outsourcing support to improve participation for these children; and, last, creating meaningful learning opportunities that enhance participation, and thus development.

Before 1994, support services were mainly available in white and Indian schools. Black schools, particularly those in the rural areas, were segregated. With regard to support services to facilitate development for children with disabilities in full-service schools, Pather (2011) identified five areas: to ensure curriculum access, curriculum differentiation, availability of professional support staff, initial and ongoing training in the use of assistive devices and to make available learning materials that are relevant to these children's needs (Department of Basic Education, 2014).

Principals, teachers, the SBST and the DBST were allocated special responsibilities for the implementation of the SIAS strategy. The teachers are responsible for the identification of learning difficulties and to liaise with the coordinator of the SBST, whose responsibility is to escalate these matters to the coordinator of the DBST. The coordinators of the DBST either provide training to the teachers or outsource professional support for both children and teachers, whichever is required. Similarly, collaboration between the child, parents and teachers in the provision of support services is encouraged (Department of Education, 2001). However, as a former coordinator of the SBST and having served on the DBST, I realised that the inopportune implementation of inclusive education without proper structures in place has a negative impact on the creation of meaningful learning opportunities for children with disabilities.

The SIAS strategy (Department of Basic Education, 2014) is underpinned by the multidisciplinary teams where children are assessed or screened, and, depending on their needs, professional support is sourced. The SBST should include the team coordinator, teachers and the principal as the general manager of the process. The DBST, according to this document, should consist of interdisciplinary professionals to address the health, emotional and other needs pertaining to children in schools. Interestingly, in this strategy, the community is included as a resource for support.

Furthermore, the SIAS strategy demarcates schools in South Africa into special and full-service schools with the aim of placing children in schools where appropriate support is readily available (Department of Education, 2008). The placement responsibility is allocated to the head of the provincial department. Depending on

the child's learning requirements, ensuring the availability of resources is necessary before placement. However, since schools in rural areas do not have all the resources to provide the required services to children with disabilities, the progression of such children may be affected, as well as their development compared to that of their typical peers.

Agheshteh (2015) is of the opinion that placement should be preceded by assessment. However, this author questions the accuracy of assessment conducted without specialists in the field. He argues that, in most cases, the outcomes of these assessments place children at levels where they struggle or where they are not challenged by the work presented to them. In this regard, Agheshteh (2015) recommends continuous rather than once-off assessment to gain a broader view on what these children are capable of doing.

It is evident from the discussion above that South Africa diligently developed policies, acts and strategies to govern the implementation of inclusive education. However, the question to ask is whether systems are in place for the stakeholders in education to implement the policy and make the curriculum accessible to all children, including those with cerebral palsy.

3.4 REQUIREMENTS FOR SUCCESSFUL IMPLEMENTATION OF INCLUSIVE EDUCATION

This study has taken a stand that there are neither prescribed requirements nor a one-size-fits-all strategy for the implementation of inclusive education. However, my argument is that responding to contextual requirements for implementation improves the success thereof. In order to indicate this, I will illustrate how, according to the literature, despite contextual challenges, some countries developed strategies to make the process work.

Numerous challenges have been experienced with the implementation of inclusive education. Booth and Ainscow (2002) ascribe these challenges to the fact that a change in beliefs, attitudes and practices is encompassed in the implementation process, which also requires the involvement of all the role players. This also relates

to an assertion of Ainscow et al. (2006) that a whole-school evaluation is necessary for achieving inclusive education success. In line with the biopsychosocial approach (see section 2.2.1.2), Ainscow (2005, p. 3) draws on what he terms “collaborative inquiry” to inclusive success. It is evident that change from how things are done is essential when collaborations and the biopsychosocial approach are to be implemented. Booth and Ainscow (2002) acknowledge the implementation of change as being challenging since a diverse range of matters needs to be considered. The first is a paradigm shift in the way children with disabilities are viewed.

Horn and Kang (2012), as well as Horn, Lieber, Li, Sandall and Schwarts (2000), acknowledge that in the 1950s already, the fact that children with disabilities may benefit academically when being exposed to meaningful learning opportunities was discussed. These authors argue that the benefit can be achieved by ensuring a match between the child, the activity, the context and the objective. This does not mean to disregard the wide spectrum of academic, social, emotional and cognitive needs embedded in disabilities, but accentuates a need for a collaborative effort. In this regard, Horn and Kang (2012, p. 243) emphasise that the academic needs of these children “cannot be fully addressed by the general curriculum alone” but should be accompanied by a needs analysis. They further state that the analysis mentioned will not only enlighten teachers concerning the curriculum requirements for these children, but will also help these teachers source the professional support required for the children’s easy access to the general curriculum.

According to Tikly and Barrett (2011), many factors, such as the teachers’ attitudes (Forlin, 2012), perceptions (Chao, Sze, Chaw, Forlin & Ho, 2017) as well as the quality and equality of, and access to, the curriculum (Lomofsky & Lazarus, 2001) have been researched in an attempt to respond to the needs of children with disabilities. However, research in this regard is mostly from developed countries while developing countries and rural areas were not acknowledged (UNESCO, 2006). In this regard, Woodcock and Hardy (2017), in agreement with Nind (2017, p. 280), suggest that “inclusive research must be relevant to the people concerned, it must matter to them and benefit them”. It is from this viewpoint that this study is

situated in the rural areas in order to contribute to the discourse regarding challenges in facilitating the implementation of inclusive education and the progression of children with cerebral palsy.

Despite the challenges in the implementation of inclusive education, as discussed above, emerging from the literature consulted are plans to make inclusive education work in some contexts. Developed countries have capitalised on their contextual strength. Brodin and Lindstrand (2007) argue that losing touch with contextual requirements is regarded as a factor for the fallout, and they illustrate this by explaining that Sweden lost its prestigious status to Canada with regard to progress in the implementation of inclusive education. It had nothing to do with the economic status of the country, but more to do with a “change of ideology”, which resulted in contradicting the contextual requirements. Norway, Australia, Germany and the United Kingdom are among the countries that are making progress in the implementation of inclusive education (Bjornsrud & Nilsen, 2011). Instead of practising what Lee and Low (2014, p. 51) call “unconscious inclusion”, these countries considered their contextual situations. Responding to inclusive principles, Norway was proactive. It trained its teachers and gave them the authority to adapt the curriculum and assessments to best suit the needs of all children. Although Australia closed most of its special schools, Graham and Spandagou (2011) state that some countries, such as Germany, left schools open for children to be placed where they are best suited in order to promote inclusion.

Of interest is Northern Ireland, which metamorphosed from slow into non-progress in the implementation of inclusive education (Smith & Douglas, 2014). However, 15 years after the implementation process had begun, they reflected on the situation, and matters such as human resource training and infrastructural challenges were being addressed. Inclusion, rather than integration, is practised in Northern Ireland (Smith, 2014), meaning that the needs of children with disabilities are addressed in inclusive schools, and progress is made.

Researchers, such as Letseka (2014) and Ntombela (2011), agree that South Africa is a country with effective policies; however, the implementation of these documents

present several challenges. The challenges of implementing these documents in South Africa make inclusive education elusive despite the fact that the country is considered to be a middle-class economy, according to the per capita gross domestic product. The per capita gross domestic product is an instrument used to compare countries' economic performance in relation to the population residing in those countries.

While budgetary constraints in some countries are regarded as a barrier for inclusive success, Letseka (2014) states that despite the financial status, the quality of education in most sub-Saharan African countries, such as Mozambique and Zambia, surpasses that of South Africa. It is obvious that the socioeconomic status of the country is just one factor impeding inclusive success, but planning and monitoring the process with the aim to identify opportunities and challenges are essential. South Africa, thus, needs to identify the contextual challenges hindering the implementation of inclusive education to be able to facilitate the process. The discussion above denotes that poorer countries than South Africa are making progress with the resources they have available.

Furthermore, while many children with disabilities are found in Africa and a correlation between disabilities and poverty has been established in the literature, Eleweke and Rodda (2002) and UNESCO (2006) state that non-progress in the implementation of inclusive education cannot be ascribed solely to poverty. In the study regarding the status of inclusive education in Zimbabwe, Chireshe (2013) found that while the country is poor and there is no applicable policy to govern the implementation process, courses addressing disability matters are offered for training teachers at the University of Zimbabwe. However, Chireshe (2013) states that the courses offered do not seem to work as teachers are still struggling to teach these children in inclusive schools. In his study, Majoko (2016) suggests that it would seem that the collaboration of the different stakeholders was initially disregarded in Zimbabwe. Majoko (2016) thus recommends collaboration between the education stakeholders that will inform teacher training while responding to the contextual challenges. Majoko (2016) also recommends continuous training for teachers as disability needs tend to vary and evolve.

Charema (2010) postulates that, despite Zimbabwe being considered a poor country, its willingness to invest in its education system is evident. There seems to be a constant review of the inclusive education processes in Zimbabwe, which according to Charema (2010), has the potential to identify areas in the system requiring attention. Similarly, despite the low economic status in Lesotho, there is more evidence of inclusion than integration in classrooms. Tanzania is another poor country facing many challenges in the implementation of inclusive education, of which resources is one. However, in 1998, a pool of teachers was drawn together to discuss these challenges. A decision was made that resources should not stall the implementation process; a paradigm shift to change attitudes and perceptions with regard to disabilities was necessary (Polat, 2001). In this regard, Eleweke and Rodda (2002, p. 119) state that inclusive education is about “respect for differences”. It can be assumed that the successful paradigm shift depends on a political will cognisant of the contextual requirements.

Furthermore, Smit (2001) emphasises that including teachers in research involving inclusive education, continuous training and making available human and support resources will ensure inclusive education success. In this regard, Salend and Duhaney (2012) postulate that attention to teachers as crucial role players will ensure that proper inclusion, rather than integration, is implemented, the latter being children placed in full-service schools without proper support.

3.5 CONCLUDING REMARKS

The perspectives and policies on inclusive education internationally as well as in Africa and South Africa were discussed in this chapter. The different legal frameworks were used to elucidate the global and local development of inclusive education. The requirements for the successful implementation of inclusive education were discussed in detail. However, the literature consulted in this chapter contains a firm conviction that political will and contextual considerations are essential for the successful implementation of inclusive education. This being said, the following question can be asked in a South African rural context: What are the contextual considerations to be made to improve curriculum accessibility for children with cerebral palsy?

Bronfenbrenner's ecological systems theory is used as a theoretical lens underpinning this study to view these contextual considerations in Chapter 4.

CHAPTER 4

THEORETICAL FRAMEWORK

4.1 INTRODUCTION

The perspectives and policies on inclusive education have been presented in Chapter 3. Chapter 4 presents Bronfenbrenner's (1979) ecological systems theory as the theoretical framework underpinning this study. While Bronfenbrenner's ecological systems theory serves as the theoretical framework to explore various factors that have an impact on the ability of the child with cerebral palsy to access the curriculum, Vygotsky's sociocultural theory (1978), specifically the ZPD, and Piaget's theory of cognitive development (1977) are used as theories to expose the cognitive challenges that children with disabilities, particularly those with cerebral palsy, contend with when accessing the general curriculum in rural schools.

It was argued in the previous chapter that the inclusive education policy presents with implementation challenges in a South African rural context with the result that children with cerebral palsy are mostly excluded from accessing the general curriculum in rural schools. Silverman, Katie, Hong, Seong, Trepanier-Street and Mary (2010) ascribe the inaccessibility of formal education for learners experiencing barriers to learning primarily to the lack of teacher knowledge about atypical development. From personal experience, additional reasons may be ascribed to the underutilisation of rural resources to facilitate the development of children with cerebral palsy and the implementation of inclusive education in rural areas. According to Booth and Ainscow (2002), inclusive education is a strategy aiming at identifying barriers that restrict participation and retard development and learning in all children. Regrettably, children with cerebral palsy contend with both intrinsic and extrinsic barriers, affecting development and their participation compared to their typical peers that are not experiencing barriers to learning. The result is that these children are unable to access the general curriculum and progress through school like other children without disabilities. In order for these children to reach their

maximum potential, it is crucial for the total educational environment, namely the school, the home and the curriculum, to be adapted for easy access.

This chapter aims to scrutinise the literature to establish how rural school teachers teach children with cerebral palsy to make meaningful learning opportunities accessible to them. Different systems in Bronfenbrenner's ecological systems theory will serve as lenses with which to review the relevant literature in investigating the child with cerebral palsy in the Foundation Phase. As cerebral palsy includes a spectrum of disabilities affecting development (Smithers-Sheedy, Badawi, Blair, Cans, Himmelmann, Krägeloh-Mann, McIntyre, Slee, Uldall, Watson & Wilson, 2014), these children require support from a variety of sources, including immediate families, friends, teachers and the community at large. To consider these challenges, the theoretical perspectives on overcoming the exclusion of children with disabilities in rural areas are discussed in the sections below.

According to George, McGahan and Prabhu (2012), a theoretical framework is a scientifically proven structure (with variables) that supports and guides a study towards the answering of research questions. The research question that this study aims to answer relates to the key requirements for meaningful learning opportunities for learners with cerebral palsy in rural schools. To answer this question, the theoretical framework and the theories of development (see section 2.5) were applied with the aim of understanding the factors in the environment affecting the implementation of inclusive education and, thus, affecting curriculum access for children with cerebral palsy in rural schools.

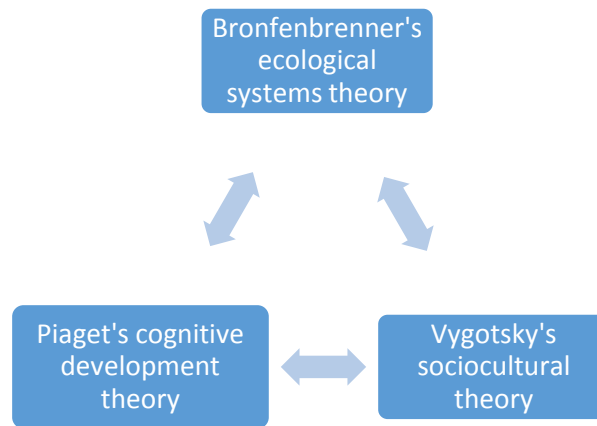


Figure 4.1: The theoretical framework and the two theories

Bronfenbrenner’s (1979) ecological systems theory gives insight into the various systems that have an impact on the learning of the learner with cerebral palsy, whereas Vygotsky’s concepts of the ZPD and “scaffolding” will be applied to demonstrate the support needed by the learner with cerebral palsy to reach his or her potential. By employing Piaget’s cognitive developmental theory, the diverse requirements for children participating in mainstream classes are exposed.

As mentioned earlier, children with cerebral palsy experience developmental delays compared to typically developing children (see sections 1.1 and 1.6.2.2). Human development involves social, physical, cognitive and emotional maturation processes occurring from infancy until an independent stage in adulthood and is influenced by the environment of participation (Bronfenbrenner, 1977). Ngure, Reid, Humphrey, Mbuya, Pelto and Stoltzfus (2014, p. 118) define child development as “the ordered emergence of interdependent skills of sensorimotor, cognitive language, and social-emotional functioning”. If the harmonious development of these skills is interdependent, the implication of this for children with disabilities and their atypical development needs to be understood.

These skills are developed and nurtured in play during early childhood stages (Milteer, Ginsburg, Mulligan & Hogan, 2012). For children with cerebral palsy, the development of these skills is compromised by the inherent characteristics of their disability. While the literature is rich in evidence that theoretical knowledge regarding

child development has its origins in developed countries (Bornstein, Britto, Nonoyama-Tarumi, Ota, Petrovic & Putnick 2012), theoretical frameworks are believed to add perspective to the developmental process and highlight factors affecting development. These models often disregard the needs of rural contexts, contradicting and misrepresenting rural requirements for development. It is important that the rural context is explored to facilitate the development of children with disabilities and the implementation of inclusive education in these contexts. Milteer et al. (2012) agree on the importance of providing intervention relevant to the context of participation. These authors believe that such interventions become effective and reduce the rate of dropouts of children in schools.

In view of the above, Bronfenbrenner's ecological systems theory as a theoretical framework of choice provides confirmation of the views of this research. First, it acknowledges the reciprocal contribution of an interaction between the child and the environment for the purposes of the child's development. Second, as Ainscow and Sandill (2010, p. 406) assert, culture holds a "reality-defining function"; using the ecological systems theory in this study will expose belief systems as well as cultural values influencing child development and the implementation of inclusive education in rural contexts. The variables that will emerge from this investigation will not only help to facilitate the implementation of inclusive education in rural contexts, but will also contribute to the existing knowledge and give insight into curriculum requirements for children with cerebral palsy in rural schools. Below is a brief synopsis of the theoretical framework and the two theories.

4.2 BRONFENBRENNER'S ECOLOGICAL SYSTEMS THEORY (1979)

The ecological systems theory was developed by Urie Bronfenbrenner, a Russian-American psychologist and theorist. Bronfenbrenner (1979) posits in this theory that child development is influenced by an interaction between the child's environment and the child's innate qualities. However, it is not everything in these contexts that has an equal effect; some matters are more influential than others (Bronfenbrenner, 1979). It is significant that the influence of the environment on the developing child is reciprocal, in other words, there is a mutual interaction between the developing child and the environment (Bronfenbrenner, 1979; Rosa & Tudge, 2013). Belsky

(1984) agrees with Bronfenbrenner regarding the influences, contexts and personal qualities that play a role in the developing child. In addition, Belsky (1984) emphasises the impact of the parents' original background, emotional and cognitive state as additional, contributory effects on the child's development. It is from the above perspective that the holistic approach adopted by Bronfenbrenner's Ecological Systems Theory earned acceptance by other psychologists as a model for understanding holistic child development (Neal & Neal, 2013).

A critical question to ask as child development encompasses the reciprocity of an individual's context and personal qualities was posed by Tudge, Mokrova, Hatfield and Karnik (2009). These authors questioned the appropriateness of the Ecological Systems Theory in understanding the inclusion of children with special needs into rural schools and their development. If the assumption is that the synchrony between content and context facilitates child progression in schools, as postulated by Yu, Desha, and Ziviani (2013), the ecological systems theory will shed some light on what constitutes meaningful learning opportunities for children with cerebral palsy in rural schools. In this regard, Swart, Pettipher, Landsberg, Kruger and Nel (in Landsberg, Kruger & Nel, 2005) consider the ecological systems theory to be appropriate for understanding inclusive education as it exposes the social, innate and contextual barriers and the support required as well as the influences of cultural implications.

Bronfenbrenner (1979, p. 3) distinguished five systems and compared these to "a set of nested Russian dolls", which he calls the microsystem, mesosystem, exosystem, macrosystem and chronosystem. However, Neal and Neal (2013, p. 735) are of the opinion that the theory is more helpful when regarded as an "overlapping configuration of interconnected ecological systems". They maintain it cannot be ascertained where one system starts and the other ends. An important aspect to consider when using this theoretical framework is its holistic contribution to understanding the developing child at the centre of these systems.

The visual representation below precedes the application of this theory to the context which is presented later in this chapter. The visual representation below

helps show the elements that will be discussed in the different ecological systems of Bronfenbrenner's ecological systems theory (1979).

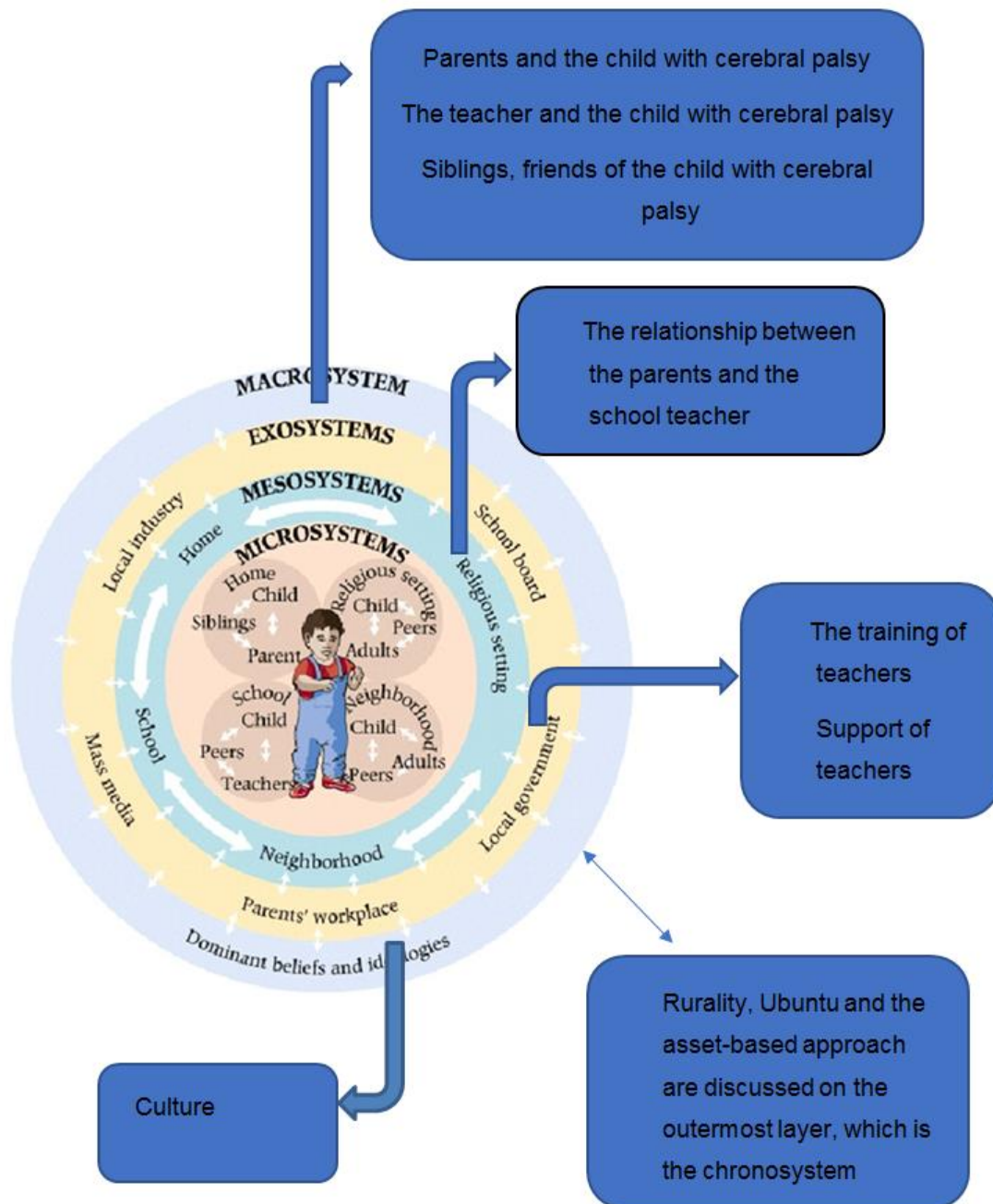


Figure 4.2: Bronfenbrenner's theory as applied to this study

For the purpose of this study, the parents and the child with cerebral palsy, the teacher and the child with cerebral palsy, and siblings and friends of the child with cerebral palsy are discussed in the microsystem. The relationship between parents

and the school or teacher is discussed in the mesosystem. The training and support of teachers are discussed in the exosystem. In the macrosystem, the cultural inclinations influencing the acceptance of children with cerebral palsy in rural communities is discussed. Lastly, rurality is discussed in the chronosystem.

4.3 APPLICATION OF THE THEORETICAL FRAMEWORK

This section presents the applicability of the theoretical framework, Bronfenbrenner's (1979) ecological systems theory and the supporting theories – Vygotsky's (1978) sociocultural development theory and Piaget's (1977) cognitive development theory. Owing to the complexity and diversity of cerebral palsy, the theoretical framework is presented together with the theories of development (see section 2.4) in a structured way, as presented in the visual diagram, Figure 4.2, above. The purpose is to ensure a holistic understanding of children with cerebral palsy as they participate in different ecological systems and, thus, reveal their curriculum needs. The factors affecting a developing child with cerebral palsy in different ecological systems, namely the microsystem, mesosystem, exosystem, macrosystem and the chronosystem, are explored.

For the purpose of this study, a profile of children with cerebral palsy, the parents and the child with cerebral palsy, the teacher and the child with cerebral palsy, and siblings and friends and the child are discussed in the microsystem. The relationship between parents and the school or teacher is reviewed in the mesosystem. The training and support of teachers are considered in the exosystem. In the macrosystem, the policies, culture, human rights and the Constitution of South Africa are discussed. Lastly, rurality is discussed in the chronosystem.

4.3.1 Microsystem

The microsystem is the closest and the first level, which represents the developing child where relationships with the people closest to the child, such as his or her parents, siblings, friends or peers, teachers and caregivers are formed (Bronfenbrenner, 1979). Additionally, Anderson, Boyle and Deppeler (2014, p. 29) include "classroom cultures and routines, resources and the playground" to their

conceptualisation of the microsystem. It is from this perspective that Bronfenbrenner (1979) considers the microsystem as being the most influential on child development as it is in this system that the child is directly involved with the family, siblings, school, teachers, friends and neighbourhoods. The harmonious interconnectivity of these relationships will ensure that the support needs of children with disabilities in inclusive classrooms are realised (Kearney & Griffin, 2001).

This being said, support is most crucial in the rural areas where there is a shortage of professionals to scaffold the needs of children with cerebral palsy. The above assertion must be viewed against Bronfenbrenner's (1994, p. 39) opinion of the microsystem as the layer that encourages "sustainable development" in children. While Ainscow and Miles (2009) concur and hold the microsystem as the pillar for child development, these authors caution researchers to be vigilant concerning the context of an investigation in order to make an informed decision about the specific needs of children with disabilities. In agreement, Anderson, Boyle and Deppeler (2014) state that contributions to the success of inclusive education need to be viewed from the perspective of influences coming from both internal and external factors. These authors also argue the importance of viewing inclusion in the light of other theories to improve the success of its implementation in different contexts.

Since this chapter focuses on a developing child with cerebral palsy, it is important to acknowledge that individuals in the microsystem have responsibilities different from those associated with rearing typically developing children (Ramita, Singh & Sumalatha, 2016, p. 158). Kruijsen-Terpstra, Verschuren, Ketelaar, Riedijk, Gorter, Jongmans, Boeije and Group (2016) mention that individuals in the microsystem are responsible for adapting the environment by removing social and physical barriers as well as providing stimulating opportunities to facilitate development and subsequent learning. In light of the purpose of this study, this process is viewed as creating meaningful learning opportunities to improve curriculum accessibility for these children.

The environment provides a platform for children to participate, learn and develop. Of primary concern is that all children, including those with cerebral palsy, are

expected to participate in standard environments, regardless of the inherent limitations in their ability (Anaby, Hand, Bradley, DiRezze, Forhan, DiGiacomo & Law, 2013). Participating in the environments mentioned may be seen as a disadvantage for children with cerebral palsy; however, it exposes the real challenges experienced by these children in the environment. These challenges inform interventionists of the support these children require (Piskur, Meuser, Jongmans, Ketelaar, Smeets, Casparie, Haarma & Beuskens, 2016).

For the purpose of this study, parents and the child with cerebral palsy, the teacher and the child with cerebral palsy, siblings and friends of the child with cerebral palsy and Vygotsky's sociocultural theory are discussed in the microsystem.

4.3.1.1 *Parents and the child with cerebral palsy*

Over the years there has been a considerable amount of research regarding the parents of children with disabilities. For example, Ketelaar, Gorter, Westers, Hanna and Verhoef (2014) researched the perceptions of parents, whereas Kearney and Griffin (2001) focused on the rejection of children with disabilities by parents. Lastly, Whittingham, Wee, Sanders and Boyd (2012) highlighted the parents' acceptance of their children with disabilities. According to the authors above, the parents of children with disabilities go through different emotions before accepting their child with a disability as part of the family. These emotions include anger, frustration, self-blame, guilt and, ultimately for some, a sense of accepting the child as a gift of God. This rollercoaster of emotions mentioned above is due to many things, including the societal stigma attached to disabilities and misinformation regarding disabilities, especially in the rural areas. The time taken until the acceptance stage differs from one parent to another and is also affected by other variables, including the support these parents receive from different structures.

Coming back to the involvement of parents in the education of their child with cerebral palsy, recent developments in the field of education have led to a renewed interest in parents' involvement in their children's educational career. In this regard, Piskur et al. (2016, p. 803) postulate that parents "are the one constant in their child's life", and so their active involvement in their children's education has been

linked to positive outcomes (Szumski & Karwowski, 2012). For parents of children with cerebral palsy, involvement encompasses providing professionals and teachers with details concerning the scope of the disability, its manifestation and being involved during assessments and interventions (Fiss, Chiarello, Barlett, Palisano, Jeffries, Almasri & Chang, 2014). Time, money and means of transportation are all essential for parents to be able to achieve the above requirements (Piskur et al., 2015). Parents' involvement facilitates support, early intervention and the provision of assistive devices to facilitate development and, thus, participation for these children (Chiarello, Palisano, Orlin, Chang, Begnoche & An, 2012). In this regard, Ketelaar et al. (2014) believe parents' involvement minimises unrealistic expectations; therefore, they accept their children's capabilities and offer support based on these capabilities. While these authors are of the opinion that children are a blessing, in the same breath, they observe that children with disabilities place financial as well as emotional strain on families.

If the above assertion is anything to go by, the socioeconomic status of most parents in rural areas where caregiving surpasses children's education, compromises curriculum accessibility further (UNICEF, 2013). In supporting the aforesaid, Weisleder and Fernald (2013) postulate that the cognitive status of parents in rural areas also contributes to their inability to identify environments rich in providing foundations for development and successful learning. They argue that since cerebral palsy is a neurodevelopmental disability, the parents of these children may possibly be cognitively affected; this may have an impact on the quality of educational support they offer their children. Of crucial importance is that these parents' failure to identify stimulating environments further delays development of these children, thereby, resulting in learned helplessness (Fuson, 2009). It is important as inclusive education research is conducted, to keep in mind the cognitive status of the parents to understand whether or not this affects curriculum accessibility for these children.

4.3.1.2 *The teacher and the child with cerebral palsy*

Despite teachers' unpreparedness to teach children with a variety of needs, teachers are the most important component in the successful implementation of

inclusive education and supporting children with cerebral palsy (Lindsay, Proulx, Thompson & Scott, 2013). Recently, teachers in inclusive contexts have been faced with a different role than just teaching. Teachers are expected to have an epistemological understanding of disabilities and the support needs of these children in order to offer scaffolds for them to access the prescribed curriculum. Furthermore, the holistic understanding is aimed at informing the scaffolding needs for optimum participation of these children. While the adaptation of buildings improves mobility, and thus participation, it is only one component to enhancing curriculum accessibility in an inclusive education context (Davies & Watson, 2001). According to the principles of inclusive education, teachers are expected to be familiar with developmental trajectories to be able to adapt, pace the curriculum and provide assessments that are learner-centred (Lindsay, Proulx, Thomson & Scott, 2013). Similarly, the curriculum, according to UNESCO (2004), is not confined only to the content taught in classrooms, but also includes how it is taught and whether provision for concessions and the resources is made during teaching and assessment.

This study aimed to investigate how teachers in rural schools teach children with cerebral palsy for curriculum access. The Department of Education (2011, p. 8) states that teachers in South Africa, particularly in rural areas, “mirror” the type of instruction they have received as learners. The teacher training that these teachers have received, particularly from South African universities, does not prepare student teachers for the diverse educational needs of the children in these schools (Curcic, 2009). These teachers lack understanding with regard to atypical child development, resulting in their disseminating standardised content and assessments. This results in children with cerebral palsy struggling to access the general curriculum in full-service schools.

Fuson (2009, p. 344) describes the lack of knowledge regarding child development and how children with atypical development learn “teaching without learning”. Exacerbating the situation are overcrowded classrooms and the lack of other professionals, teacher assistants, caregivers and assistive devices in rural areas. This does not only perpetuate the difficulty children with disabilities have in

accessing the general curriculum, but also contributes to teacher stressors in inclusive classes (Engelbrecht, Swart & Eloff, 2001).

It is evident that the interrelationship between parents and teachers is crucial to ensure a smooth transition to schools and the progression through grades for children with cerebral palsy.

4.3.1.3 Siblings and friends of the child with cerebral palsy

According to UNICEF (2013), a disabled child evokes mixed emotions for siblings, friends and, in a sense, the entire family. While some siblings may despise a sibling with a disability and feel embarrassed by him or her, some feel a sense of responsibility for accepting, protecting and supporting such a sibling (Mandleco, Olsen, Dyches & Marshall, 2003). In this regard, Mandleco et al. (2003) suggest that researchers have, for some time, lacked sensitivity when investigating matters regarding siblings and friends of children with disabilities. According to these authors, research has found that many matters negatively affect the siblings of children with disabilities. They suggest it is important to be vigilant during these investigations in order for the findings also to reveal positive factors that will contribute to the development of siblings with disabilities. Furthermore, the research findings will inform policy on the reciprocal support needs of these children and their siblings.

I support an assertion by UNICEF (2013) that most parents of children with disabilities are overwhelmed by caregiving responsibilities, thus, unintentionally neglecting their typically developing children. The experience of neglect by parents often results in typically developing siblings experiencing behavioural challenges and becoming stressors for the parents. Furthermore, caregiving responsibilities for children with a disability affect the socioeconomic status of the family as a result of the expense of caring for such children, resulting in typically developing children feeling emotionally excluded by the parents.

Bond and Hebron (2016) and Verschuren, Wiart, Hermans and Ketelaar (2012) warn that children with disabilities are sometimes exposed to intimidation while they

are interacting with other children without disabilities. Although this is a reality, Missiuna and Pollock (1991) point to the advantages of attending mainstream education with friends and siblings. These authors believe that through these interactions, children with disabilities develop cognitive skills to deal with abstract thoughts and use different senses for awareness. Furthermore, Burtner, Leinwand, Sullivan, Goh and Kantak (2014, p. 265) note that it is in participating with other children without disabilities that these children are exposed to “modelled play activities”. Verschuren et al. (2012) concur that learning through experimenting and experiencing is considered crucial to offer children with disabilities an opportunity to practise learned skills and transfer those to other contexts. It is clear that the interaction with children without disabilities is beneficial to the social, cognitive and emotional domains of the child with special needs.

In the context of this research study, it is important to nurture these relationships. If the assertion is made that social interaction in children facilitates change (Sameroff, 2010), the question will be how these interactions can be positively shaped to facilitate development. In line with Vygotsky’s sociocultural theory, Saxena and Adamsons (2013) believe that siblings, peers and friends have a specific role in the lives of children with disabilities. These authors argue that skills mastered during social interaction can be transferred to other activities, including learning, thereby facilitating development. Clearly, these authors are advocates for inclusion; hence, they regard the microsystem as being the context to foster relationships between siblings, peers and friends of children with disabilities.

4.3.2 Mesosystem

The mesosystem is the second layer of Bronfenbrenner’s ecological systems theory. It takes the form of an interaction between two or more microsystems in which a developing child participates and forms relations (Bronfenbrenner, 1979). Kail and Cavanaugh (2013) state that problems in the microsystem may affect child participation and thus hamper progress and curriculum accessibility. The teachers as distant individuals may upset an already stable social circle with the child’s immediate family as they (the teachers) are introduced into the mesosystem. Consequently, the parents’ role expands to include managing the smooth

incorporation of these relationships into the child's life. In this regard, McIntyre, Blacher and Baker (2006) contend that the mesosystem has a substantial influence on the child's emotional development. Based on this assertion, Hinton, Miyamoto and Della-Chiesa (2008) discuss the influence of emotions on learning. Hinton et al. (2008) argue that stable relationships and emotions are factors that boost memory and concentration. Against the backdrop of children with disabilities attending rural schools, it is important for parents and all concerned to manage these relationships in order to facilitate emotional development, thus learning.

Bronfenbrenner (1979, p. 29) suggests that a growing person acquires "more extended, differentiated, and valid conception of the ecological environment, and becomes motivated and able to engage in activities that reveal the properties of, sustain, or restructure the environment at levels of similar or greater complexity in form and context". Based on the above assertion, parents and teachers, as experienced adults, are responsible for managing the collaborative relationship to help the child's transition from home to school, and thus extend their accessibility to the curriculum.

The involvement of adults in managing the transition mentioned contributes not only to the child's development of acceptable behavior, but to academic success as well (Bronfenbrenner, 1979). It can be assumed that children's successes depend mainly on the scaffolds they receive from the adults and peers in their lives. Furthermore, managing the child's transition from familiar to unfamiliar environments is crucial for a child's development (McIntyre et al., 2006).

Although statistics regarding the literacy levels of South African adults are fluid, authors such as Aitchison and Harley (2006) have reported on the low levels of parents' literacy in the rural areas. This assertion has negative implications for children with disabilities as these adults are the scaffolding agents of children to enable them to access the prescribed general curriculum in full-service schools. For the purpose of this study, the relationship between the parents and the school or teachers is discussed in the mesosystem.

4.3.2.1 Relationship between parents and the school or teachers

The relationship between parents and the school or teachers is of crucial importance in the development and progression of children in the rural context of this study. Parents are the backbone of the support required for the development of children with disabilities, particularly those with cerebral palsy (see section 3.4.1.2). Since the scarcity of professional support in rural areas is confirmed by literature, these relationships can form a strong foundation for children's development. However, there are many factors that may affect these relationships in rural contexts. Hwang (2014) cites factors such as poverty, and these parents' educational levels make it difficult for them to contribute to their children's educational preferences.

In a South African rainbow nation context, despite 11 official languages being recognised, the medium of instruction in most schools is English (Sailors, Hoffman, Pearson, Beretvas & Matthee, 2010). The above persists regardless of a large body of knowledge relating the failure rate of children in South African schools to the non-proficient use of English (Early & Norton, 2014). The notion is backed by many authors claiming that teachers and parents in rural areas struggle with the use of English (Bayat, Louw & Rena, 2014; Early & Norton, 2014; Nel & Muller, 2010).

Furthermore, Hwang (2014, p. 2) believes "the mesosystem comprises the connections between the teacher, people outside of the school, such as family, school teachers, educational researchers, and officers in the educational ministry". In line with Piaget's theory of cognitive development, this interaction results in a developing child assimilating and adapting to its environment, thus, forming new experiences (Bronfenbrenner, 1917). Yu et al. (2013) believe the involvement of adults in children's social interaction is important in shaping the new experiences – thus, behaviour. An uncoordinated interaction without adult parents, teachers and caregivers' supervision manifests itself in "responsible cooperation to unquestioning conformity" by children (Bronfenbrenner, 1979, p. 180).

A study by Anaby et al. (2013) found that children with cerebral palsy participated in learning activities more at home than in schools, which reinforces the argument that the home forms the basis for identifying and managing challenges experienced by

children with disabilities. The parents and siblings identify activities in a home environment in which children with disabilities participate. These skills are then transferred to a learning environment. It cannot be too strongly emphasised that a sound relationship between parents, teachers and the school is of crucial importance in improving the educational participation of these children in inclusive contexts. McIntyre et al. (2006) are of the opinion that teachers take over the scaffolding responsibilities immediately when these children enter the school system.

4.3.3 Exosystem

The exosystem is the third layer of Bronfenbrenner's ecological systems theory in which the developing child is not an active participant, but is profoundly influenced by processes in the system (Bronfenbrenner, 1979). According to Mensah and Badu-Shayar (2016, p. 3), the exosystem has an influence on the "social-emotional development" of children. In this regard, Bronfenbrenner (1979) cites institutions, such as the parents' workplace, the local municipalities, government departments and the community at large, as constituting the exosystem. In this regard, Rosenbaum and Stewart (2004) postulate that the quality of life and the meaningful participation of children with disabilities, particularly those with cerebral palsy, are determined in the exosystem and are interlinked to all the previously mentioned ecological systems. It can be assumed that the ecological systems are interdependent and influence one another. Thus, for intervention to be effective, a holistic assessment of all the areas of participation is necessary.

Limitations in participation and support are hindered or expedited by the way society perceives disability. Society's understanding of disabilities will, as a result, inform the support requirements for these children in learning contexts. The policies, curriculum development, teacher training and support will, in a way, conform to factors that accelerate development and also the curriculum requirements for children with cerebral palsy. Furthermore, the educational participation of these children needs to be understood in the context of intrinsic as well as extrinsic barriers affecting the participation mentioned. For the purpose of this study, the training and

support of teachers are discussed as two variables that can potentially affect access to meaningful learning opportunities for children with cerebral palsy in rural schools.

4.3.3.1 Training of teachers

The transformation from a segregated to a unilateral education system in South Africa was a welcome move in the development of the country. The move also served the political aspiration of the country in attempting to address the imbalances in the education system (Crouch, 2005). However, Crouch (2005) and Weber (2002) concur in that the skills required to be able to address the diverse needs of the matters emanating from the transformation process were overlooked. Teacher training is one of the matters of importance in this as is the support these teachers need to be able to cope with the transforming system (Jansen, 2001). While learners with diverse abilities were being admitted to schools, educational departments were amalgamated (Crouch, 2005). The curriculum offered in schools was changed from outcomes-based education to the National Curriculum Statement (Jansen, 1998), which Chisholm (2005, p. 80) argues was an “internationally borrowed concept”; hence, it failed in a South African context. Teacher training colleges were closed in favour of university qualifications. However, the implications thereof were overlooked. The universities did not have the capacity to train enough teachers for the increasing number of children in South African schools (Jansen, 1998). Furthermore, as a result of such curriculum changes, teachers entered the school system, only to find that the curriculum that they were trained for, had changed.

Considering this, it is clear that for teacher training to be responsive to contextual challenges, a SWOT analysis needs to be undertaken; SWOT –strengths, weaknesses, opportunities and threats. In so doing, strengths, weaknesses and gaps will be identified for responsive teacher training. In addition to teaching, it is expected of teachers to respond to the emotional, social and cognitive needs of children in inclusive classes. However, to achieve this, a multidisciplinary team is preferably required.

It is evident that teaching children with learning difficulties is not only a classroom activity. According to Bell (2013), matters such as the identification of the disability, planning for individual programmes, evidence for examination differentiation and access arrangements need to be incorporated in this. However, while South Africa aspires to creating an inclusive education system, teacher training does not prepare teachers for the above (Jansen, 2001). The result of this is children with a spectrum of disabilities, particularly those with cerebral palsy, being excluded from accessing the general curriculum in full-service schools. On identifying the gap in teacher skills, Bell (2013) designed a model to help teachers ensure curriculum accessibility for children with dyslexia. Although teachers alone cannot achieve all those suggestions the model proposes, it can be used as a baseline to understand the needs of these children. Although the model below was proposed for children with dyslexia, it could be used to assist children with cerebral palsy in accessing the general curriculum in rural schools.

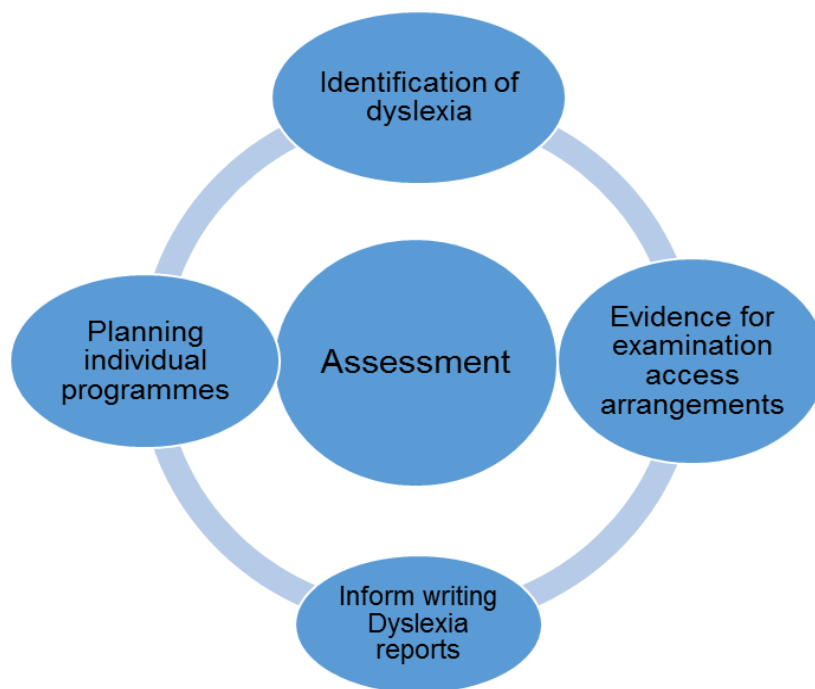


Figure 4.3: A model to improve curriculum accessibility in inclusive classrooms (adapted from Bell, 2013, p. 110)

According to Oswald and Swart (2011), teacher education in South Africa was designed in such a way that all teachers were trained to teach typically developing children. The medical model informed teacher training in a sense that only the intrinsic barriers affecting participation in children were considered to be more significant than the extrinsic barriers. The incorporation of matters such as proposed by the model above, was not part of the training. It is from this perspective that children with cerebral palsy find it difficult to access the general curriculum in rural schools. This suggests a need to find contextual solutions to improve curriculum accessibility for these children.

A study conducted by Amatepee and Anastasiou (2015) indicates that Austria, like South Africa, contended with big classes in which children with diverse educational needs were admitted. However, the teachers had a choice to specialise either in mainstream or special education training. This means that the teachers in either type of school (special or full-service) were there by choice. Furthermore, although the teachers were not specifically trained for co-teaching, it was introduced to support full-service school teachers in Austria. Similarly, Italy worked on reducing the size of classes to support its teachers, after which their negative attitudes towards inclusive education changed (Amatepee & Anastasiou, 2015). It is clearly important for countries for teacher training to develop strategies that will support its teachers in implementing inclusive education.

4.3.3.2 Support of teachers

It has been mentioned that teachers alone cannot achieve the envisaged implementation of inclusive education and scaffold children to reach their potential (see section 3.4.3.1). According to Arbeiter and Hartley (2002), teacher support in a South African context includes the involvement of different stakeholders, such as health professionals, parents and the community at large. However, Wilson, Couper, Vries, Reid, Fish and Marais (2009) postulate that health professionals, particularly in rural areas, still need to be recruited. A lack of this support further prevents children with disabilities from accessing the prescribed curriculum and progress through school with other children without disabilities. In this regard, Arbeiter and Hartley (2002) further argue it is not only teachers who require support,

but all stakeholders, including the parents of these children. In this regard, Arbeiter and Hartley argue that poverty and the low levels of literacy as contributory factors impede the parents' access to the needed support in rural areas.

Despite this, the politically envisaged goal in South Africa is improving curriculum accessibility for all children, including those with cerebral palsy. It is of the utmost importance that the stakeholders in education unite in their efforts to maximise the aforementioned support. It is envisaged that, while other professionals attend to children's medical, cognitive and physical needs affecting curriculum accessibility, teachers deliver the prescribed curriculum in accordance with the individual needs (Department of Education, 2001).

According to the Department of Basic Education (2014), it is expected that the teachers, in collaboration with the SBST coordinators, initiate the SIAS process. The policy was launched in 2008 by the Department of Basic Education aimed at identifying barriers affecting curriculum accessibility and seeking support for children in need. The point of departure for the identification of these barriers is premised on the fact that teachers complete the following forms, as indicated below:

- Admission form
- Road to Health Card
- Integrated School Health Programme reports
- Year-end school reports (included in the learner profile)
- Parent and/or stakeholder reports, and
- The report(s) of the teacher(s) currently involved with the learner

However, the bureaucracy in South Africa prevents teachers from directly sourcing the required professional support; instead, they have to go through the DBST coordinators. The role of the DBST coordinators is to provide professional support, arrange assistive devices and follow up on the progress made from the intervention provided (Department of Education, 2008), yet, a study conducted by Msila (2011) in Gauteng South Africa, found that while the policy clearly stipulates what needs to be done, the support never reaches the schools.

The implication is that the lack of this support creates systematic barriers that have an impact on curriculum accessibility for these children. At the same time, while these professionals are said to be concentrated in urban areas, Msila (2011) found no evidence of a system in place to provide the necessary support by the DBST coordinators. Although this study was confined to the rural areas, it can be assumed that the shortage of professionals to support the implementation of inclusive education is a widespread problem in South Africa. In his conclusion, Msila (2011) recommends in-service training and making class aids available to help teachers facilitate the development of children with special needs.

Based on the findings and recommendations above, it is evident that, for rural school teachers to facilitate the implementation of inclusive education and the development of children with cerebral palsy, a combined and dedicated effort is required. Rural assets, as well as the human resources in this context, need to be mobilised and valued to ensure the successful implementation of inclusive education.

4.3.4 Macrosystem

The macrosystem is the furthest from a developing child and the fourth level of Bronfenbrenner's ecological systems theory. However, it still exerts an influence on the developing child (Bronfenbrenner, 1979). According to Bronfenbrenner (1979), the macrosystem encompasses customs and laws, culture, belief systems, ideologies, resources, and economic and political systems in a developing child's life. Bronfenbrenner further considers the noticeable impact of the above on how teachers view children with disabilities and the way parents believe in their children's capabilities. Similarly, Hwang (2014) postulates that a common understanding with regard to socioeconomic status, religion and ethnic differences is necessary as this has an impact on the support children need in mainstream classes. Interestingly, while communities in the macrosystem share commonalities, such as identities, belief systems and culture, the individuals in these communities are not homogeneously influenced (Onwuegbuzie, Collins & Frels, 2013). The outcome is influenced, among others, by variables such as the availability or lack of support.

In the context of this study, where the purpose is to create meaningful learning opportunities for children with cerebral palsy in rural schools, culture was part of the macrosystem.

4.3.4.1 Culture

According to Oyserman (2015), culture refers to a collective belief system, as well as attitudes, religion and what is regarded as acceptable in different communities. While Oyserman (2015) believes culture is the backbone of communities, the author also postulates that culture remains a source of contradictions with progressive, political as well as economic development in many countries. Oyserman (2015) argues that Western influences heighten difficulties by implementing strategies in countries that are strongly immersed in cultural beliefs. In this case, specifically, cultural beliefs influence the implementation of inclusive education, which means that cultural values and beliefs influence the way communities view disabilities in relation to inclusive education.

Furthermore, language and culture contribute to learning and “abstract reasoning”, which form the basis of learning success (Sternberg, 2014). The above perspective indicates that supporting children with disabilities requires holistic considerations. This implies that the way these communities embrace inclusive education and the support they give to children with disabilities will vary. The contradictions in cultural, religious and belief systems may manifest themselves in varying attitudes affecting access to quality education, the development of children with cerebral palsy and the implementation of inclusive education. To illustrate this, the cultural attitudes towards disabilities in rural areas are discussed.

(i) Cultural attitudes towards disabilities in rural areas

Cultural attitudes that establish a correlation between disabilities and witchcraft are rife in South African rural areas. Researchers, such as Donohue and Bornman (2014), Abosi (2008) and Mosalagae (2016), agree that disabilities in most African countries are perceived having emanated from witchcraft, a curse from ancestors, and this is mostly found in the rural areas. In a comparative study between Botswana, Zimbabwe, South Africa and Namibia, Mosalagae (2016) found that

although commonalities exist, there are also differences in how these countries perceive disabilities. Their study found that South Africa is ranked high in associating disabilities with witchcraft and holding mothers responsible for the disability. The birth of a child with disabilities in Zimbabwe is associated with draining finances and the beginning of a generation with disabilities in the family. In Namibia, as in South Africa, mothers are held to be responsible for these births; however, Namibians further qualify why these families have been bewitched. Firstly, jealousy of neighbours is said to be the reason for the witchcraft; secondly, the disability is associated with mothers who have presumably cheated on their partners during pregnancy. When this study compared countries in Africa, the results were somewhat different. The differences in perceptions may affect the way disabilities are perceived by the aforementioned countries. I support the view of Mosalagae and Lukusa (2016), which holds that, until cultural beliefs are understood, progress in implementing inclusive education will not be realised.

These perceptions also have an impact on how children with disabilities are treated in full-service schools. Against the background of the disparities in African perspectives, which have been mentioned, it is evident that countries will also prioritise interventions differently, which has implications for the implementation of inclusive education and the support and development of children with cerebral palsy. Worse still, cultural beliefs are deeply rooted in the rural areas, thus contributing to the exclusion of these children and having an impact on the opportunities for social participation in mainstream schools. This assertion needs to be understood in the light of the fact that the improvement of the lives of children with disabilities needs to consider, among others, the “cultural values of the communities” in which these children reside (Zvoleyko, Kalashnikova & Klimenko, 2016, p. 6470).

Despite the growing body of literature prioritising cultural values and beliefs in facilitating the implementation of inclusive education, it is a challenge in a multicultural and multiracial South African context. It is, however, a challenge worth overcoming if inclusive education is to be achieved for the sake of all children. Furthermore, it is a right embedded for all in the Constitution of South Africa.

Whether or not all citizens have access to these rights is another matter to be explored.

4.3.5 Chronosystem

The chronosystem is the outermost layer of Bronfenbrenner's ecological systems theory. It involves all the events, including the socio-historical events that occur throughout a child's life and, thus, influence its development (Johnson, 2008). Johnson (2008) describes the chronosystem as representing the transitioning through events that happen and influence a developing child's life over time. Bronfenbrenner (1979, p. 26) also refers to the chronosystem as the "ecological transition" and explains that this transition occurs whenever a person's individual position in the environment changes. While Weiss, Lopez, Kreider and Chatman-Nelson (2014) believe in the contribution of transition to the child's life, they also emphasise the importance of the historical events affecting child development. Weiss et al. (2014) argue that historical events contribute to child development and, hence, cannot be overlooked.

According to Weiss et al. (2014), these events include changes happening at the personal, family, historical-political, socioeconomic and psychological levels. It is against this background that Pini et al. (2014) believe that the transition in the education system to include children with disabilities in mainstream schools needs to be closely monitored in order to provide the necessary support for these children. These authors further argue that the implementation of inclusive education without careful consideration of the children's needs defeats the positive purpose of the strategy, thus further distancing these children from accessing the general curriculum in mainstream schools.

There has been a great deal of research with regard to inclusive education in the literature; however, the paucity thereof focusing on rural areas is notable (Pini et al., 2014). Pini et al. (2014) assert that available research regarding inclusive education mainly concentrates on the disadvantages, poverty and the lack of resources, infrastructure and lack of specialised professionals to support the strategy. In this regard, Slee (2013) argues that this notion is also fuelled by the way inclusive

education research is conducted in the rural areas. Slee (2013) maintains that, instead of lamenting existing challenges and using an international lens to view these, research rather needs to change its focal point to expose structures or systems that facilitate the implementation of inclusive education.

In their article, Downing and Peckham-Hardin (2007) mention a few of the advantages attached to facilitating the implementation of inclusive education in rural contexts. These authors state that, due to low populations in these contexts, there is firstly, a few children with disabilities to be included in mainstream classes, making individual attention possible, and secondly, the communities have formed relationships making it possible to implement the principles of Ubuntu to support one another.

The concept of rurality is defined first and after that the indigenous culture-rich concept of Ubuntu and the asset-based approach that can be used to facilitate the implementation of inclusive education in the rural areas are presented.

4.3.5.1 Rurality

It is the aim of this study to explore how meaningful learning opportunities can be created for children with cerebral palsy in rural schools. According to the World Bank classification, South Africa is considered to be an upper-middle-income country. Census (2011) reports the population of South Africa to be at 51 million; however, 79% of the citizens are poor and live in the rural areas. According to Ebersohn and Ferreira (2012), the impact of rurality also depends on the distance between these areas and the nearest urban areas. The closer the rural areas are to the more affluent areas, the easier it becomes to find job opportunities and, thus, improve socioeconomic status.

Donohue and Bornman (2014) suggest that 70% of children with disabilities in the rural areas drop out of schools, which can be ascribed to cultural beliefs, a lack of support or funding and poverty. The education system in these areas is characterised by poor infrastructure, a lack of resources and a poor standard of education (Ellof & Kgwete, 2007; Engelbrecht, Nel, Smit & Van Deventer, 2016).

Similarly, research, according to UNESCO (2010) as well as Croft (2013), describes the interconnectedness of disability and difficulties accessing educational services. These are further stated as being rife in developing countries, particularly in the rural areas.

Many attempts have been made to define rurality in the literature; however, notable is the negativity depicted by the semantics used. Rurality, according to Balfour, Mitchell and Moletsane (2008) and Ebersohn and Ferreira (2012), is identified as being geographical locations characterised by the scarcity of services and a high illiteracy rate among adults. Similarly, according to Donohue and Bornman (2014), rurality is characterised as consisting of dilapidated buildings, the dearth of financial capital and teachers who have not been trained to make the curriculum accessible to these children.

Rurality in this study is defined as “geographical regions marked by rough topography and other physical infrastructure, low population density, limited educational and economic opportunities and services like water, sanitation electricity, healthcare, and recreation” (Mukeredzi & Mandrona 2013, p. 142). Rurality is also determined according to the document of norms and standards in funding South African schools (Department of Education, 2004). The document exempts parents from paying school fees based on a lack of work opportunities and poverty levels in their areas of residences. A quintile system is used to classify these schools from one to five, the latter being the poorest. The implication thereof is that parents do not pay school fees for their children and the government subsidy does not meet the educational requirements for these children.

Balfour et al. (2008, p. 96), however, state that lamenting the challenges in rural contexts cannot benefit the system, but it is “activism in communities” that will help formulate models according to the intention that aims to solve rural challenges. Balfour et al. (2008) and Moletsane (2012) believe that models emanating from data collected in the rural areas by the rural communities with the aim of finding solutions can generate solutions to these contexts. The above authors, as well as Downing et al. (2007), assert that rural research needs to go beyond just scratching the

surface and should produce solutions responding to those contexts for sustainable development.

While the scarcity of resources, both human and infrastructural, has been repeatedly emphasised as deterrents of inclusive education progress and the development of children with cerebral palsy in this study, it is also important to mention the underuse and undermining of indigenous resources to facilitate the implementation process in rural South Africa. In support of Hlalele (2012) that as much as the factors mentioned above are a reality in a South African context, strategies to create sustainable learning ecologies can be sought. Among others, Hlalele (2012) suggests that providing space for the appreciation and a better understanding of rurality, responsive curricula, and recruiting and retaining highly effective teachers are some of the strategies that can be used to facilitate inclusive education in rural contexts. I would like to suggest the inclusion of the concept of Ubuntu and the principles underlying the asset-based approach to address the challenges associated with rurality.

4.3.5.2 *Ubuntu*

In spite of the challenges in the implementation of inclusive education and the problematic attention to the development of children with cerebral palsy in rural schools, Gade (2012) presents the indigenous culture-rich concept of Ubuntu as a possible scaffold to challenges in these communities. Metz (2014, p. 69) defines Ubuntu “as a plausible ethical theory honouring relationship of sharing and caring, a corollary, doing what it takes in a given circumstance to strike a decent balance between the two”. The concept of Ubuntu has recently challenged countries in Africa to solve their problems differently than before. According to Gade (2012), Ubuntu originated from a South African Nguni saying, translated to mean “I am because you are”. It draws to its existence values such as sharing, helping and humanity, which have the potential to eradicate poverty and other social ills from society.

Masalagae and Lukusa (2016, p. 79) reiterate that the struggles regarding the implementation of inclusive education in African countries and rural contexts evolve

from using “Western strategies” to solve contextual challenges. Masalagae and Lukusa Africa (2016) recommend that effort and resources should be redirected to amend the strategy so that it is compatible with the rural cultural contexts in which it is to be implemented. This study contributes to existing research that explores the factors in rural contexts that have an impact on the implementation of inclusive education and facilitate the development of children with disabilities. Below are the principles of Ubuntu, as discussed by Nussbaum (2003, p. 3):

- Ubuntu consciousness is about the desire to build a caring, sustainable and just response to the community – whether that be a company, village, city, nation or global family.
- Because of its emphasis on common humanity and the ethical call to embody communal responsiveness in the world, Ubuntu offers an alternative way to recreate the world that works for all. Simply put, people, businesses and countries would relearn how to live together with respect, compassion, dignity and justice and would reorganise resources accordingly.
- Ubuntu, applied to business and corporate responsibility, would ultimately be about sharing the wealth and making (at the very least) basic services, such as food, housing and access to health and education, accessible and visible to all the members of the global family, and having empathy with other persons, which is a multifaceted quality.

In light of the above principles and their meaning, it is evident that communities in the rural areas could volunteer services as caregivers for children with cerebral palsy in rural schools. Furthermore, when considering the heavy workload of teachers in mainstream classrooms, this could be alleviated by assigning the help of community members as classroom assistants (Giangreco, 2013) and paraprofessionals (Tews & Lupart, 2008) in order to support children with disabilities in mainstream classes. Tews and Lupart (2008) caution against using these volunteers for professional services without the necessary training, but Downing and Peckham-Hardin (2007) regard using the knowledge, resources and skills available in communities as a strategy for solving contextual challenges. Ebersohn and Eloff (2006, p. 462) call this an “asset-based approach” and argue its sustainability in supporting children with special needs in their contexts.

4.3.5.3 The asset-based approach

Ssewamala, Wang, Karimli and Nabunya (2011) define the asset-based approach as being a community effort to use available skills and knowledge for the upliftment of these communities. Ebersohn and Eloff (2006) postulate that the asset-based approach makes provision for indigenous and cultural knowledge, which improves the development of knowledge in children that can be fostered through community-based inventories.

These inventories may yield culture-rich resources, such as indigenous games and language development through folktales, with the aim of strengthening the base for educational success. Furthermore, this approach can improve how children make meaning and develop knowledge relevant to their culture, in this way facilitating development. Although Ebersohn and Eloff (2006) admit that this approach aligns with the medical model (see section 2.2), the asset-based approach can be regarded as a tool in creating meaningful learning opportunities in rural contexts.

The scarcity of resources as a factor affecting the implementation of inclusive education has been discussed at personal, family and community levels (see section 4.3). There is very little research available on employing the asset-based approach to facilitate the implementation of inclusive education. According to Ebersohn and Eloff (2006), an asset-based approach is one that looks internally to identify challenges and, thereafter, draws available resources from the community in order to solve the identified challenges. In the context of inclusive education in this study, the asset-based approach could yield resources to scaffold its implementation in rural contexts and improve curriculum accessibility for children with cerebral palsy.

It is important to note that the South African curriculum, namely the CAPS document, is homogenously prescribed by the Department of Basic Education across grades for all urban, semi-urban and rural schools, without making any provision for differences in learning abilities. When considering the particular profile of learners with cerebral palsy (see section 4.3.1.1), it is clear that these learners require professional support in facilitating curriculum accessibility. In this regard,

Ammerman and Parks (1998, p. 34) suggest the following strategies as the initial point of departure for the application of the asset-based approach:

- An individual capacity inventory of specific capacities, skills, talents and experiences of the stakeholders involved, should be made. This is a way in which the richness of personal resources that could be mobilised, could be identified. It may include actual work experience, personal traits, and volunteer work or life experiences.
- An inventory of local associations and organisations that may contribute to the solution of problems should be made. It could be formal or informal and it could include support groups, church groups, youth groups, political groups, businesses or sports organisations.
- An inventory of local institutions that may contribute resources in terms of materials and services should be made. This could include libraries, schools, hospitals, human service agencies, banks, parks and community centres.

Similarly, Ebersohn and Eloff (2001) postulate objectives embedded in the asset-based approach. These are:

- to support a community dialogue that involves citizens in determining how they would like to see their community develop;
- to identify the factors that influence the potential development of the community;
- to identify the strengths, weaknesses, opportunities and threats that are influencing or can influence the development of the community; and
- to provide information for those leading a strategic planning process so that a workable and focused set of goals and objectives can be created to help the community achieve its potential, as well as to help citizens realise their shared vision of the community.

It can be assumed that data yielded by employing the asset-based approach has the potential not only to uncover resources in communities but also to inform policy developers of the curriculum requirements for children with cerebral palsy. The curriculum taught will thus be “responsive” to these children’s needs, as postulated by Hlalele (2012) and Croft (2003, p. 240).

4.4 CONCLUDING REMARKS

This chapter has reviewed the challenges, possibilities and hopes for the implementation of inclusive education and the development of children with cerebral palsy in a South African rural context. There have been misconceptions in the literature globally and nationally suggesting that poverty in rural areas results in schools being unable to offer quality education to the children in those schools. However, this study attempts to create meaningful learning opportunities for children with cerebral palsy in rural schools by a collaborative effort with all the stakeholders in education for this purpose.

The theoretical framework, as provided by Bronfenbrenner's ecological systems theory, allowed for the literature reviewed in this chapter to engage in aspects of the home, school and community level. The focal point was not to criticise the assertions in the literature that Western theories are met with implementation challenges in the context of developing countries. Instead, the culture-rich concept of Ubuntu and the asset-based approach were revealed as strategies to improve curriculum accessibility for these children in the rural areas.

Above all, it is the time for the teachers' voices and contributions to be listened to as they are key figures in the implementation of inclusive education. The aforementioned assertion justifies the rationale for including teachers from the rural areas as participants in the empirical study.

The methodological perspectives of the study are discussed in Chapter 5.

CHAPTER 5

RESEARCH METHODOLOGY

5.1 INTRODUCTION

Bronfenbrenner's (1979) ecological systems theory was presented in the previous chapter as a lens through which to understand a child with cerebral palsy and the factors in the environment affecting the child's development and curriculum accessibility. As the purpose of this study is to create meaningful learning opportunities for children with cerebral palsy, this theory exposed intrinsic as well as extrinsic factors affecting these children's development and their ability to access the general curriculum compared to other children without disabilities.

This chapter describes the methodology used to collect the empirical data towards answering the forthcoming research questions. Subsequently, the research design, research methods, trustworthiness and ethical considerations employed in the research process are discussed.

5.2 RESEARCH QUESTIONS

From the problem that was identified during the preliminary literature review (see section 1.5), specific research questions emerged. According to Maree (2007, p. 3), research questions do not only extract answers from the collected data but also act as a "beacon" for the systematic progress towards the answering of the research questions. The research questions further inform the researcher of the best-suited methodology to be used, the process of data analysis, the report of research results and the recommendations relating to this. Maree (2007) also acknowledges that research questions guide the researcher to the relevant literature to be perused for the purpose of the study. The following main and sub-research questions have been answered by the empirical study.

5.2.1 Main research question

The main question of the research is: What are the key requirements for meaningful learning opportunities for learners with cerebral palsy in rural schools?

5.2.2 Sub-questions

The sub-questions this research aimed to answer are as follows

- What are the perceptions of teachers in rural schools regarding inclusive education?
- How do teachers in rural schools teach learners with cerebral palsy?
- How can meaningful learning opportunities be made accessible to learners with cerebral palsy?

The purpose of this study was to create meaningful learning opportunities in rural schools, and the figure below outlines the research methodology that was used to collect the empirical data for this study.

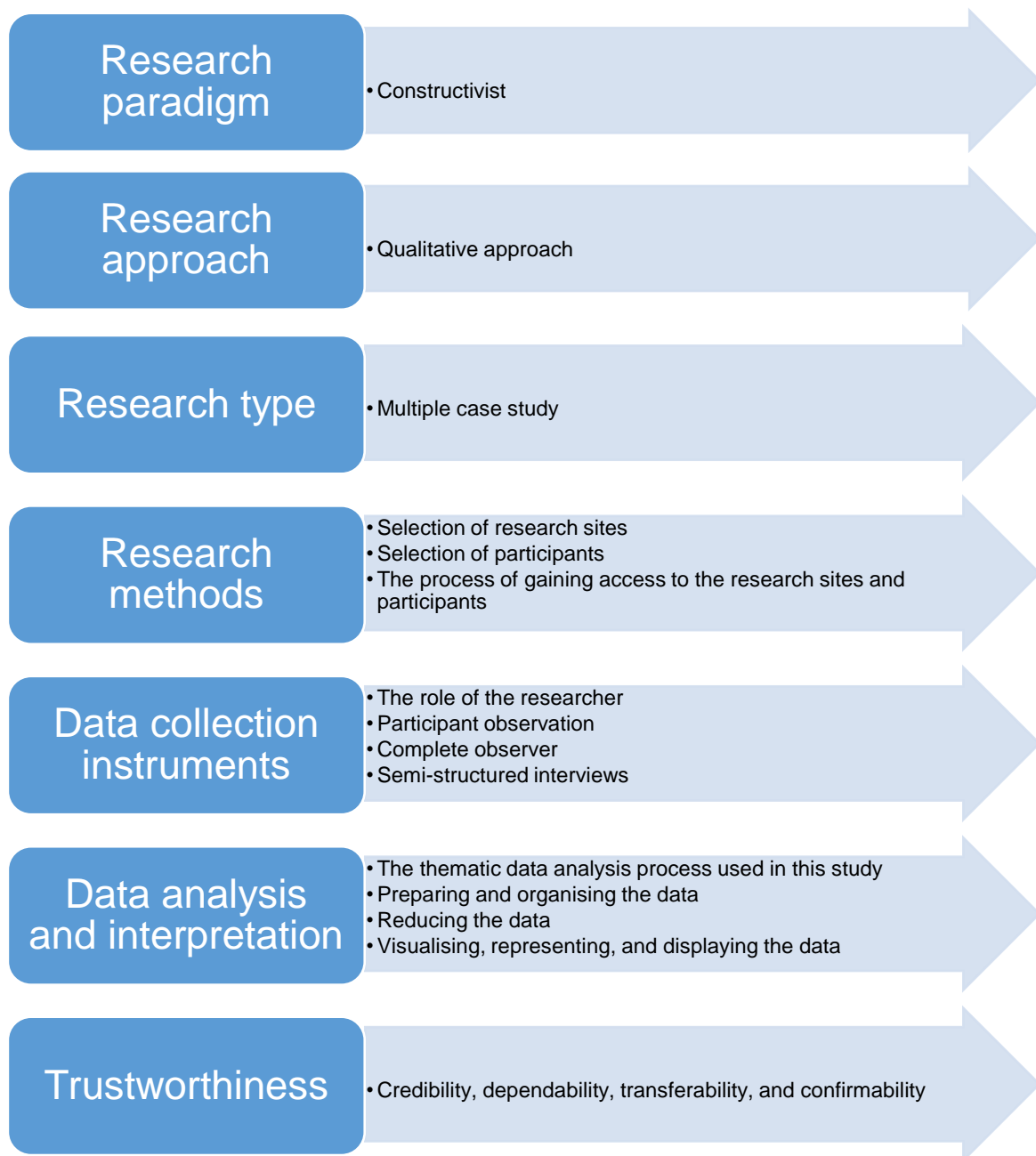


Figure 5.1: Summative outline of the contents of Chapter 5

5.3 RESEARCH METHODOLOGY

Sefotho (2015) defines research methodology as being the overall strategies outlining the process in which a research project will be conducted, inclusive of the research methods that will be used. The research methodology in this study

incorporates the research design, research paradigm, research approach and research type.

5.3.1 Research design

The type of a research inquiry influences the choice of a research design (Harwell, 2011). Harwell (2011) defines a research design as a broad plan that outlines the general research process inclusive of the research methodology – where, how and when the inquiry will take place. Similarly, Creswell (1998, p. 12) describes a research design as “types of inquiry within qualitative, quantitative and mixed methods approaches” aiming at answering the research questions in a study. In addition, Yin (2011, p. 83) characterises a research design as “logical blueprints” that researchers use towards answering the research question of the phenomena under investigation. A good research design promotes “efficient and successful functioning” while the contrary leads to poor operational failure (Maxwell, 2012, p. 2). It can be assumed that a research design provides a blueprint towards the answering of research questions in a study. However, the overall layout must be presented in a comprehensive, meaningful and logical way. In this regard, Maree (2007, p. 70) further states that the whole process of choosing a research design is influenced by the underlying “philosophical assumption” of the researcher.

As part of the research design, the research paradigm, research approach and type of qualitative research underpinning this study are presented in the following sections.

5.3.2 Research paradigm

Babbie (2008, p. 34) describes a paradigm as a “model or a framework for observation and understanding, which shapes both what we see and how we understand it”. Maree (2007, p. 47), on the other hand, defines a paradigm as “a set of assumptions or beliefs about fundamental aspects of reality which gives expression to a particular worldview”. Maree (2007) concedes that paradigms are used as “lenses” to shape the realities created by individuals in their daily lives. Simply put, paradigms are premised on those presumptions, beliefs and inferences, among other things, that form an individual’s worldview. Maree (2007) names one’s

view of reality “ontology” and the way in which knowledge about the reality is acquired “epistemology”.

Since reality is socially constructed, Lincoln and Guba (1985) assert that paradigms feed into researchers’ biases. As such, care should be taken during the research process to eliminate these biases for the purpose of improving the trustworthiness of the research results. Lincoln and Guba (1985) classify paradigmatic assumptions that influence the researcher’s interpretation of realities into critical theory, constructivism and positivism and post-positivism. This study is situated within a constructivist paradigm, which Crotty (1998, p. 42) clarifies as socially constructed, defining it as “the view that all knowledge, and therefore all meaningful reality as such, is contingent upon human practices, being constructed in and out of interaction between human beings and their world, and transmitted within an essentially social context”.

A constructivist approach was chosen as the worldview underpinning this study. Creswell (2013, p. 8) defines a constructivist approach or social constructivism as an approach in which individuals in their environments co-construct meaning that may be “socially and culturally” influenced. In this regard, Creswell (2012) further argues that the multiple constructed meanings may not be true, but are real to those who live them. Creswell (2013, p. 18) recommends “distinctive characteristics” inherent to the constructivist approach that researchers need to observe. The lists below are outlined as relevant for the purpose of this study.

- **Position him-or herself**

I have positioned myself in the constructivist philosophical worldview approach in which I would extract meaning from my participants’ responses without manipulating them.

- **Collect the participants’ meanings**

The collected data were transcribed verbatim, colour-coded and objectively applied to the analysis. I considered the cultural influences or ethnography of the participants’ responses (cf. Creswell, 2013).

- **Focus on a single concept or phenomenon**

Although this study uses different data collection methods, the research sites and participants, guided by the different systems of Bronfenbrenner's ecological systems theory, were aimed at exploring one concept, namely curriculum accessibility for children with cerebral palsy.

- **Bring personal values into the study**

While I had worked at the explored contexts, I was careful not to allow the experiences I had had in these contexts to influence my data interpretation but to use the experience to enrich the study. I aimed with this transparency to increase the confirmability and credibility of the study (cf. Rule & John, 2011).

- **Study the context or settings of the participants**

The observation phase of the data collection process allowed me to study the context of my participants. Furthermore, worth mentioning is the insights regarding the home setting that were revealed during the interviews with the parents at their homes. These insights are presented in the data analysis chapter.

- **Collaborate with the participants**

The study did not lend itself to collaborating with the participants, but aimed to understand the phenomena from their perspective. Therefore, the interviews were conducted without discussing the questions with the participants prior to the interviews.

With regard to the contextual gap that the study aimed to explore, the constructivist paradigm was best suited in a sense that although there were similarities, the teachers' and parents' responses during data collection and context-specific factors also emerged, suggesting that reality is socially constructed.

5.3.3 Research approach

Creswell (2013) identifies qualitative, quantitative and mixed methods as being the three common research approaches in research. Quantitative approaches were initially the preferred methods of inquiry until 1990, going to the 21st century when the qualitative approach gained momentum (Creswell, 2014). Quantitative approaches use numbers to prove or disprove the hypotheses in answering the research questions (Creswell, 2013). On the other hand, qualitative approaches use words and semi-structured interviews for that purpose, while the “mixed method approach” uses a combination of both to answer the research questions (Creswell, 2013, p. 12).

Since the purpose of this study was to explore how teachers in rural schools teach children with cerebral palsy in order to make the curriculum accessible to them, a qualitative approach was used. This approach was chosen to explore the phenomena in their naturalistic environment and give rich descriptions of the meaning that the selected participants attach to these phenomena in their context (Lincoln & Guba, 1985). In this regard, Patton (2002) believes that a characteristic of qualitative research is that the researcher becomes a research instrument who identifies themes and categories and describes the findings of the analysed data. To that effect, 15 teachers from three schools, parents of children with cerebral palsy and coordinators of DBSTs were selected as participants. The participants were interviewed at their respective schools and the district offices.

The rationale for the qualitative research approach was twofold. Firstly, the participants could be interviewed in their natural settings. Secondly, I immersed myself in the contexts and crystallised the collected data (Leedy & Ormrod, 2005). Qualitative studies are classified into ethnographies, narratives, phenomenological and grounded theories and case studies. In order to answer the research questions in this study, a focus group method was used to interview the teachers from the three identified research cases. An individual method was used to interview the coordinator of the DBST and the parents of children with cerebral palsy.

5.3.4 Research type: Multiple case study

There are many definitions of what a case study entails in the literature. Rule and John (2011, p. 3) define case studies as a “systematic and in-depth investigation of a particular case in its context in order to generate knowledge”. Similarly, Yin (2011, p. 21) defines a case study as “an in-depth exploration from multiple perspectives of the complexity and uniqueness of a particular project, policy, institution, program or system in real life”. In this regard, Yin (2011) states that case studies lend themselves to being used in their natural settings and they allow for an in-depth exploration of the phenomena. In addition to the similarities in the above definitions, George and Bennet (2005, p. 19) point to the advantage in using case studies and mention “their potential to achieve high conceptual validity, strong procedures for fostering new hypotheses, useful for closely examining the hypothesised role of causal mechanisms in the context of individual cases and their capacity for addressing causal complexity”. Despite this, there has been a fair share of criticism regarding case studies in the literature.

As one of the disadvantages, Maree (2007) identifies the tendency of researchers to use one case and generalise the findings of such inquiries to other settings. In this regard, Leedy and Ormrod (2005) mention a small sample and reiterate the non-transferability characteristic of case studies as being a disadvantage. Although the aim of this study was not to transfer its findings to other contexts, to circumvent the weaknesses of case studies (cf. Stake, 2006), multiple cases were chosen that lent this study to an in-depth exploration. Furthermore, I was hoping to contribute to the body of knowledge with the multiple cases explored that contextual consideration is essential, particularly in the implementation of inclusive education, as is the case in this study.

Stake (2006) classifies case studies into instrumental, intrinsic and collective types. Collective case studies are normally used when the researcher is exploring multiple cases and/or sites. Considering the three schools explored, a multiple case study method granted me the opportunity to compare the responses of the participants; I analysed these in their contexts and identified the factors affecting curriculum access for children with cerebral palsy in these schools. The emerging themes

helped point to the meaningful learning opportunities in the framework of the various contexts explored, namely special and full-service schools.

5.3.4.1 Special school

According to the White Paper 6 on inclusive education (Department of Education, 2011), the Department of Basic Education aimed to put children with high levels of support needs in special schools and also provide the educational support needed. Allocating special schools this responsibility was to steer clear of excluding these children from accessing quality education. Furthermore, it was envisaged that the coordinator of the DBST would make available the support required by both the children and teachers in this schools. The special school admits children with a spectrum of disabilities; as such, it has always been practising inclusion. Although the teachers in this school face contextual challenges in the implementation of inclusive education, I expected them to offer baseline requirements for children with cerebral palsy accessing the curriculum.

5.3.4.2 Full-service school (School 2)

The teachers in Full-service school (school 2) were included in inclusive education training as it was a pilot school for the implementation process.

The Full-service school (school 2) was tasked with the responsibility of admitting children with and without disabilities and adapting the curriculum for easy access by all children. It was envisaged that there would be collaboration between special and full-service school (school 2) teachers with regard to sharing the skills in teaching children with special needs. Special school teachers were considered to be experienced and trained in this regard. Funding was also allocated for infrastructural adaptation of this school. However, the report on the implementation of inclusive education (2006) reports the contrary. It found in its investigation that the budget from treasury could not be accounted for in different provinces where pilot schools had been identified.

5.3.4.3 Full-service school (School 3)

Since inclusive education is the norm in South Africa, a third type, full-service school (School 3) was added as a pilot school for the implementation of inclusive education. Like full-service school (school 2), this school has been tasked with the responsibility of admitting children with low to moderate intensity needs. The reason for this was that the Department of Basic Education collates information from many contexts on the successful implementation of the strategy, thus improving curriculum accessibility for all children. Despite the varying requirements, the disregard of contextual requirements by the Department of Higher Education and Training (2013) in providing intervention could not be overlooked.

Furthermore, while this study did not aim to triangulate, but to crystallise the data from the three sites (cf. Maree, 2007), special care was taken to apply the concepts of versatility, depth, manageability and flexibility to improve the trustworthiness of the rich data collected (Rule & John, 2011, p. 7-8).

Table 5.1: Applicability of versatility, depth, manageability and flexibility of this study (Rule & John, 2011, p. 7-8)

Concept	Applicability to this study
<p>Versatility</p> <p>Rule and John (2011) suggest versatility as being a way of using other research approaches in case studies.</p>	<p>To ensure that rich data were collected from the participants, I immersed myself in and used different data collection methods.</p>
<p>Depth</p> <p>Rule and John (2011) define depth in case studies as extensively exploring the phenomena under investigation, including factors influencing the phenomena.</p>	<p>Prior to data collection, I developed observation schedules for all the research sites. The observations gave me an overview of the contexts observed and, thus, ensured an in-depth exploration. Understanding the</p>

Concept	Applicability to this study
	different contexts, informed possible follow-up questions to ask the participants.
<p>Manageability</p> <p>John and Rule (2011) argue that case studies allow researchers to study specific units in a case, thus ensuring the manageability of the collected data.</p>	<p>The semi-structured interviews questions were developed to collect the data from all the participants. Consistency was ensured by extracting these from the index of inclusion (Booth & Ainscow, 2012) and the White Paper 6 (2001). The methods and instruments were compatible with the aim of the study, thus ensuring consistency and the manageability of the collected data.</p>
<p>Flexibility</p> <p>John and Rule (2011) conceptualise flexibility as being a way of using different methods in research, thus enriching the data towards answering a research question.</p>	<p>The multiple sources consulted in the literature review and the multiple participants, methods and instruments used to collect the data allowed me to immerse myself in these contexts. It enriched the study and ensured flexibility; therefore, it improved the trustworthiness of the study.</p>

5.4 RESEARCH METHODS

It is very important in research to choose appropriate research methods and instruments for the phenomena under investigation in order for the collected data to answer the research question. Creswell (2013) emphasises the significance of selecting appropriate research sites and participants suitable for the inquiry to be conducted. In line with Leedy and Ormrod (2005), who reiterate that random sampling is not a characteristic of qualitative research, a non-probability purposeful sampling was used for the purpose of selecting both the participants and the research sites in this study. I used this type of sampling method being consciously

aware that the identified research sites are pilots for the implementation of inclusive education in the district. The direct involvement of the participants was an advantage for the study as it ensured that they understood the dynamics of the phenomena under investigation and therefore, provided rich data (cf. Stake, 2006).

In most cases, qualitative researchers are familiar with the phenomena under investigation (McMillan & Schumacher, 2010); therefore, subjectivity is ensured by this. In this regard, McMillan and Schumacher (2010) regard existing knowledge as an advantage for researchers as it also enables them to recognise silent responses from the participants (Stake, 2006). Creswell (2013) maintains that the compatibility between the research sites and the familiarity of the participants with the phenomena under investigation improves the reliability of the responses. It is from this perspective again that purposeful sampling was chosen so that the results of this investigation would fill in the aimed contextual gap (rural context) in this study.

Below are the processes and the rationale that were used to access both the research sites and the participants in this study.

5.4.1 Selection of research sites

As a former teacher in a school for children with disabilities, the coordinator of the SBST and a member of the DBST, I realised that children with disabilities, particularly those with cerebral palsy, found accessing the curriculum in rural schools challenging. This realisation induced my interest in exploring the key requirements for meaningful learning opportunities for children with cerebral palsy in those contexts. I therefore decided to conduct this study to find out how teachers in these schools make the curriculum accessible for these children. I selected the three research sites because they were part of the pilot project in the implementation of inclusive education in South Africa. As such, I anticipated rich data that would inform practice and, therefore, facilitate the implementation of inclusive education.

It was envisaged that 30 special schools would be converted into resource centres for the 30 full-service schools in the country (Department of Education, 2001). These schools were allocated different roles for the successful implementation of

inclusive education and supporting children with learning difficulties in these schools (Department of Education, 2001). The purpose was to ensure that children were placed in schools compatible with their curriculum needs. Furthermore, the special school teachers were targeted as a resource for supporting teachers in full-service schools.

5.4.2 Selection of participants

Diligence was applied in choosing the participants in this study. All the participants who were directly involved in the implementation of inclusive education in the sites were identified. It has already been mentioned that the collaboration of the stakeholders in supporting children with special needs to access the curriculum would be essential in the implementation of inclusive education (see section 4.3.3.2). Therefore, direct involvement in the implementation of inclusive education was the main criterion for participation.

5.4.2.1 Teachers as participants

Five teachers, one of whom is the coordinator of the SBST from each of the three schools, participated in this study. The criterion for choosing these teachers was that they teach in either the special and full-service schools identified for piloting the implementation of inclusive education. One of these teachers was the coordinator of the SBST. The selected teachers were directly involved in teaching children with special needs in their classes; therefore, it was assumed that their lived experiences would feed into the required meaningful learning opportunities for children with cerebral palsy.

5.4.2.2 Coordinator of the district-based support team as participant

One coordinator of the DBST participated in this study. According to the SIAS policy (Department of Basic Education, 2014) and the White Paper 6 on inclusive education (Department of Education, 2001), the coordinator of the DBST has the responsibility for supporting teachers and sourcing emotional, physical and social support for children with special needs to be able to access the general curriculum and progress through schools with other children without disabilities. The

participation of the coordinator was necessary to establish whether or not there were challenges in executing their responsibilities.

5.4.2.3 *Parents of children with cerebral palsy as participants*

One parent with a child with cerebral palsy from each school was chosen to participate in this study. According to the White Paper 6 on inclusive education (Department of Education, 2011), the collaboration between the stakeholders in education, including the parents, ensures its successful implementation and improves curriculum accessibility for these children. I thought that the parents' perspectives would feed into meaningful learning opportunities for these children.

5.4.3 *Process of gaining access to the research sites and participants*

The University of Pretoria has set rules that researchers may not collect data until ethics clearance has been issued by the Ethics Committee of the University. In order to adhere to the ethical considerations, as prescribed by the University, after the proposal had been accepted, I applied for ethical clearance. After the ethical clearance certificate had been issued, the research process was started. Below are the steps that were followed to gain access to the research sites and participants.

5.4.3.1 *Meeting with the head of the Department of Education*

The research protocol in the Department of Education is that the head of the Provincial Department of Education gives permission to all the researchers to conduct research. The letter that was approved by the Ethics Committee of the University of Pretoria was taken to the head of the Department of Education in the Limpopo Province asking for permission to interview the teachers, coordinators of the DBST and parents of children with cerebral palsy in the pilot schools. After 14 days, I received written permission to conduct research in the schools under the jurisdiction of the head of the department. The identified participants consisted of five teachers, one of whom was the coordinator of the SBST, one the coordinator of the DBST and one parent of a child with cerebral palsy from each school. The rules were adhered to, as stipulated in the letters from the Department of Education in Limpopo (see Appendix B). The rules stipulated that I would not be allowed to collect data during school hours or examination sessions, among others.

5.4.3.2 Meeting with the circuit manager

According to the protocol in the province, before researchers access the identified school, the circuit managers need to give verbal permission for the study to commence. The circuit manager was consulted, who gave permission to access the schools and interview the teachers through the principals of the schools.

5.4.3.3 Meeting with principals

Irvine and Gaffikin (2006) believe that creating a good relationship with the gatekeepers of institutions is essential in data collection. The relationship does not only ensure easy access to the institutions, but also ensures quality participants for an in-depth description of the phenomena under investigation. In this regard, I secured appointments with the principals of the respective three schools. Through the letters of permission, approved by the Ethics Committee, I discussed the purpose of the study and asked the principals for their permission to conduct research at the schools. The principals granted permission for the study to be conducted, signed the permission slip and promised to meet with the teachers to discuss the study and ask them for volunteer participation. On different dates, the principals called to inform me of the consenting teachers and gave me dates to meet with these teachers.

5.4.3.4 Meeting with teachers

On the arranged dates, meetings with the teachers from the three schools were held. The purpose of the study was discussed, the letters were given to them and they were asked for their permission to participate in the study. The teachers agreed, after which they were asked to sign the consent slips attached to the letter. The dates, venues and duration of the study were discussed. I further asked the teachers from the schools to help me identify one parent with a child with cerebral palsy willing to participate in the study. The teachers from the three schools gave me the names and contact details of the three parents.

The initial plan was that one parent with a child with cerebral palsy would be interviewed from each school. However, when the first parent was called, I discovered that the parent had moved her child from the special school to the

identified full-service school. I decided to interview this parent as a representative for both the special and full-service schools. The rationale behind the decision was that the parent understood the dynamics of both schools. I also thought that the move was in search of meaningful learning opportunities for her child with cerebral palsy; therefore, her participation would inform the study on what those were.

5.4.3.5 Meeting with the parents of children with cerebral palsy

Subsequently, meetings with the two parents of children with cerebral palsy were arranged. The meetings took place at their respective homes. During the meetings, the purpose of the study was discussed and they were asked to participate by answering the interview questions. A date was set, and the parents signed consent letters to participate in the study.

5.4.3.6 Meeting with the coordinator of the district-based support team

The same procedure of ensuring an appointment, discussing the purpose, the venue, the duration of the study and asking for permission of the coordinator of the DBST to participate in the study was, followed. Consent was given, and the form was signed by the coordinator of the DBST.

5.4.4 Data collection instruments

Leedy and Ormrod (2005) regard data collection as the whole process of collecting data, inclusive of the instruments used in the process. In the same way, Nieuwenhuis (2007) defines data collection as being a detailed account of what was done and how it was done. These authors further state that there are different techniques and instruments that can be used in the data collection process. Nieuwenhuis (2007) explains data collection as the most important stage in research in a sense that the process determines the trustworthiness and the collected data answer the research question. Compromised data affect the validity of the results (Denzin & Lincoln, 2011). In order to be able to identify enablers and challenges in teachers creating meaningful learning opportunities for children with cerebral palsy in rural schools, interview schedules with semi-structured questions were used. A tape recorder was used to record the interviews with the teachers, with the parents of children with cerebral palsy and the coordinator of the DBST.

The section below reveals the data collection techniques and tools that were used in this study. The process that was used to gain access to the research sites and participants, the role of the researcher, the observer as the participant, the researcher as a complete observer and administering semi-structured interviews to the identified participants are all discussed in the following sections.

5.4.4.1 *The role of the researcher*

It is the role of the researcher to ascertain that the procedure followed in conducting the study and the collection and analysis of the data is ethical and suitable for answering the research question (Nieuwenhuis, 2007). The researcher is considered to be a research instrument in qualitative studies (Denzin & Lincoln, 2011). As such, it is crucial for the researcher to be vigilant and objective in order to avoid contextual influences that may distort the research results. It is also the role of the researcher to protect the participants from any harm (Appendix A) and to keep the information that they divulge, confidential.

Creswell (2013) recommends that researchers declare their position regarding the phenomena, participants and/or the context of inquiry for the reader to understand any prejudices that may arise. I knew some of the participants who participated in this study personally. Secondly, I was familiar with some of the challenges that the interviewed stakeholders experience in the implementation of inclusive education and making the curriculum accessible for children in rural schools. I was always conscious of not allowing my existing knowledge to influence the way I perceived the participants' responses. Furthermore, while it was my responsibility to direct the interviews in order to avoid past experiences affecting the participants' responses, the outcomes of the observation schedules were used to probe and allow the participants enough time to speak to make sure that their responses were clarified in the process. Giving the participants enough time to speak clarified exactly what they meant from their own perspective.

Vos, Strydom, Fouche and Delport (2011) consider observation in research as falling within a spectrum and the type used depends on the purpose of the study. Maree (2007) identifies four types of observation methods in research, namely the

participant as an observer, the observer as a participant, the complete observer and the complete participant. I assumed the responsibility of both a complete observer and a participant observer in this. A complete observer is a researcher who observes the phenomena without the participants being aware that they are being researched (Maree, 2007). As a complete observer, I used structured observation schedules with “predetermined categories” that I wanted to observe. These categories were extracted from the index of inclusion developed by Booth and Ainscow (2002) (see section 5.4.3.3).

5.4.4.2 Participation observation

During participation observation, I immersed myself in the context in which children with cerebral palsy participate. Maree (2007, p. 85) calls this an “emic perspective” where the researchers completely immerse themselves in the context to “gain an insider’s perspective”. The aim was to probe the accessibility of the school to these children. A wheelchair was used to move from the bathroom and back and around the school to get a feel of its accessibility for children with cerebral palsy using wheelchairs as assistive devices. I took photographs (see section 6.3) of my participation and the infrastructure of the schools as evidence to compare the three research sites (cf. Silverman, 2015). I wanted to understand the time it takes for children with cerebral palsy in wheelchairs to achieve this. Since there are no assistants at these schools, the longer they take to accomplish this task, the more contact time they miss in class; and this contributes to these children being unable to access the curriculum in these classes.

It was not the purpose of this study to interview children with cerebral palsy, but understanding the factors that have an impact on their participation could add a perspective to the creation of meaningful learning opportunities in this study, or to put it differently, to improve their curriculum accessibility in rural schools.

While participation observation has its own disadvantages, I would like to mention the advantages, as postulated in Vos, Strydom, Fouche and Delport (2011, p. 337):

- It aims at an in-depth investigation and is qualitative in nature.

- It has a specific link with practice and prevents results from becoming too theoretical.
- It is not dependent on the ability or willingness of the respondents to take part in the investigation.

5.4.4.3 Complete observer

Complete observation is a data collection method that researchers use without questioning the individuals in those contexts (Maree, 2007). Complete observation as a data collection method in qualitative research requires the “systematic” observation and recording of the phenomena and/or individuals under investigation. In this regard, as already mentioned (see section 1.5.4), I went to the research sites with predetermined categories of the index for inclusion to be observed.

Complete observation is not only about recording what researchers see, it is also about reflecting on what they have seen. Maree (2007) argues that this method has the potential to provide information that would otherwise not have been asked in interview questions, thus, enriching and improving the trustworthiness of the study. It is from the perspectives of the discussion above that Maree (2007) proposes the following as strategies to ensure the trustworthiness of observation results:

- The field notes should be as accurate as possible. Record what is seen, heard and experienced, if observed for the first time.
- Always write up the field notes as observations are made. Observation notes may be recorded with a tape recorder, but make sure that the context and the participants are secure.
- When recording events or behaviour in a social setting, make sure that both the verbal and non-verbal behaviours are recorded.
- Reflection should be done as soon as possible after the event and should include the researcher’s hunches (it appears...; it seems...).

I went to the three research sites with a notebook to record field notes of the observation schedules. The three dimensions of the index for inclusion (see section 1.5.4) were used, proposed by Booth and Ainscow (2002) as lenses for the

observation schedules. As the observation process progressed, I reflected on the questions of the interview schedules and the possible probing questions to ask.

The White Paper 6 on inclusive education (2001), the Admission Policy (1996), the Progression Policy and the SIAS policy (Department of Basic Education, 2014) were all available at the three observed sites. However, there were no strategies in place to make these accessible to children with disabilities. The commonalities and differences in terms of how these schools respond, or fail to respond, to the mandate for inclusion through policy and practice were also observed. The index of inclusion postulates that special attention should be paid to the three pillars in order to foster inclusive change in schools. I consider the use of the index of inclusion a strength for my study as it ensured consistency of the observation schedules conducted at the three researched schools. Furthermore, since the indicators on the index of inclusion were scientifically researched, the factors that affect curriculum accessibility for children with disabilities were exposed. There are many indicators on the three pillars of the index. However, with the time available for this study, only the ones listed below were observed.

(i)Creating inclusive cultures

The index of inclusion postulates two indicators on this section to ascertain whether the schools create a culture of inclusion, namely:

- building an inclusive community; and
- establishing inclusive values.

(ii)Producing inclusive policies

The two indicators listed below are postulated on the index of inclusion and were used to ascertain whether the schools operate in terms of inclusive practices. They are:

- developing the schools for all; and
- organising support for diversity.

(iii)Evolving inclusive practices

In this regard, I observed whether through policy and practice, the schools respond to a mandate for inclusion, namely:

- orchestrating learning; and
- mobilising resources.

5.4.4.4 *Semi-structured interviews*

Vos, Strydom, Fouche and Delport (2011, p. 181) characterise “structured interviews” as being compatible with qualitative research. Since a qualitative approach was followed in this study, semi-structured interviews to extract rich descriptive data assisted in interpreting the social realities of the participants. Semi-structured interviews lent themselves to an in-depth exploration of the phenomena under investigation (Creswell, 1998). Although the interview schedules had been prepared beforehand, the flexibility offered by the semi-structured interviews improved the trustworthiness of the research results. Factors that emerged from the observation schedules were used as probing and follow-up questions during the interviews.

The interviews that were conducted with the teachers and parents of children with cerebral palsy took place at the respective schools. The coordinator of the DBST was interviewed at the district office. The same questions for the group interviews were used with the teachers, and the same questions for individual interviews were used with the parents of children with cerebral palsy (see Appendices H and J). Denzin and Lincoln (2011) believe the same questions can be asked to all the participants if the aim is the same.

5.5 DATA ANALYSIS

There are many ways in which data analysis is conceptualised in the literature. The qualitative data analysis is interpretive in nature in the sense that it analyses the participants’ perceptions, feelings and experiences (Maree, 2007). Merriam (1998) defines data analysis as a systematic presentation of the collected data to make sense of its meaning. Similarly, Creswell (2013) agrees and further identifies the purpose of data analysis as being the transformation of the collected data into findings that answer the research questions. Important is the submission by

Creswell (2013) that, unlike the solid way in which quantitative data are analysed and conducted, qualitative research data analysis is an ongoing process that builds up as the data collection process progresses. The submission is also supported by Thomas (2006), who reaffirms the existence of an overlap between the analysis and interpretation of the data to reach a conclusion. However, it is the researcher's responsibility to extricate meaning from the collected data and to interpret and clarify it (Maree, 2007). In this regard, Vos et al. (2011, p. 403) argue that the researcher needs to move "in analytic circles rather than using a fixed linear approach" to give the data its meaning. An audit trail to ensure the trustworthiness of the study is essential. Hamilton and Corbet-Whittier (2013, p. 140) name this an "iterative process".

Thorne (2000, p. 68) regards data analysis as "the most complex and mysterious" stage in qualitative research inquiries. He stresses the importance of the researcher's objectivity to the events, emotions and perceptions of the participants researched. It is from this perspective that this study employed different data collection methods and research sites in order to crystallise and gain an in-depth understanding of the phenomena under investigation. The multiplicity of methods and sites used, lent this study to its flexibility, thus, improving its trustworthiness. I believe that the rich scientific literature reviewed and presented in Chapters 2, 3 and 4, fed into my subjectivity during the data collection in a sense that I was able to identify contextual differences from the empirical data.

While Merriam (1998) as well as Vos et al. (2011) agree on what data analysis entails, Maree (2007) further states that the data analysis process must be guided by the research questions to be answered. In this regard, Vos et al. (2011, p. 403-404) summarise the guidelines to be employed during the data analysis stage as:

- preparing and organising the data;
- reducing the data; and
- visualising, representing and displaying the data.

Maree (2007) is of the opinion that researchers need to know beforehand the data analysis strategies they are going to use in their research inquiry. Merriam (1998)

agrees and suggests the hermeneutic, grounded theory, thematic, conversation and discourse analysis as strategies for data analysis. For the purpose of this study, a thematic analysis was used.

5.5.1 Thematic data analysis process used in this study

Alhojailan (2012) considers thematic analysis to be a type of qualitative analysis used to interpret inductive and deductive data, coding and categorisation of the data. The author argues that flexibility is one of the advantages of thematic data analysis.

Many studies, such as this study, employ both the inductive and deductive approaches to data analysis. An inductive approach, according to Thomas (2006, p. 238), is a type of qualitative data analysis that aims to extract meaning from the “frequent, dominant and significant” themes emerging from the collected data. Thomas (2006, p. 238) further defines deductive approaches as being a type of data analysis that sets “out to test whether data are consistent with prior assumptions, theories, or hypotheses identified or constructed by an investigator”. Described below are the steps that were used to analyse the collected data.

5.5.2 Preparing and organising the data

While there are many data analysis software programmes available on the market, I opted to prepare and organise the data manually. With regard to data transcription and coding, Yin (2011, p. 197) insists that it is important for a researcher to know “what to code, where to start and what is salient enough to be coded”. The data (observations and semi-structured interview schedules from the teachers, coordinators of the DBSTs and parents of children with cerebral palsy) were transcribed. The full description of the data from the observation schedules was given and the tape-recorded data were transcribed word for word. The observation and interview data were prepared and organised systematically according to the presentation on the index of inclusion and the sequence of the questions on the interview schedule.

5.5.3 Reducing the data

Thomas (2006) considers the data reduction stage to be the process of condensing extensive and varied raw data into a brief summary format. Since a great deal of data are collected in qualitative data inquiries, it is important to reduce the data to manageable information. However, it is also crucial for the remaining data to represent the original data collected from research sites. For the purpose of this study, the categories on the observation and interview schedules were colour-coded. The photographs from the different research sites were compared to expose the contextual differences, that is, the requirements for intervention (Silverman, 2015). These requirements fed into the meaningful learning opportunities for children with cerebral palsy. I used “colour codes” to indicate the frequent categories that emerged (cf. Maree, 2007, p. 107). Thereafter the themes and subthemes that emerged from the coded data were identified.

5.5.4 Visualising, representing and displaying the data

The analysed data are presented systematically in a tabular form (cf. Vos et al., 2011). The results of the observation schedules are presented, followed by the semi-structured interview questions. A constant comparison of the data from the three research sites was conducted as the study progressed. The rationale of the constant comparison was geared towards answering the research question and to supporting the argument that contextual consideration is essential in both policy implementation and intervention. Although Boeije (2002, p. 406) suggests that the term “constant comparison” may be exaggerated, I argue, for the purpose of this study, that it will provide an audit trail, thereby enhancing traceability for this study. Constant comparison further enhanced the credibility of the data analysis process. In line with Hamilton and Corbett-Whittier (2013), I ensured that my voice was heard throughout the data analysis process.

5.6 TRUSTWORTHINESS

Long and Johnson (2000, p. 30) emphasise the necessity of “validating” the research process in an inquiry. This ensures the repeatability of the research process, thereby improving the trustworthiness of the study. Long and Johnson (2000) further postulate that unreliable processes may potentially misinform the context the study was meant to investigate. Over time, validity and reliability have been used as the criteria to verify the integrity of an inquiry in quantitative research.

However, these concepts were not applicable to qualitative research, which has resulted in researchers questioning the accuracy of these studies (Shenton, 2004). Recently, authors, such as Maree (2007), Lincoln and Guba (1985) and Denzin and Lincoln (2011), have reported on the significance of validating trustworthiness in qualitative inquiries. Trustworthiness, according to these authors, ensures the soundness of qualitative research. Transferability, dependability, credibility and confirmability criteria were aspects in a process intended to “critique and evaluate” qualitative inquiries in order to ensure rigour and thus, the trustworthiness of these studies (Long & Johnson, 2000, p. 30).

Despite these criteria, Denzin and Lincoln (2011) found that only credibility and dependability are well accounted for in studies in general. Transferability and conformability are poorly reported, with the former being the worst in terms of the suitability of research questions and triangulation methods presented.

5.6.1 Credibility

Guba (1981, p. 79) conceptualises credibility as a process in which “one can establish confidence in the truth of the findings of a particular inquiry for the subject (respondents) with which and the context in which the inquiry was carried out”. Similarly, Lincoln and Guba (1985) refer to credibility as being the process of establishing whether the results of a research study are believable. The credibility of qualitative inquiries implies a “well-laid process of data collection” until its interpretation (Yin, 2011, p. 85). This author further advises that special attention should be given to strengthen the credibility of a study in its preparatory stage. Many strategies are proposed in the literature to advance the believability of the research results in qualitative inquiries. Guba (1981), as well as Lincoln and Guba (1985), suggest strategies such as triangulation, including field notes or field journals, and descriptions of how the process of data inferences and interpretations were conducted to guide other researchers to ascertain the believability of the research findings. In support of the above authors, Krefling (1991, p. 219) postulates an “audit trail”, “theoretical tests” and “reflexive analysis” and stakeholder checks as strategies to ensure the believability of the research results.

To ensure credibility in this study, a step-by-step account of the different data collection methods and instruments used was presented. In this regard, Maree (2007) identifies different data collection methods that yield similar results and have the potential to ensure the credibility of the inquiry. Furthermore, the data were collected from the three research sites and the different participants (teachers, parents and the coordinator of the DBST) were interviewed. The data were then triangulated to ensure the credibility of this study.

5.6.2 Transferability

Guba (1981, p. 79-80) defines transferability as the process to “determine the degree to which the findings of a particular inquiry may have applicability in other contexts or subjects”. Transferability in quantitative research is considered to be a type of external validity (Lincoln & Guba, 1985; Moon et al., 2016). While generalisation is a concept mostly used in quantitative research, it is closely linked to transferability in qualitative inquiries. However, the literature is sceptical about accepting the transferability of research results in qualitative inquiries. In this regard, Maxwell (2012) further cautions against transferring findings of small samples to other contexts. Likewise, Maree (2007) postulates that the aim of qualitative studies is not rooted in the transferability of the research findings, but to understand the phenomena under investigation from the perspective of the participants in those contexts. However, “thick descriptions” given in qualitative research may form a blueprint to repeat these studies in larger populations in other contexts, thus, generalising the research findings (Anney, 2014).

Care was taken in this study to give thick descriptions of the responses of the interviewed participants, the research sites, the rationale for the choices and the methods used to collect and analyse the data.

5.6.3 Dependability

Guba (1981, p. 80) defines dependability as a way to “determine whether the findings of an inquiry would be consistently repeated if the inquiry were replicated with the same (or similar) subject (respondents) in the same (similar) contexts”. Rolfe (2006, p. 305) argues that dependability is closely linked to reliability in

quantitative research. Strategies for providing a “thick audit trail”, “code-recording” and “stepwise replication” are recommended to measure dependability in the literature. In addition, Guba (1981) recommends frequenting the research sites and creating a good relationship with the participants to be able to recognise behaviour that may affect the responses during the interviews.

As a result of the time constraint in this study, stepwise replication and going back to the research sites to verify the raw data with the participants (cf. Maree, 2007) were not conducted. However, dependability was not compromised. The participants’ questions were probed and clarified as the investigation progressed, thereby providing a thick audit trail.

Furthermore, code-recording (Chilisa & Preece, 2005) was used as a strategy to improve dependability. I went back and forth coding and recording the raw data and comparing and recording the emerging themes and subthemes (cf. Maree, 2007). I believe that the strategy improved the dependability of this study.

5.6.4 Confirmability

With regard to confirmability, Guba (1981, p. 80) argues that this is a way to “establish the degree to which the findings are a function solely of the subjects (respondents) and conditions of the inquiry and not of the bias, motivations, interests, perspectives and so on of the inquirer”. In a later work, Guba (1985) further suggests using theoretical frameworks as strategies to improve the credibility of a study.

In terms of bias in research, Maree (2007) considers this to be a normal human trait; however, he mentions that bias may misrepresent facts as the researcher’s perceptions influence the participants’ responses. In this regard, Maree (2007) recommends a strategy to circumvent bias in research.

For the purpose of this study, reflexivity was used to ensure confirmability. Krefting (1991, p. 218) defines reflexivity as “an assessment of the influence of the investigator’s own background, perceptions and interests of the qualitative research

process". As a former teacher in one of the schools that was identified as a research site, I anticipated that my background at the school would influence my probing questions. To circumvent such influences, I allowed the participants enough time to speak, so as to be able to absorb more from their own perspectives than to allow my experience at the school to influence their responses. Furthermore, a back-and-forth reflection process during the data analysis was employed to eliminate bias in attaching meaning to the teachers' responses.

5.7 ETHICAL CONSIDERATIONS

Ethical considerations remain a serious matter in research and it is the researcher's responsibility to negotiate these constantly to ensure the participants' understanding of the conditions of their participation (Nutbrown, 2011). For the purpose of this study, I applied for and was granted ethical permission by the Ethical Committee of the University of Pretoria (Reference number: 16/04/01). The ethical clearance certificate is included in this thesis.

Yin (2011) cautions researchers to maintain ethical standards to avoid dilemmas in their inquiries. Voluntary participation, informed consent and deception of participants (cf. Creswell, 2013) were all addressed in this study. In order to ensure voluntary participation (cf. Creswell, 2013), a meeting between the principal of the school and the teachers was held, and the teachers willingly volunteered to participate.

5.7.1 Voluntary participation and informed consent

On the day of the interviews, I asked the teachers whether they were still willing to participate in the study as they had been at the principal's meeting. All the identified teachers consented (see Appendix C). Subsequently, discussions with the parents and the coordinators of the DBST regarding the aim of the study and what was expected from their participation led to their consent (see Appendix D). It is worth mentioning that all the participants in this study were consenting adults; therefore, there were no assent issues (cf. McMillan & Schumacher, 2014). The participants' consent assured me that voluntary participation had been addressed (cf. Creswell, 1998).

Cohen, Manion and Morrison (2013) define informed consent as resulting from the researcher clearly explaining the aims and the process that the research will take so that, when the participants agree to participate, they know exactly what they are agreeing to. Fisher (2007, p. 878) maintains that “informed consent continues to be seen as the sufficient protection of human subjects”. Since a tape recorder was used to record responses from the participants, the participants were informed. By signing the letters of consent, permission was given to record the interviews. The participants were assured that the recorded interviews would not be used for any other purpose than that of the study in which they had consented to participate. The following matters of informed consent and voluntary participation were communicated:

- The participants were assured that participating in this study would not in any way subject them to harm.
- Their anonymity was guaranteed together with the fact that they were free to withdraw from participation for fear of being penalised.
- The participants were also assured that the research of this study would be shared with them on request.

5.7.2 Non-deception of participants

Deliberate deception or deception that researchers are not aware of has always been a matter for contention in research inquiries (Creswell, 2013). In this regard, Creswell (2014) recommends debriefing the participants to eliminate the deception that could have an impact on the ethical standards of the study. Despite the extreme care that was taken during the research process in this study, I held a debriefing session at the end of the interviews with all the participants to eliminate any kind of suspicion that they might have had. The participants were also allowed to ask for clarity throughout the study. In this regard, one teacher from School A asked whether it was possible to organise a professional for the school from the University of Pretoria as the interviews progressed. Although the question was somewhat misplaced, it already suggested that the teachers in this school did not receive the support they needed from the district office. I was able to clarify the matter to eliminate factors that may ultimately contribute to a feeling of deception.

5.8 CONCLUDING REMARKS

This chapter aimed to provide detail regarding the methodology that was used to explore the teachers' perceptions concerning inclusive education and how they teach children with cerebral palsy to make the curriculum accessible to them. The procedures employed for data collection, research design, research methods and the rationale behind those were discussed in this section. Thereafter, the data analysis procedure and the methods used to ensure trustworthiness and ethical considerations were explained.

The categories that emerged were classified into themes and subthemes. These themes and subthemes are systematically presented in Chapter 6 to allow for the data interpretation.

CHAPTER 6

DATA ANALYSIS AND INTERPRETATION

6.1 INTRODUCTION

The research design and methods used to conduct the empirical study as well as the rationale for these choices were presented in the previous chapter. In Chapter 6, the empirical data collected are analysed and interpreted to identify the commonalities as well as the differences in the implementation of inclusive education and how the teachers in the three schools make the curriculum accessible for children with cerebral palsy. The meaning deduced from the collected data, as well as the reviewed literature, will lead towards the formulation of certain recommendations with the aim of creating meaningful learning opportunities for children with cerebral palsy in rural schools.

Five sets of data, which involved and consisted of participation observation, complete observation and interviews with teachers, the coordinator of the DBST and parents of children with cerebral palsy, were collected. These sets of data are presented in the sequence outlined above. Since Bronfenbrenner's (1978) ecological systems theory was used as a framework underpinning this study, the data interpretation in this chapter is presented bearing in mind the effects of the different ecological systems on children with cerebral palsy as they participate in rural schools.

This chapter commences by presenting the codes of all the participants and research sites pertaining to the empirical data in this study. The data are then analysed and interpreted based on the various data collection methods. Once the data analysis and interpretation have been completed, a summative overview of the themes and categories is presented, followed by the discussion of the main findings according to Bronfenbrenner's ecological systems theory (1979). After that, the final remarks are presented.

6.2 THE CODES OF ALL THE PARTICIPANTS IN THIS STUDY

The preceding data analysis and interpretation and the codes of the different participants and research sites employed in collecting the empirical data in this study are presented. These codes are presented sequentially according to the stages at which the data were collected.

6.2.1 Participation observation

Table 6.1 below presents the codes of the participation observation that was conducted in the three schools.

Table 6.1: Participation observation codes

Participation observation in the special school	POS1
Participation observation in the full-service school	POS2
Participation observation in the full-service school	POS3

6.2.2 Complete observation

The codes of the complete observation conducted in the identified schools are presented in Table 6.2.

Table 6.2: Complete observation codes

Complete observation in the special school	COS1
Complete observation in the full-service school	COS2
Complete observation in the full-service school	COS3

6.2.3 Focus group interviews: Teachers

Table 6.3 below presents the codes of the focus group interviews conducted with the teachers from the three identified schools. One of these teachers was the coordinator of the SBST.

Table 6.3: Codes: teachers in special and two full-service schools

Codes of teachers in School 1 (special school)	Codes of teachers in School 2 (full-service school)	Codes of teachers in School 3 (full-service school)
T1S1	T1S2	T1S3
T2S1	T2S2	T2S3
T3S1	T3S2	T3S3
T4S1	T4S2	T4S3
T5S1	T5S2	T5S3

6.2.4 Individual interviews: Coordinator of the district-based support team

The table below presents the codes of the coordinator of the DBST responsible for offering and sourcing professional support for the three identified schools.

Table 6.4: Codes: Coordinator of district-based support team

COORDINATOR OF DBST	CODES
	CDBST

6.2.5 Individual interviews: Parents

The codes of the two parents of children with cerebral palsy interviewed are presented in Table 6.5.

Table 6.5: Codes: Parents of children with cerebral palsy

Parents	Codes
	PS2
	PS3

After the codes of the different stages in the data collection process have been presented, the data analysis and interpretation of all the stages are presented below. The observation stage in this study was divided into the participant and complete observation stage. During the participation observation stage, I was a participant myself where I used a research schedule (see Appendix F) to investigate the accessibility of the school. After that I used the index of inclusion (see section 1.5.4) to collect the data for my complete observation stage. The section below presents the data analysis and interpretation of the participation observation stage.

6.3 DATA ANALYSIS AND INTERPRETATION: PARTICIPATION OBSERVATION

The perspectives of and policies on inclusive education were presented in Chapter 4. The guidelines for full-service and inclusive schools (2009) (see section 3.3.1) stress as key the importance of full-service schools to be accessible for all children. Since wheelchairs and other assistive devices are necessary to improve access for children with disabilities, I went to the three schools with an observation schedule (see Appendix F) with the aim to explore the accessibility of the infrastructure of each school and find out how, if at all, it affects curriculum accessibility for these children.

Photographs were taken of the three sites (schools), which are defined as “the production, organisation, and interpretation of the imagery” (Prosser, 2007, p. 13) and which serve as visual representations of the resources of the schools. I also made field notes detailing my participation observation, which Babbie and Mouton (2001) describe as a way of enhancing credibility in qualitative research. Although Corbin and Strauss (2008) view field notes as being a way to enhance the data collected, Welman, Kruger, Mitchel and Huysamen (2005) are of the opinion that extreme care is necessary only to include the data relevant for the purpose of the study in the field notes. In the section below, the pictures, descriptions, comparative analysis and their interpretation are presented.



Photograph 6.1:

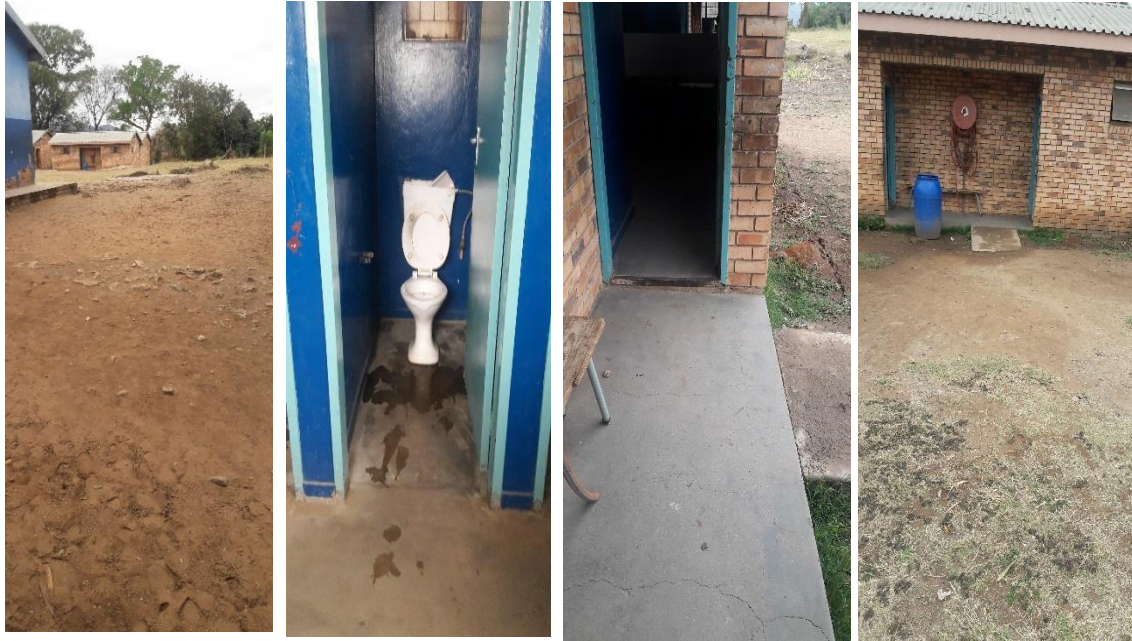
School 1 (special school)

School 1 is a special school for children with a spectrum of disabilities. Many children at the school are in wheelchairs and there were a few electrically powered wheelchairs. Despite the electrically powered wheelchairs at the school, I chose to use a manual wheelchair to move around at all the schools. Consistency was maintained, and therefore, the manageability of the data was improved (see Table 5.1). It took me five minutes to move from one of the classes to the toilets. I further allocated ten minutes for changing diapers and freshening up, which totalled to 15 minutes. School 1 also had a sluice room for the hygienic disposal of diapers and basins for these children to clean themselves up after changing diapers. The schools also had a clinic with a professional nurse administering chronic medication for children who are dependent on it for survival. The pictures above indicate roofed ramps to support easy movement for and balance of these children. The roofed ramps also assured protection on days when the weather was bad. The toilets were spacious and rails had been installed for a child with a physical disability.



Photograph 6.2: School 2 (Full-service school)

School 2 is a full-service school admitting children with multiple disabilities, including children with cerebral palsy who are in wheelchairs. Although the photographs reveal ramps into the classrooms, a long, uncovered and roughly paved path without rails to the toilet is evident. The cement covering leading to the entrance of the school is fragmented, making accessibility to the school difficult. Furthermore, the toilets are small, making these inaccessible to a child in a wheelchair. It took me ten minutes to push myself to and from the toilet. I also allocated ten minutes for these children to use the toilet without help, which totalled 20 minutes. Additionally, the child whose mother was interviewed indicated that her child was paraplegic and presents with multi disabilities, including spina bifida, requiring the child to use diapers. No containers were observed for these children to dispose of their soiled diapers or basins to clean themselves.



Photograph6.3: School 3 (Full-service school)

In School 3, like School 2, admits a variety of children, including those with cerebral palsy using assistive devices. Although the school has ramps giving easy access to the classrooms, there are neither rails nor paved paths to the toilet. The school is next to a hill and the ground is rocky, making it difficult to move around using a wheelchair. Additionally, the distance from the classrooms to the toilets is considerable; therefore, it is necessary for these children to be helped to access them. I interviewed the mother of a paraplegic child (see section 2.3.2) with hydrocephalus, characterised by water retention, requiring the monitoring of the shunt that drains the water from her head. Despite the requirement mentioned, no health professional had been allocated to the school; therefore, the teachers were expected to take over this responsibility. The water leakage and the size of the toilets observed at School 3 suggest that this child finds it difficult to access and change diapers in these facilities. There was no other room dedicated to changing diapers at the school. It took me 21 minutes using the wheelchair to reach the toilets. A further ten minutes was allocated for children to clean themselves and change diapers, which totalled 31 minutes.

Below is the comparative analysis of the data collected from the three schools.

6.3.1 Comparative analysis: Participation observation data

I argue that different contexts present different needs. As such, strategies to improve curriculum accessibility, as is the purpose of this study, cannot be applied to all the schools homogeneously. The comparative analysis of the participation observation data is presented in Table 6.6.

Table 6.6: Comparative analysis and findings: Participation observation

School	Schools' accessibility
POS1	<p>The school was accessible, with covered rails and ramps for a child in a wheelchair. It took me 15 minutes to move from one classroom to the toilets. The toilets were big enough for children in wheelchairs to use comfortably.</p> <p>Despite the shortage of human resources at School 1, the school had sluice rooms for the hygienic disposal of diapers, dedicated rooms for refreshing and a clinic to monitor the health matters of the children.</p>
POS2	<p>There were no rails to improve accessibility and balance for children with disabilities. It took me 20 minutes to move from the classrooms to the small toilets which were difficult to access using a wheelchair.</p> <p>The necessary infrastructure, inclusive of human resources, to support children with disabilities was not available at this school.</p>
POS3	<p>Like School 2, no rails were observed in School 3. It took me 31 minutes to move from the classrooms to the toilets, which were small. Like School 2, the required infrastructure was not available at this school.</p>

“Inductive themes” (cf. Ryan & Bernard, 2000, p. 786) and categories began to emerge from the participation observation data. Data analysis is a time-consuming and muddled process (Atkin & Wallace 2012). One can infer that it embraces part

of the data interpretation. Data interpretation is defined as the process of deducing meaning from the patterns and themes that emerge from the analysed data (Niewenhuis, 2007). Braun and Clarke (2006, p. 10) argue that a theme is not “dependent on quantifiable measures but in terms of whether it captures something important in relation to the overall research question”.

The schools’ accessibility is presented as the main theme for the participation observation in the section below.

Table 6.7: Themes and categories: Participation observation

Theme	Categories
Schools’ accessibility	Lack of human resources
	Incompatible infrastructure

6.3.2 Interpretation: Participation observation data

In this section, the interpretation of the main theme, schools’ accessibility and the categories – lack of human resources and incompatible infrastructure – are presented. The theme above emerged from the inductive reordering (cf. Thomas, 2003) of the comparative data presented in Table 6.8. The theme suggests a spectrum of contextual factors that contribute to the impairment of curriculum accessibility for children with disabilities in rural schools.

6.3.2.1 Theme: Accessibility of schools

Infrastructural accessibility has been identified as a factor requiring adaptation to improve participation, and it has an impact on curriculum access for children with disabilities see section 2.2.2). Additionally, UNICEF (2013) postulates that children without disabilities also need to be consulted as the infrastructure is adapted. This assertion supports the importance of collaborating with all the stakeholders to ensure the sustainability of the new vision of including children with disabilities in full-service schools.

This theme embraces two categories, namely a lack of human resources and incompatible infrastructure. School 1 was built with children with disabilities in mind. Therefore, the physical infrastructure and toilets are big enough and easily accessible for all children, including children with cerebral palsy using wheelchairs. However, the unavailability of covered rails and ramps suggests that children in Schools 2 and 3 take more time and/or find it difficult to access the toilets, especially during rainy seasons. Furthermore, the toilets were too small to allow children in a wheelchair to turn comfortably and help themselves.

(i) Lack of human resources

Human resources refer to all other professionals, inclusive of housemothers and teaching assistants (see section 2.4.5), who need to support children to access both the school's infrastructure and learning material in the classrooms. While there was a human resource shortage at School 1, children used the shortest time to access the toilets and for refreshing, compared to the children at Schools 2 and 3, who spent 20 and 31 minutes respectively on this. The participation observation results revealed that there were no assistants at Schools 2 and 3 to help children access the school buildings.

The aforementioned posed curriculum access challenges in the sense that it took these children a long time to reach their classes without the help of the support staff they need. Despite this, teaching and learning continued in their absence. Furthermore, the curriculum in these schools is paced according to the prescripts of the Department of Basic Education (see section 3.3.8), while these children experience challenges manipulating writing materials, opening pages in books and getting interpretation services from the already overburdened teachers regarding the assessments in those classes. Therefore, the curriculum as well as assessment strategies remain standardised while the teachers are not trained to adapt these for access by children with disabilities.

There were neither no health professionals nor support staff at Schools 2 and 3, despite these children's vulnerability. The unavailability of such staff not only placed these children's lives at risk, but also exposed them to emotional pressure as they

are exposed to competing on uneven platforms (see section 2.2 and 4.3.3.1). This is despite the Standard Rules on the Equalisation of Opportunities for Disabled Persons (1993) (see section 3.2.5) and the White Paper on the Integrated National Disability Strategy (see section 3.3.5) aiming at promoting equity and quality education for children with disabilities in inclusive schools.

Furthermore, without the biopsychosocial support these children need (see section 2.4.3), two learners soiled themselves in class. This exposed them to ridicule from typically developing children, which according to the teachers, affects them emotionally. However, staff allocation in these schools cannot be standardised, as School 1 also needs housemothers to take care of these children throughout the day. This supports the literature (Lee & Low, 2014) in that the contextual and SWOT analyses (see section 4.3.3.1) are necessary to providing support for different contexts.

(ii) Inaccessible infrastructure

The social model, among other things, proposes the adaptation of the infrastructure as a way of removing access barriers and improving environmental accessibility for children with disabilities in all the schools (see section 2.2.2). However, the inaccessibility of infrastructure remains a challenge for children with disabilities in full-service schools. Inaccessible infrastructure, in this case, is two-pronged: firstly, it refers to the government's lack of knowledge regarding these children's capabilities to access the infrastructure and the support they need. Secondly, despite the budget that the Department of Education (2001) has allocated (see section 3.3.7) for the adaptation of the infrastructure, it had no impact on improving the schools' accessibility, and thus it has had an impact on curriculum access for children with cerebral palsy in rural schools.

Furthermore, the dropout rate of children with disabilities from inclusive schools can be attributed to the inaccessible infrastructure and explained as being a result thereof (see section 1.1). The infrastructure in the explored schools, except for School 1 of which the infrastructure was built before the implementation of inclusive education, was not suitable for children with disabilities using wheelchairs. Most

notable was that the understanding of the Department of Education of adapting these schools meant only adding a few ramps for entering classrooms. The roads from these children's homes to the schools in the observed rural areas were not wheelchair-friendly; therefore, these children would arrive at school late and tired, which affected their curriculum access. Additionally, some of the ramps at the schools were too steep to access without help. Since incompatible infrastructure continues to be a problem for children with disabilities in full-service schools, it can be assumed that, firstly, no SWOT analysis has been conducted to ensure that the schools would be easily accessible for children with disabilities (see section 4.3.3.1). Secondly, reflection for improving accessibility and, therefore, improving curriculum accessibility for these learners is never conducted (see section 3.4). Angelides et al. (2014) view reflection as a crucial process in the implementation of inclusive education as it exposes areas for improvement. It can, thus, further be assumed that, since the teachers are a constant presence in the child's life in the explored schools, in line with the literature, the teachers' voices have been side-lined during reflection on the challenges experienced by these children (see section 3.3.6).

6.4 DATA ANALYSIS AND INTERPRETATION: COMPLETE OBSERVATION STAGE

A deductive approach, including the index of inclusion (see section 5.4.3.2), with predetermined themes was used as an observation schedule to collect the data during the complete observation stage. The three themes used, were as follows: creating inclusive cultures, producing inclusive policies and evolving inclusive practices. In each of the three themes, indicators were used to delineate the data to be collected (see section 5). Since the aim was, among other things, to use the indicators on the index of inclusion to inform the contextual requirements for each of the three schools, the structured index and its indicators improved the manageability of the collected data (see section 5.3.4). The themes and categories for the complete observation stage are presented in Table 6.8 below.

Table 6.8: Themes and categories: Complete observation

Theme	Categories
Creating inclusive cultures	Promoting inclusion
Producing inclusive policies	Lack of dedicated school policies
Evolving inclusive practices	Lack of paradigm shift

6.4.1 Theme 1: Creating inclusive cultures

The indicators, namely building a community of acceptance and establishing inclusive values, were used as research schedules in this section. The aim of these indicators was to explore whether the teachers and children at the school had endeavoured to build a culture of acceptance where there was no segregation, but all the children were treated equally.

The children in School 1 all lived with some form of disability, and so the acceptance of all the members of the school community was visible. The school operated according to inclusive principles and values (see section 3.2.6). The children in wheelchairs were seen playing and pushing each other to and from the bathrooms to class after break. Isolation of the children with disabilities was observed in School 2. During breaks, typically developing children were seen to be more interested in playing with wheelchairs as toys than helping these children achieve their personal needs. Two streams of education, one for typically developing children and the other for children with disabilities, were observed in the sense that the children with disabilities were isolated in many ways. The teachers in School 3 believed in confining these children to special classes to be able to service them better. However, the segregation of these children exposed the teachers' lack of training in differentiating the curriculum for children with different abilities. There was no effort made to build an inclusive culture at School 3. Against this background, it is evident that the three schools had different support needs to help the children access the general curriculum.

The implementation of inclusive education internationally (see section 3.2), in Africa (see section 3.2.7) and in South Africa (see section 3.3) is discussed in the literature

referring to different acts and policies. However, the implementation of inclusive education contends with culture, beliefs and value systems as well as community attitudes towards disabilities in the rural areas. Furthermore, the teachers' attitudes towards, and perceptions of, children with disabilities and their capabilities have an impact on the support that the teachers source for these children (see section 3.2.6). It is against this background that the empirical data from Schools 2 and 3 begin to highlight the teachers' reluctance in promoting inclusion in these schools. These factors in the rural areas influence the teachers' negative perceptions and attitudes towards children with disabilities. However, Fyssa, Vlachou and Avramidis (2014), in this regard, believe that attitudes and perceptions can be changed through carefully planned training courses.

6.4.2 Theme 2: Producing Inclusive policies

The two indicators that were used as observation schedules on this theme are developing schools for all and organising support for diversity. I, therefore, focused on these indicators – whether, through the policies, the three schools catered for all its learners. Furthermore, I explored whether there was support at the three schools for learners with diverse educational needs.

Inclusive policies, as well as the implementation strategies compatible with the schools' unique needs, were in place in School 1. There was a sense that all the children felt accommodated and the teachers were working as a team in helping these children achieve. The inclusive education policies provided by the Department of Basic Education were available at School 2. However, there were neither implementation strategies nor school policies in place to organise support for children with disabilities in School 2. Although there were no implementation strategies in School 3 in a way that perpetuated exclusion, School 3 confined children with disabilities to special classes to make the curriculum accessible to them. An informal discussion with one teacher revealed that in this way, the teachers were able to pace the curriculum and assessments, thereby supporting these children in accessing the curriculum.

While schools are regarded as institutions to combat segregation in implementing new policies, such as the White Paper 6 in this case, Letseka (2014) and Ntombela (2011) argue that although South Africa is a country perceived as having good policies, the implementation thereof is a challenge (see section 3.3.6). The White Paper 6 on inclusive education (Department of Education, 2011) is one such policy. Its international origin is identified, among other things, as contradicting the implementation context in developing countries, including South Africa. The aim in implementing this policy in South Africa was to combat the exclusion of children with disabilities (Department of Education, 2011) and to promote equal education for all (Lomofsky & Lazarus, 2001; UNESCO, 2000) (see section 3.2.4). Therefore, the adaptation of this policy is necessary to ensure its successful implementation. However, the aforementioned adaptation of policies and the availability of implementation strategies were only observed in School 1. There were no such strategies in Schools 2 and which meant that developing a school for all and organising support for diversity were impaired. This begins to suggest different training needs for these schools.

6.4.3 Theme 3: Evolving inclusive practices

The two indicators used in the research schedules are whether the schools orchestrated learning and mobilised resources. In other words, these indicators aimed to explore whether the school or teachers arranged resources to support children at the school to access the curriculum.

It seemed as if School 1 understood the inclusive education policy (Department of Education, 2001) in a sense that, despite the unavailability of other professionals at the school, the policy developed by the school to source the required emotional, psychological and physical support from the nearby hospital was in place. Although the support was inadequate, the school, with the initiative of the SBST coordinator, sourced and received some support from the volunteering staff of the nearby hospital. A school policy to adapt the easy access to the curriculum and assessments for children in School 1 was also in place. This suggested an understanding by these teachers of atypical development and the need to make the curriculum accessible, as presented in the developmental theories (see section 2.5).

These teachers understood the factors for overcoming the exclusion of children with disabilities in the rural areas where there was no support staff dedicated to their schools.

There were no policies to mobilise resources and professional support, or adapt the curriculum and assessments for children in Schools 2 and 3. The only policies observed were the ones provided by the Department of Basic Education. The parents were expected to take over the responsibility for outsourcing resources and professional support for their children. However, the empirical data in this study confirm the literature findings that the parents' level of literacy and socioeconomic status have an impact on their ability to source this support for their children.

Among other things, the literature ascribes the difficulty in the implementation of inclusive education in South Africa to its Western origin, thus contradicting the context of implementation (see section 3.2). In this regard, the policies need to evolve and be adapted to suit the context for which they are intended (see section 3.5.1). Reasonable adaptation is embedded in the UNCRC (1989) (see section 3.2.3). Reasonable accommodation is an outcome of having identified what a child can or cannot do without support (ZPD) and thus outsource support in order to orchestrate learning (see section 2.5.1).

The adaptation of curriculum and assessment strategies was observed in School 1. Presumably, the lack of training of teachers in Schools 2 and 3 meant that these teachers did not have the ability to adapt the curriculum to reasonably accommodate and orchestrate learning for these children.

6.5 DATA ANALYSIS AND INTERPRETATION: INTERVIEWS WITH TEACHERS

Interview schedules with nine semi-structured questions were used to collect the data from 15 teachers, five from each of the three identified schools, one being the coordinator of the SBST. Responses to the interviews were tape-recorded with the consent of all the teachers concerned. The questions and responses are presented below in the sequence in which they were asked. After that the data are interpreted.

Question 1: What do you understand by the term “inclusive education”?

School 1	<p>T3S1 in this school understands inclusive education as “<i>removing barriers experienced by all children inclusive of their socioeconomic status</i>”, thus providing the necessary support for these children to progress in full-service schools.</p> <p>T5S1 describes inclusive education as “<i>including children with barriers in a school without such barriers and eliminate such barriers</i>”.</p>
School 2	<p>T1S2 understands inclusive education as involving institutions that cater for learners with different barriers and offer support according to their needs which “<i>may be academic or vocational</i>”.</p>
School 3	<p>In general, teachers in School 3 understand inclusive education as teaching children with all types of abilities.</p>

Question 2: What do you understand by the term “cerebral palsy”?

School 1	<p>Teachers in this school have been trained concerning different types of disabilities. They understand what cerebral palsy is, the different types of cerebral palsy, how it manifests itself, and the support as well as alternative assessments required for these children to access the curriculum. The coordinator of the SBST was leading the discussion.</p>
School 2	<p>T1S2 defined cerebral palsy as “<i>any person who has a problem in the brain</i>”. These teachers conceptualise cerebral palsy as a condition that a person is born with or emanating from an accident affecting the functioning of the parts of the body. They also understand that body functioning depends on the severity of the brain damage.</p>

School 3	T4S3 stated that in their school cerebral palsy was understood as <i>“children that are not coping with school and repeating the same class for more than three years”</i> .
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Question 3: What do you think is your role in teaching children with cerebral palsy?

School 1	<p>Teachers in this school believe that, since children with cerebral palsy present with multi disabilities and there are no other professionals at the school, the situation requires them to <i>“multitask”</i>. They state they are <i>“teachers first, then social workers, parents, physiotherapists, speech therapists, occupational therapist and responsible for arranging assistive devices to help these children progress”</i> (T2S1). <i>“Due to lack of teacher assistants and aids at the school, we sometimes leave children alone to help children that have soiled themselves”</i> (T5S1).</p> <p>The participants further acknowledged that leaving children without supervision is a dangerous practice but also mentioned that it is for the sake of children who are dirty and smell bad to save them from ridicule.</p> <p>T2S1 stated that children are sometimes <i>“unintentionally cruel”</i>. They mock and isolate one another, thereby destroying one another emotionally, which may affect curriculum accessibility.</p>
School 2	<p>It was clear that the participants realised that the teaching of children with disabilities requires specific skills. These teachers believe their responsibility is to be patient, to love these children, motivate them and arrange wheelchairs. T2S2 reiterated that <i>“facilities for these children must be adapted and that tables to improve the accessibility of reading material must be provided for these children. Parents need to get involved in their children’s education. However, training matters most for us to be able to</i></p>

	<p><i>support these children, as we are only trained to teach normal children”.</i></p> <p>Facilities, according to T4S2, need <i>“adapting chairs for the children in wheelchairs to be able to sit comfortably instead of sharing chairs with other children without disabilities”.</i></p> <p>With regard to parental involvement, these teachers responded that <i>“most of the parents do not participate in their children’s education”</i> (T1S2). The teacher ascribed the non-participation of these parents to being illiterate and feeling uncomfortable when having to discuss their children’s progress.</p>
School 3	<p>Teachers at School 3 believed their roles comprise supporting these children and showing them love. However, T5S3 reported that, because she had never received any training, she rather focused on the mainstream children when presenting lessons, as she did not know how to differentiate the curriculum for the benefit of all the children in her classroom.</p>

Question 4: How do you think the progression policy affects curriculum accessibility for these children?

Schools 1, 2 and 3	<p>Teachers in Schools 1,2 and 3 are in agreement that the progression policy affects children’s curriculum accessibility in the sense that these children are expected to progress to the next grade with their age cohorts although they have not grasped the content expected of them in the previous grade.</p>
School 1	<p>In this regard, one teacher from School 1 mentioned that children with cerebral palsy are clever and educable, but <i>“the systems in terms of the acts and policies are barriers to them accessing the curriculum”</i> (T2S1). This teacher mentioned further that <i>“before inclusive education we used to keep children in the same grade for three years until we were sure they were</i></p>

confident to learn content in the next grade. These policies deprive us of teaching these children and we end up killing the child” (T2S1).

This teacher has been at the school for a long time and mentioned that, initially, assessments were conducted for admission at the school and now the SASA (2006) fails children in the sense that all children are admitted, while there is no support in those schools and there are no assessments conducted to gain a scientific view of these children’s capabilities.

The teachers in School 1 further mentioned that although they try to adapt the assessments to suit the children with special needs, the circuit manager is against that as she does not understand the curriculum needs of children with cerebral palsy. This results in their rushing the curriculum and administering standardised assessments to comply with the circuit manager’s expectations.

“I will give an example of one day I was attending a workshop where the circuit manager was thanking all schools for the good work they did with the results. But she further said, ‘uhhhhh we were dropped by the two special schools in our circuit” (T2S1). This proved that she does not understand the requirements for children with disabilities.

Question 5: What challenges do you experience teaching children with special needs?

<p>School 1</p>	<p>The data pointed to the fact that challenges regarding teaching children with special needs emanate from the lack of training concerning disability and a lack of resources and support. T1S1 succinctly replied, “<i>Actually there are a lot of challenges.</i>” These teachers mentioned challenges, such as a lack of resources, a lack of support and the absence of parental involvement at the school. These participants expressed the wish for a separate directorate governing schooling for children with special needs.</p>
<p>Schools 2 and 3</p>	<p>The enormous challenges, including children with disabilities, in rural schools evoked emotions for one remedial teacher in School 3, where in the past she had been responsible for a special class. This teacher believes that struggling children in her class progressed because she gave these children individual attention. She mainstreamed these children in line with the ZPD (see section 2.5.1) after they were ready to follow the curriculum prescribed for the next grades in those phases.</p> <p>The teachers in Schools 2 and 3 attribute their challenges to the lack of training in disability studies and a lack of skill in adapting and differentiating the curriculum. Furthermore, according to these teachers, they feel that the expectations by the circuit office to finish the prescribed curriculum and use standardised assessments to determine progression for these children, make it difficult for them to cope.</p>

Question 6: Do you involve parents in the education of their children? How are these parents involved?

<p>School 1</p>	<p>The teachers in School 1 reiterated their frustration with trying to involve parents in participating in the education of their children. Most of these children are cared for by their grandparents, as their mothers are young and some are divorced due to the birth of these children; as such, the parents are ashamed to be associated with these children.</p> <p>Therefore, the parents decided not to make themselves available at the meetings called by the school. Additionally, factors such as illiteracy, unemployment and poverty all cause these parents to have low expectations of their children. <i>“They do not think anything good can come up with these children, but they are taking their children to the school to be cared for instead of learning”</i> (T3S1, who is a blind teacher at the school, who went to a special school as a child and managed to study until university level with her mother’s support). T4S1 responded that <i>“[k]nowledge is the problem”</i> in that these parents are ignorant of the value of education. This participant further explained that, if parents knew what the potential of their children would be with their support, they would be available whenever they were needed.</p> <p>These teachers also reiterated that the parents only came to the school on hearing that their child is in hospital, suggesting these parents are more concerned about their children’s health than their education, which is capable of making their children independent.</p>
<p>School 2</p>	<p>Although the teachers in School 2 also mentioned the non-compliance of parents in participating in their children’s education, they tried to address this by scheduling these meetings for Sundays and found that attendance did improve (T3S2).</p>

School 3	<p>The teachers stated that the parents in School 3 were not cooperative. They did not attend the scheduled meetings. The collected data did not indicate the reasons for the non-attendance of meetings by these parents. However, an informal discussion with the principal of the school indicated that these parents were not comfortable with being among the parents of typically developing children as they were ostracised as the parents of children with disabilities.</p>
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Question 7: What support do you receive from the DBST? What support do you need?

School 1	<p>The teachers in School 1 replied in unison that they were getting no support at all from the DBST. One teacher further stated that she did not even know who the coordinator of the DBST was. Another teacher stated that she knew who the coordinator was, but whenever she saw the coordinator at the school, the coordinator ended up at the administration office. They did not get a chance to communicate their challenges and frustrations or suggest the type of support they require for the children in their classes.</p> <p>Regarding the support, they need, these teachers indicated that they needed continuous and dedicated training with regard to disabilities as had been the case before the implementation of inclusive education. The teachers who have been at the school for a long time maintained that training was provided by the Department of Basic Education regarding disabilities, thus, making intervention easy and effective. They also needed assistive devices (dedicated technology for disabilities that would help with writing and speech output, among other things) to be provided for those children in need.</p>
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	<p>These teachers further suggested that training for them should be clustered with other special schools and full-service schools admitting children with disabilities. In this regard, they believed they would be able to share best practices with these colleagues. Furthermore, these teachers demanded qualified staff to train them as whenever they ask questions from curriculum advisers facilitating workshops they are told <i>“you teachers from special schools, wait, we will come to you”</i> (T1S1), but this never happens.</p> <p>Another teacher in this regard stated that when the changes were affected, <i>“we were taught about inclusive education but the circuit office was not taught about us”</i>(T3S1).</p>
<p>Schools 2 and 3</p>	<p>The teachers from Schools 2 and 3 shared the same sentiments in a sense that the coordinator of the DBST did visit the school, but they never got to talk to her and share the challenges they experience and the support they need to improve curriculum accessibility for children with special needs.</p> <p>T2S2 further explained, <i>“[A] meeting between parents and the coordinator of the DBST was once held where she gave parents pamphlets on different disabilities and support strategies. However, I think the meeting was not effective since parents in this area are not educated enough to read and understand the content of the pamphlets that she distributed.”</i></p>

Question 8: What training did you receive with regard to teaching children with special needs? Do you feel equipped to teach these children?

<p>School 1</p>	<p>Most of the teachers in School 1 received continuous training from the previous Department of Education and Training (DET). When inclusive education was introduced, as a pilot school, they were the first to be trained in its implementation. They felt equipped to teach children with special needs, including those</p>
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	<p>with cerebral palsy. The coordinator of the SBST holds a diploma in caring for neurally handicapped children that was offered by the Department of Education and Training in collaboration with the University of South Africa. The then school inspectors from the DET used to visit the school. They inspected it and offered in-service training. <i>“I then started enjoying teaching these children, I could detect the problems and how to help them. Fortunately, we also had all other professionals to refer these children to for support. Furthering my studies in Augmentative and Alternative Communication with the University of Pretoria, made me more comfortable teaching children with special needs”</i> (T2S1).</p> <p>Yet at the same time, these teachers were quick to admit that they needed further training as disabilities increased and intervention strategies evolved. Furthermore, there were teachers at the school who had been redeployed from full-service schools without any background knowledge regarding disabilities and intervention strategies. It was interesting to note that the coordinator of the SBST (T2S1) took the responsibility of supporting these teachers.</p> <p>Another teacher who had studied Augmentative and Alternative Communication at the University of Pretoria (T1S1) stated that she understood that culture was an integral part of understanding children with disabilities (see section 4.3.4.1). Whenever there were issues about these children, she said, <i>“I call parents and interview them regarding their culture and beliefs systems. It mostly helps”</i>(T1S1).</p>
<p>Schools 2 and 3</p>	<p>Most of the teachers in Schools 2 and 3 had studied inclusive education at different universities; however, although they reiterated their need for training in disability matters, they could not elaborate on their expectations of the training.</p>

Question 9: How do you feel about inclusive education? Do you think it works in rural areas?

<p>School 1</p>	<p>All the teachers from Schools 1, 2 and 3 were in agreement that inclusive education does not work in the rural areas as the infrastructure itself is a challenge. Accessibility, according to T3S1 is not about a few ramps to the classrooms, but consideration should be given to the roads to the schools, the buildings and the toilets, which are mostly pit toilets when there is no assistance to access these. This teacher responded as follows, <i>“There is no support in rural areas honestly, they concentrate on the infrastructure meaning a few ramps that do not even help but impair children with disabilities more”</i> (T3S1). Regarding assistive devices, T3S1 further indicated a further lack of electricity as another challenge that would have an impact on the use of those. The teacher further indicated that she wondered if there was buy-in regarding inclusive education in the rural areas where witchcraft is rife. She believed it was necessary for all the stakeholders to be consulted; in so doing, inclusive education would be embraced by all concerned. In conclusion, the teacher recommended that unless resources were in place, it would be better for children with disabilities to be served in special schools or resource centres where there would be help in a sense that the teachers understand their needs.</p>
<p>Schools 2 and 3</p>	<p>It also emerged that assistive devices were expensive and a teacher from School 2 stated that affordability was a challenge for parents in the rural areas depending on the disability grants from the government.</p> <p>Additionally, teachers from Schools 2 and 3 agreed that there were parents who refused to let their children go to the same class as disabled children. Similarly, typically developing</p>

	<p>children in these classes are not kind to these children, more specifically the incontinent ones. The teachers suggested that the coordinator of the DBST, among other things, should help to train parents in disability matters, particularly informing them that it is not contagious. On further probing as to why these teachers do not do it themselves, the teachers indicated that they were part of the community and share the same belief systems; therefore, the parents would think they are only trying to convince them to accept children with disabilities in inclusive schools and that they (the teachers) do not mean it.</p>
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Question 10: How do you think culture influences the implementation of inclusive education?

<p>School 1</p>	<p>The teachers at the three schools responded to this question by discussing culture, belief systems and religion having an impact on the implementation of inclusive education and curriculum accessibility for children with cerebral palsy.</p> <p><i>“Mhmm, that one is a problem and is creating problems for families and children”</i> (T5S1). The teachers in School 1 knew cases where families accused one another of witchcraft as having caused the disabilities in these children.</p> <p>While children with disabilities require support to be able to function, some cultures believe that a pregnant woman cannot be in contact with a disabled child as they may give birth to a disabled child themselves. Housemothers in School 1 thus refuse to touch these children. In such cases, the children feel rejected and emotionally affected, which has an impact on their schoolwork. Sometimes it is children themselves who refuse to be helped by women after returning from initiation schools.</p> <p>The refusal emanates from the teachings in these schools that they were graduating to be real men and, thus, could not allow</p>
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	<p>women to see them naked. Also, children spend months before returning to school after initiation schools and, thus, they miss out on schoolwork.</p> <p>Some belief systems and religions are of the opinion that disability can be cured, and so, most children in School 1 have strings around their waists and wrists. These children are laughed at and mocked, leaving them embarrassed about the associated stigma.</p>
School 2	<p>In an informal discussion with one teacher (the son of a local chief) at School 2, he mentioned that a number of cases have been arbitrated by his father regarding families accusing one another of being responsible for the disabled children in their families. As a result, this teacher states that the relations are strained to such an extent that as teachers they are caught up in the tension, which affects teaching and learning at the school.</p>
School 3	<p>The teachers in School 3 indicated that witchcraft was rife in their village and that some parents still had a problem with their children going to a school that admits children with disabilities.</p> <p>It also emerged that whenever typically developing children in classes with disabled children got sick, the parents would attribute the sickness to the disabled children bewitching their children.</p>

The teachers' group interviews at School 1, 2 and 3 lasted an hour and 22 minutes, 31 minutes 16 seconds, and 18 minutes respectively. The time spent interviewing the teachers from these schools already suggests that the teachers at School 1 were comfortable responding to the questions asked and/or knowledgeable regarding the phenomena under investigation. These teachers' educational backgrounds and training can be assumed to be responsible for their acceptance or the questions. However, the teachers at Schools 2 and 3 did not seem comfortable or

knowledgeable enough discussing both inclusive education and disabilities. Below is the interpretation of the findings of the data that were previously analysed inductively.

Table 6.9: Themes and categories: Teachers

Theme	Categories
Understanding of inclusive education and disability	<ul style="list-style-type: none"> (i) Rurality (ii) Poverty (iii) Parents' educational level
Lack of progression and independence	<ul style="list-style-type: none"> (i) Lack of training (ii) Lack of insight into disability (iii) Lack of support and resources

6.5.1 Data interpretation: Interview data of teachers

In this section, the interpretation of the themes and categories that emerged from the findings above is presented. The two themes are “understanding inclusive education and disability” and “the lack of progression and independence”.

6.5.1.1 Theme 1: Understanding inclusive education and disability

Although the empirical data collected reveal an understanding of inclusive education and disabilities, the teachers define it differently. Many authors in the literature support a common understanding of inclusive education and disabilities within communities with the same cultural beliefs and values (see section 2.4.1) and authors argue that it helps to create harmony. However, contradicting many authors in the literature, Swart et al. (2002) (see section 4.3.5.1) argue that since inclusive education, as is the case in this study, cannot be homogeneously implemented in all the contexts, it is not necessary to come up with a common definition for its successful implementation. A holistic assessment of the implementation context is necessary to understand the requirements of inclusive education, thus facilitating its implementation.

Furthermore, cerebral palsy as a neurodisability (see section 2.2.4) presents with a spectrum of disabilities (see sections 2.3.1 and 2.3.4) and requires a myriad of support strategies for the learner to be able to progress in a full-service school. In addition to the support strategies required, the availability of trained teachers is fundamental. Despite a misconception around disabilities that these children have poor health and cognitive abilities that are considered to be below average in the literature (see section 2.2.2), these children progress when support fit for purpose is provided. The cumulative effects of the misconceptions have had an impact not only on society's conceptualisation and understanding of disabilities, but also on the teachers' mind-shift to the new understanding of disabilities as these misconceptions slow down the progression of these children in full-service schools.

Furthermore, inclusive education is argued to be a Western concept; therefore, the understanding thereof needs to be viewed against a cultural background, among other things (see section 2.4). Despite the fact that the interviewed teachers at the three schools had a relatively fair understanding what the terms "inclusive education" and "disability" entail, categories such as rurality, belief systems and parents' education level, emerged to support the literature because these factors have an impact on curriculum accessibility for children with disabilities (see section 3.2.7 and 4.3.4.1). However, at the same time, these findings provide insight to improve curriculum accessibility for these children. Rurality, belief systems and parents' educational levels as categories encompassed in the abovementioned theme are discussed below.

(i) Rurality

This study suggests that the successful implementation of inclusive education depends, among other things, on the holistic assessment or a SWOT analysis (see section 4.3.3.1 and 3.4) conducted to ensure that the strategy resonates with the communities for which it is implemented (see section 2.2). Rurality in the context of this study encompasses geographical areas located far from urban areas, where there are little employment opportunities (see section 4.3.5.1). These areas are characterised by a lack of basic services, such as water, electricity and appropriate infrastructure, particularly for easy access by children with disabilities. The

inaccessibility of compatible infrastructure as well as a lack of qualified teachers for inclusive success and the low literacy levels of parents in these areas are common features and impede the successful participation of children with cerebral palsy.

This study was underpinned by Bronfenbrenner's (1979) Ecological Systems Theory to explore the matters at the different ecological systemic levels that have an impact on curriculum accessibility for children with cerebral palsy. Rurality and the factors that have an impact on curriculum access for children with cerebral palsy in this context were discussed in the chronosystem (see section 4.3.5.1). The empirical data in this study support the literature in that rurality is one of the contributing factors affecting curriculum accessibility for children with cerebral palsy.

Rurality in this context includes factors such as infrastructure, witchcraft, poverty and belief systems, as experienced by children with disabilities (see section 3.7). With regard to witchcraft, all the participants referred to the fact that some people in the rural areas still believed in witchcraft as being the reason for disabilities. This happens to such an extent that some parents refuse to have their children taught in the same school or classroom as children with disabilities. Culture and belief systems are considered to be inherent human rights for all citizens (UNESCO, 2006); however, these beliefs cannot be practised at the expense of violating the rights of children with disabilities (see section 3.2.3). While it is children with disabilities who need to be served in this case, the rights of housemothers believing that touching a disabled child while pregnant may affect their unborn child also need to be represented. This is a challenge in a multicultural South African context where the rights of all citizens are imperative (see section 3.2.2).

(ii) Poverty

Poverty and disabilities are believed to be interrelated (Lee, 1999). Furthermore, the literature holds that more children with disabilities are found in Africa than developed countries (see section 3.2.7). In an inclusive context, supporting children with disabilities encompasses the use of assistive devices to ensure curriculum accessibility and progressing along with their peers. However, the lack of employment, corruption and the low socioeconomic status of the parents in rural

areas all have an impact on these children accessing assistive devices. In addition to this is the parents' educational level, which Nino-Zarazua (2016) (see section 3.2.7) describes as being very low. The results thereof are teachers falling short in supporting these children, and their curriculum access is affected.

Despite this, there are contradictions in the literature in that Brann-Barret (2015) argues that political will (see section 3.4) is more important than all the other matters mentioned above. There are many poor countries said to have achieved success in inclusive education as a result of the government creating an enabling environment for the successful implementation of inclusive education (see section 3.3.9).

(iii) Educational level of parents

Despite the fact that the White Paper 6 (Department of Education, 2001) considers parents to be essential for the implementation of inclusive education (see section 3.2.7), their literacy level is considered to be a hindering factor in rural areas (Aitchison & Harley, 2006). The key role of parents in fostering educational success for their children with disabilities has been discussed in the mesosystem (see section 4.3.2). The importance of the relationship between parents and the teachers was further discussed (see section 4.3.2.1). Of crucial importance is that this relationship may close the gap in the lack of support and aid development by providing teachers with information about these children's capabilities and the prognosis of these disabilities (see section 4.3.1.2). However, from the interviews conducted with the teachers, it was found that the parents did not make themselves available to help the teachers understand these children.

The absence of parental involvement in the education of these children contributes as stressors to the teachers' already heavy workload and their responsibilities in inclusive classrooms (see section 4.3.1.3). However, the literature attributes this absence to the discomfort of parents about discussing educational matters with the teachers while they themselves are illiterate. Additionally, the use of English as a medium of instruction in these discussions exacerbates the challenge in the context

where parents are illiterate and the teachers' English proficiency is low (see section 3.2.7).

6.5.1.2 Theme 2: Lack of progression and independence

For children with disabilities to progress in school and to be enabled to become independent, professional and other human resource support as well as the availability of assistive devices and accessible infrastructure are needed (see section 3.2). In this section, the lack of teacher training, the lack of insight into disability, the absence of resources and support are the three categories encompassed in the theme progression and independence. The progression and independence of children with disabilities are dependent, among other things, on these categories. The teachers from all the interviewed schools reiterated the need for training (see section 4.3.3) and resources, as well as the importance of the parents' involvement (see section 4.3.2.1) in the education of these children.

(i) Lack of training

Negative attitudes among teachers towards disabilities are attributed to a lack of training and understanding of disabilities and the abilities of these children (see section 3.2.6). Success regarding inclusive education and a change of attitudes in some countries have been achieved through training (see section 2.3.4.1). The teachers and schools as institutions are regarded as tools to enforce what a country envisages – the implementation of inclusive education. However, many authors have found a lack of training (see section 4.3.3.1) and support (see section 4.3.3.2) in many countries, including South Africa, to be a stumbling block to achieving different aspirations, such as the implementation of inclusive education in this case.

However, a lack of training, in this case, refers to the training of all the stakeholders regarding insight into disability and the implementation of inclusive education. Training reinforces the understanding of the stakeholders' roles and promotes collaboration, which is considered to be a building block towards the successful implementation of inclusive education and the development and the progression of children with disabilities in full-service schools. However, collaboration is a concept

very difficult to implement as the various stakeholders have different aspirations regarding the policies that are to be implemented.

However, the participants in this study lamented their lack of training to deal with children with disabilities as a matter that affects their curriculum accessibility. This was more apparent with the teachers from Schools 2 and 3. These teachers revealed how the lack of training had an impact on the way they taught the learners with disabilities, which made them revert to traditional methods of teaching. The teachers from School 1 understood disabilities and their responsibility for supporting children with a spectrum of abilities in inclusive classrooms. These teachers were also aware of the recent research-based insights and stated that they needed continuous training in those to be able to benefit children in their classrooms.

It also emerged from the interviews with the teachers in School 1 that the stakeholders, as the curriculum advisers, needed training to be able to support them to improve curriculum accessibility for children with disabilities in their schools. These teachers felt that the district bureaucracy also impeded curriculum access and the progress of children with cerebral palsy compared to their peers. The continuous training and academic background of the teachers in School 1 informed these teachers of the requirements for children with cerebral palsy to be able to access the curriculum in rural schools. The coordination between the coordinator of the SBST and the teachers at School 1 was apparent. The coordinator was informed about the disabilities and support strategies, and as such, she fulfilled her responsibilities of identifying the challenges and sourcing support for both the teachers and the learners at the school.

However, it also emerged from the interviews with the teachers in Schools 2 and 3 that although they understood that they lacked training, they could not engage further regarding the type of training that they needed. These teachers mentioned that they had not been trained to teach children with disabilities; yet they found themselves in a situation where they had to do so (see section 1.5.2). This factor supports the literature that the teachers' views were not considered before giving them the responsibility of teaching children with disabilities (see section 3.3.6).

In light of the category of the lack of training discussed above, the teachers from Schools 2 and 3 had failed to make a paradigm shift from the medical to the social model of disability (see section 2.2.1). These teachers were adamant that they had not been trained to teach children with a spectrum of disabilities. It was argued in the reviewed literature in this study that it was necessary for the teachers to understand child development to be able to support children with atypical development in inclusive classrooms (see section 2.5). It can be confirmed that it is against this background of a lack of insight into disability that, although these teachers were aware that they had a responsibility to support children with disabilities, they did not know how to do this.

Furthermore, the training regarding the implementation of inclusive education and the responsibilities of the different stakeholders (Department of Basic Education, 2014) at school level allowed the coordinator of the SBST in School 1 to take up the responsibility and outsource support services from the nearby hospital. It emerged from the empirical data that the coordinators of the SBST from Schools 2 and 3 were not aware of their responsibilities, which naturally has an impact on curriculum access for children with cerebral palsy.

The teachers in School 1 reiterated that South Africa was not ready for the implementation of inclusive education in the rural areas. They further suggested that until resources are in place, these children should be placed in special schools and resources should be made available as the lack of these continues to further segregate these children from accessing the general curriculum and progressing with their age cohorts. Similarly, in support of the literature, the teachers feel that the autonomy to pace the children, differentiate the curriculum and monitor progression should be given to those teachers who understand these children better as they are in their classes (see section 1.2). Lee and Low (2014) support the above and argue that policy developers have lost touch with what is happening in inclusive classrooms.

(ii) Lack of support and resources

The lack of support and resources (see section 4.3.4) in the context of this study incorporates the provision of professional support, support staff, parental involvement and assistive devices without which these children will not be able to access the prescribed curriculum and progress with their peers. The lack of support from the coordinator of the DBST was again emphasised by the teachers in all the schools. The curriculum advisors, who are expected to support these teachers, did not have an epistemological understanding of disabilities. The circuit manager expected the school with children with diverse educational needs to be at the same level as all the other schools. The lack of coordination between these stakeholders and the unavailability of the support of the coordinator of the DBST both further exacerbate curriculum accessibility for these children (see section 4.3.3.2).

It is against this backdrop that, despite teachers in School 1 doing their best to outsource professional support, the lack of consistency in supporting these children stalls the progress and is a disabling factor for these children when accessing the curriculum in the rural areas.

6.6 DATA ANALYSIS AND INTERPRETATION: INTERVIEW WITH COORDINATOR

The coordinator of the DBST holds a PhD from the University of South Africa. In her thesis, she investigated the attitudes of black communities towards disabilities and cerebral palsy was one of the targeted disabilities she explored. She worked in School 1 and taught many children with cerebral palsy before she became the coordinator of the DBST. An individual interview was conducted with the coordinator of the DBST.

The DBST supporting the three schools was explored. One coordinator of the DBST was interviewed since she was the only appointed official in the district responsible for all the matters related to inclusive education, including the outsourcing and provision of support for the teachers and children in the three schools that were explored. The interview schedule consisted of eight questions, and the responses were tape-recorded and captured in the research journal.

The interview was subsequently analysed and interpreted according to the themes and categories presented below.

- **Question 1: What do you understand by the term “cerebral palsy”?**

In her response, the coordinator of the DBST explained what cerebral palsy is and further revealed the support strategies these children need to progress in school. The coordinator also mentioned how she missed the days when she was a teacher teaching these children in School 1. She elaborated by saying that the classes had been small and she could give individual attention and refer these children to the professionals available at the school to offer these children the support they needed.

- **Question 2: What do you think inclusive education means?**

She understood inclusive education as being a strategy for admitting learners “*with learning barriers in inclusive schools with teachers understanding that these learners have many challenges*”.

- **Question 3: As the coordinator of the DBST, what are your responsibilities?**

“*[My responsibilities]... ummm is to make sure that the DBST is functioning in many ways.*” Supporting the schools, educators, learners, as well as the parents, “*since parents are the engine in the implementation of inclusive education*”. However, she also mentioned challenges, such as financial constraints and not being involved in the budgeting process (for assistive devices and learning materials), which affected her ability to execute her responsibilities.

- **Question 4: What challenges do you face in the execution of your duties?**

The main challenge is that, since there are no full-time employed members of the DBST and the co-opted members are employed full-time in other government departments, they do not have enough time to dedicate to inclusive education. These professionals only come to the school when there is an emergency, which is not enough intervention for children with disabilities. The coordinator of the DBST later voiced her aspiration by saying, “*I wish we could have them employed full-time*”.

at the schools as children in those schools miss out on support, thus, quality education.”

- **Question 5: How do you support teachers in making sure that children with special need access the prescribed curriculum?**

The coordinator of the DBST indicated that *“training is done differently; the province conducts the training. I also offer training on different disabilities such as Down syndrome, epilepsy, autism and cerebral palsy”*. The teachers from schools identified for piloting inclusive education are invited to provincial training where contracted universities and specialists offer training. *“Adding to the problem is that the curriculum advisors responsible for supporting teachers are not knowledgeable regarding disabilities, nor the support that these children need.”*

- **Question 6: Do you think inclusive education really works in rural areas and why?**

The coordinator of the DBST responded that the implementation of inclusive education is *“sooo difficult in rural areas”*. She further pointed to the misconceptions in the rural areas that disability is a curse and contagious; therefore, associating with such children puts one at risk of contracting disabilities. Additionally, she mentioned that the parents in one school threatened to withdraw their children from the school on realising that the school was opening its doors for children with disabilities.

This participant referred to other villages where communities refuse to bring children to schools. These children receive social grants from the government, and since there are no job opportunities in these areas, social grants are an income for those families. These parents believe that the government will monitor how they use the money allocated for their children, so they keep their children at home.

In closing to this question, the coordinator indicated the mammoth responsibility that has been delegated to her office without employing the staff to help execute the functions.

- **Question 7: What would you suggest to improve the implementation of inclusive education in rural areas?**

The coordinator of the DBST mentioned, “*Number one is to train curriculum advisers and teachers to have a positive attitude towards disabilities.*” Second and most importantly, the coordinator of the DBST mentioned the necessity of awareness drives to be conducted in communities. She believes that in so doing, communities will understand that disability is not contagious, thus accepting these children as members of the community. Moreover, the coordinator of the DBST mentioned that it was difficult for her to train all the schools as she was the only person in the district office who had been assigned to all the responsibilities of inclusive education and was expected to support teachers, parents and learners and also had to attend professional meetings on inclusive education.

- **Question 8: How does culture impact on the treatment of children with disabilities particularly in rural areas?**

The coordinator mentioned the matter of witchcraft and belief systems having an impact on the acceptance of children with disabilities in rural schools. This, she mentions, shatters the self-esteem of these children and adds to their emotional problems.

- **Question 9: White Paper 6 (2001) promotes the coordination between the parents, the school and the teachers for the successful implementation of inclusive education. What is your view on this in the context of your district? Do you think it is possible to make the suggested relationship work?**

The coordinator of the DBST is of the opinion that the collaboration may work, but would be impaired by the stakeholders not understanding disabilities and their roles in the successful implementation of inclusive education.

Regarding the parents of children with disabilities, she mentioned that while these parents do not make themselves available for meetings concerning their children at the schools, many wish the best for their children. They want their children to be “*self-sufficient*”.

Table 6.10: Themes and categories: Coordinator of the district-based support team

Theme: Lack of human resources
Lack of professional and support staff
Lack of collaboration

6.6.1 Data interpretation: Coordinator interview data

The two themes and the categories that were inductively extracted from the data are presented below. These themes are the lack of support and the lack of collaboration.

6.6.1.1 Theme 1: Lack of support professionals

The coordinator of the SBST is the beacon for the successful implementation of inclusive education as she is responsible for supporting and outsourcing support for the teachers, parents, as well as children at the schools (see section 3.3.3.10). The SIAS document (Department of Basic Education, 2014) outlines the composition of the professionals in the DBST, which involves therapists, psychologists and social workers, depending on the children’s needs. However, the empirical data in this study revealed that the coordinator of the DBST in this district is the only person in the office. She has neither foot soldiers to help execute the mandate of her office, nor professional staff to support children in full-service schools. She is responsible for organising meetings, sending invitations, writing reports and reporting to the provincial department on the progress made in the district.

This supports the literature as reflected in Engelbrecht’s (1999) work that although the intentions of the government by implementing inclusive education were noble

(see section 4.3.4.1), the decentralisation of the responsibilities of the departments was inopportune for the successful implementation of inclusive education in the rural areas. The matter of untrained curriculum advisors emerged as a further factor disabling curriculum accessibility for children with disabilities. The literature postulates that this contributes to the already frustrated teachers, who consequently revert to traditional teaching methods at the expense of excluding children with special needs (see sections 3.5 and 3.3.9).

In the light of this, the interpretation of the coordinator of the DBST supports the contribution that Agguerrondo (2008) made to the literature (see section 3.5). Agguerrondo (2008) asserts that political-ideological, epistemological, pedagogical and institutional factors are crucial for inclusive success (see section 3.5). However, worth mentioning is the absence of the political will to make the strategy work (see section 4.3.4.1). The disregard of environmental requirements for support was evident in all the explored contexts.

6.6.1.2 Theme 2: Lack of collaboration

Success in inclusive education cannot be achieved without the collaboration of all the stakeholders in education (see section 3.3.3.10). However, the coordinator of the DBST considers the fragmented collaboration as being a disabler for children with cerebral palsy accessing the curriculum. She mentioned that she does not have staff in her office to help with inclusive education responsibilities. Schools do not have dedicated staff for her to work with, and the professionals she outsources have dedicated responsibilities in their workstations. As such, they are not always available for her meetings or to support the teachers and children with disabilities in the different schools.

Therefore, as much as collaboration is essential, the lack of professional and support staff in her office renders her office incompetent.

6.7 DATA ANALYSIS AND INTERPRETATION: INTERVIEWS WITH PARENTS

Two parents of children with cerebral palsy were interviewed from Schools 2 and 3. Initially, the plan was to interview one parent from each of the identified schools. However, I discovered during the planning stage that one of the identified parents had removed her child from School 1 to School 3. Therefore, it was decided to interview this parent representing both Schools 1 and 3 with the aim of comparing this parent's lived experiences in both these schools.

Despite the fact that the interviews were prepared in English, they were conducted in Xitsonga to allow the parents an opportunity to express themselves adequately in their mother tongue. I immersed myself in these parents' situations, and reached a satisfactory level of data saturation to improve the trustworthiness of this study. Krishna, Naidoo and Pilkinton (2010, p. 22) argue that translation in research contends with "cross-cultural matters" that may affect the trustworthiness of the study, among other things. However, the trustworthiness of the data presented in this study was not culturally compromised as I share the same language and culture with the interviewed participants.

The parents' responses to the interview questions regarding raising children with disabilities were recorded following their consent. Interview schedules with eight semi-structured questions were used. The responses are presented below.

Question 1: What are the challenges of having a child with disabilities on the rest of the family?

School 2	PS2 stated that having a child with a disability in her family had a ripple effect on all the members of the family. She mentioned that as the mother, she could not look for a job to supplement the disability grant that her child receives as she has the child to take care of; therefore, it has an impact on their standard of living. She also mentioned that her son seems emotionally affected since he sometimes has to bring his sister back home and miss
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	<p>class when she has soiled herself in the classroom. She also stated, “<i>sometimes my children have to miss out on playtime with their friends and stay home to keep their sister company</i>”. It would seem that having a child with a disability affects all the members of the family as their main priority is to make the child with cerebral palsy comfortable first.</p>
School 3	<p>PS3 states that it was not easy financially raising a child with a disability since both she and her husband are unemployed. She mentioned that she could not find a job since she had to take the child to and from school. PS3 mentioned that she sometimes felt guilty that she was neglecting her other children to make her child with a disability feel loved. She further mentioned that, since the family was not financially stable, all the other children were squeezed into one room to make provision for her child in a wheelchair to have operational space. The mother stated that this makes the children fight for space in the house; therefore, it affects their relationships. She finally said, “<i>in short it is not easy</i>”.</p>

Question 2: Do you discuss your child’s performance with the teachers at your child’s school?

School 2	<p>Participant PS2 immediately said “<i>no</i>”. On further enquiry, the parent spoke about collecting the progress reports and attending parents’ meetings. There were no specific meetings about her child’s performance that she attended.</p>
School 3	<p>The parent said that she talked to the teachers about her child. However, I could pick up from the discussion that the parent</p>

	<p>talked more about the child's health matters to the teachers. The parent contacted the school when the child was in the hospital and could not go to school. On enquiry what she would like to see happening to improve her access to the curriculum, the mother responded that she would like the government to build her a house.</p>
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Question 3: Do you have an opportunity to voice your concerns?

School 2	<p>This parent's educational level was low and as a result it can be assumed that she was not comfortable discussing the education of her child with the teachers. Voicing concerns for this parent were more about informing the school of the health challenges that the child faced.</p>
School 3	<p>Although the educational level of this parent was low, this parent understood that her child progressed with her age cohorts, although she had not fully grasped the work of the previous grade. As such, she approached the teachers to ask if they could arrange a skills class at the school for the sake of equipping her child with a trade.</p>

Question 4: Do you think your child is happy at the school, and why?

School 2	<p>PS2 stated that although there were challenges with other children accepting her child at school, she loved going to school as it was the only place where she met other children and played.</p>
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	However, she usually comes home sad as most children at the school always laugh at her, mostly when she soils herself.
School 3	PS3 responded, <i>“I don’t think so; the things that she sometimes tells me when she comes back from school are hurting. I wish the government could build a school offering different curriculum levels for children that do not cope in full-service schools or provide human resources to support or help our children”.</i>

Question 5: What challenges do your child experience at school?

School 2	<i>“It is not only my child with a disability experiencing problems at the school. Her older brother goes to the same school. Whenever his sister wets herself, the teachers either call me or ask the brother to bring her home. I am not able to work as I need to take care of my disabled child. I wish the government could arrange transport or electrically powered wheelchairs for these children.”</i>
School 3	This parent responded by saying the challenges weremany, but what made her sad was that the children at the school charged her child a fee for pushing her to the toilet since there was no support staff at the school. <i>“I once had to confront a parent of a “normal child” because they abused my child and called her names for failing to pay these children.”</i>

Question 6: Do you think culture contributes to the way your child is treated at school?

School 2	<p><i>“...eehhhh culturally a disabled child in the family is a product of being bewitched. It is worse for me as most community members think I got what I deserved as my child’s father was married [to someone else].”</i> PS2 further mentioned that it is more difficult for her as her child goes to the same school as the other children from his legal wife. She further mentioned that although she is trying, for her own sanity, to ignore believing her child was a product of witchcraft, the ridicule and stares from the community area constant reminder thereof.</p>
School 3	<p><i>“The parents did not accept that their children go to the same school with my child as they thought my child was bewitched, or was herself a witch and feared that it would affect their children. It got better when the principal called a parents’ meeting and spoke to the parents about disabilities.”</i></p>

Question 7: Do you think your child is accepted into the community and included at the school?

School 2	<p>PS2 stated that the child was neither accepted in the community nor included at the school. She said that the misconceptions about disabilities meant that parents influenced their children, who then refused to play with her child, resulting in her child being segregated. This parent further said that it hurt her because she believed she was responsible for her child’s disability as the child is a product of infidelity with a married man in the community.</p>
School 3	<p><i>“She is known in the community; however, since she does not move around, it is difficult to say for sure if she is accepted. However, children at the school laugh at her for using diapers at her age; as such, she is mostly heartbroken and withdrawn. At times she fakes an illness just to avoid going to school. Nevertheless, her relatives accept her.”</i></p>

Question 8: Why did you remove your child from School 1?

School 3	<p>The mother responded that she had removed her child from the school because of the child’s mental ability. She stated that the child was not benefiting from the curriculum taught at the school anymore. Her child’s stay at the school was expensive and she felt that the child could rather come back home and they could use the disability grant money for the household, as neither she nor her husband were employed. However, she believed her child was deteriorating physically. The teachers at School 1 always arranged physiotherapy for the child where the callipers and wheelchair were constantly in check. She further mentioned that the school also had a clinic where children were attended to – <i>“The teachers at School 3 always call me to attend to my child whenever there is something related to the shunt in her head or she is wet.”</i></p>
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Table 6.11: Themes and categories: Parents

Theme	Categories
Cultural beliefs	<ul style="list-style-type: none"> • Attitudes toward disabilities • Witchcraft • Belief systems
Socioeconomic status	<ul style="list-style-type: none"> • Lack of employment • Literacy levels

6.7.1 Data interpretation: Interviews with parents

Two themes emerged, namely cultural beliefs and socioeconomic status. The themes and the categories that emerged from the interviews with parents are presented in the section below.

6.7.1.1 Theme 1: Cultural beliefs

Cultural beliefs, such as attitudes towards disabilities, witchcraft and belief systems, emerged as categories affecting curriculum accessibility for children with cerebral palsy from the interviews with parents. Below, the categories of the cultural belief theme are discussed, as presented in the table above.

(i) Attitudes toward disabilities

Negative attitudes (see section 4.3.4.1) of community members towards disabilities emerged as a cultural belief impeding curriculum accessibility for children with cerebral palsy. Mosalagae (2016) and Ainscow and Sandhill (2010) postulate that disabilities emanate from ancestral curses and witchcraft evoked by jealousy among family members and neighbours (see section 4.3.3.4). To support these authors' claim, when the parents were asked whether their children were happy going to the full-service school they were attending, both parents responded negatively.

These parents indicated that although their children considered going to school to be an opportunity to make friends, the bullying that typically developing children subjected them to, discouraged them. Although PS2 felt going to school for her child also included, among other things, making friends, most children at the school did not accept her and ridiculed her (see section 4.3.1.4). PS2 stated that her child went to the extent of faking an illness for the sake of not going to school, as she was bullied by typically developing children at the school.

Such incidents are supported by the literature in that these children are exposed to bullying and intimidation in full-service schools (see section 3.2.5). PS3 indicated that some children at School 3 refused to play with her child and they charged her money for pushing her from the class to the toilets during comfort breaks. The courtesy does not suggest empathy for the child with cerebral palsy, but self-serving for typically developing children as they used her as a money-making source. PS3

resorted to approaching the school principal to intervene as a result of the parents' and their children's attitudes towards her child with cerebral palsy. The negative attitudes, according to these parents, were exacerbated by misconceptions regarding witchcraft in these communities (see section 4.3.4).

(ii) Witchcraft

Although the scarcity of well-equipped health infrastructure and qualified staff in Africa is attributed to the prevalence of disabilities (see section 2.3), disability is still associated with witchcraft in most African countries (Mosalagae, 2016) (see section 4.3.4). However, witchcraft in this study is not only confined to the belief that children with disabilities are bewitched, but also encompasses the belief that these children and their families are witches themselves.

While both the interviewed parents believe in witchcraft, PS2 was more convinced that witchcraft was the reason her child was disabled. She attributed this to the relationship she had with the father of her child, who was married. The community ridiculed the mother and her child is called a witch or the bewitched, instigated by her step-siblings at school. This affects the emotional well-being of both the child and the mother, and thus has an impact on curriculum accessibility for the child.

(ii) Belief system

In this case, belief systems refer to all the stakeholders concerned, including children with disabilities, parents of typically developing children and the support staff in schools. It emerged from the interviews with the parents that the parents of typically developing children in S2 and S3 believed that disability was contagious and as such, they feared that their children would contract disabilities when mainstreamed with children who were disabled. Children with disabilities in S1 do not want to be helped by women after coming back from initiation schools as culturally, women are perceived as being inferior to men. These misconceptions affect children with disabilities and impair their progress.

6.7.1.2 Theme 2: Socioeconomic status

The theme of socioeconomic status encompasses the lack of employment and the parents' literacy levels.

(i) Lack of employment

It emerged from the interviews conducted with the mothers of children with cerebral palsy that both of them were unemployed and the disability grant (see section 2.2.1) which their children received from the government was the source of income for the two families. The aforementioned is supported by the literature on the mesosystem (see section 4.3.2) that, since there are no clear demarcations of where one system starts and ends, the interaction and transition from and between the different systems have the potential to upset a stable system. It also emerged from the interviews conducted with PS3, who had withdrawn her child from S1 where children received professional support from physiotherapists and occupational therapists, as well as other emotional support that was outsourced from the nearby hospital, that a lack of employment has an impact on curriculum accessibility for these children. In this case, the lack of employment in these contexts affected the decision of PS3 between what is best for her child with cerebral palsy and withdrawing her from the school for the benefit of the whole family.

While a lack of employment is evident in the explored contexts, PS2 felt a lack of support staff to help look after her child at S2 hampered her chances to look for job opportunities to support her family. This discussion of both interviews with the parents of children with cerebral palsy suggests that a lack of employment has an impact on these children accessing the curriculum in the explored rural Full-service schools. Additionally, the literacy levels of these parents have an impact on their ability to make informed choices to the benefit of their children.

(ii) Literacy levels

Parents are said to be a pillar of their children's development (Szumski & Karwoski, 2012). However, both the literature and empirical data in this study confirm the low literacy levels of parents in the rural areas as being a factor having an impact on both the teacher and the child with cerebral palsy (4.3.1.3) and the relationship between parents and the school or teachers (see section 4.3.2.1). The ripple effect

arising from a lack of teacher training and a lack of support services to the parents' literacy levels has an impact on a collaborative effort to support these children access the prescribed curriculum.

This theme also emerged during the interviews when these parents were asked if they conversed with the teachers regarding their children's schoolwork. These parents' conversations with the teachers were generally not academically inclined. Although PS3 asked whether her child would be admitted to the school nearby to further her studies, both the interviewed parents discussed their children's health status with the teachers instead of their academic status. This confirms the assertions in the literature that the parents are more concerned about the care that their children receive than their progression at school (UNICEF, 2013). Despite this, it is not only these parents' literacy level that should be considered; Weisleder and Fernald (2013) postulate that parents' cognitive status is a factor for consideration as well.

6.8 SUMMATIVE OVERVIEW: THEMES AND CATEGORIES

Table 6.12 below provides a summative overview of the themes and categories that emerged from the data analysis and interpretation discussed above. The overview, according to the different sets of data, is discussed in this chapter. The factors for the successful implementation of inclusive education (see section 3.5) are highlighted to indicate the key areas of the Ecological Systems Theory impeding the implementation of inclusive education and affecting curriculum accessibility for children with cerebral palsy.

Table 6.12: Summative overview: Themes and categories

DATA	THEMES	CATEGORIES
Participation observation	Schools' accessibility	<ul style="list-style-type: none"> Lack of human resources

DATA	THEMES	CATEGORIES
		<ul style="list-style-type: none"> • Incompatible infrastructure
Complete observation	Creating inclusive cultures	<ul style="list-style-type: none"> • Promoting inclusion
	Producing inclusive policies	<ul style="list-style-type: none"> • Lack of dedicated school policies
	Evolving inclusive practices	<ul style="list-style-type: none"> • The lack of a paradigm shift
Interviews with teachers	Understanding inclusive education and disability	<ul style="list-style-type: none"> • Rurality • Poverty • Parents' educational level
	Lack of progression and independence	<ul style="list-style-type: none"> • Lack of training • Lack of insight into disability • Lack of support and resources
Interviews with coordinators	Lack of professional and support staff Lack of collaboration	
Interviews with parents	Cultural belief	<ul style="list-style-type: none"> • Attitudes toward disabilities • Witchcraft • Belief systems

DATA	THEMES	CATEGORIES
	Socioeconomic status	<ul style="list-style-type: none"> • Lack of employment • Literacy levels

The empirical data presented exposed institutional, epistemological, political-ideological and pedagogical factors in the different ecological systems impacting on curriculum accessibility and the development of children with cerebral palsy in rural schools. However, each case explored revealed context-specific requirements to improve curriculum accessibility and the development requirements for these children.

The physical accessibility of the three schools, the knowledgeability and training requirements for the teachers in those schools, the challenges experienced by the coordinators of the DBST and the parents of children with cerebral palsy were exposed. Most importantly, the lack of coordination among the stakeholders towards the successful implementation of inclusive education was evident in the research findings. It appeared that while the aforementioned collaboration is believed to ensure the successful implementation of inclusive education and widens the knowledge base regarding disabilities and the support these children need, there was no political will between the stakeholders, including government officials and policy developers, to reflect continuously on the process in order to make the strategy work.

The argument in this study that inclusive education is an international concept and cannot be implemented in rural contexts without contextual considerations is supported by the empirical data in this study. It is, thus, crucial that the context of the implementation of inclusive education is carefully considered to ensure the successful implementation of the strategy and the facilitation of the development of these children. These considerations will ensure that the appropriate support is provided for these children, and therefore, that they progress with other children without disabilities in mainstream rural schools.

6.9 CONCLUDING REMARKS

In this chapter, the empirical data, analysis, interpretation and the findings were presented. This was done according to the different cases that had been explored. The findings revealed the importance of contextual considerations in the implementation of inclusive education to ensure its success and benefit all children, inclusive of the typically developing children, thus facilitating the access to quality education for all.

In the next chapter, the summary, conclusions and recommendations for this study are presented.

CHAPTER 7

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

In the previous chapter, the data that have been collected through observations and interviews have been analysed and interpreted. Chapter 7 first presents the summary of the literature and empirical findings, followed by the research conclusions which answer the research questions, as presented in Chapter 1 (see section 1.3). Thereafter, the recommendations for the study, limitations, recommendations for future research and the final remarks are offered.

7.2 SUMMARY OF LITERATURE AND EMPIRICAL FINDINGS

The section below presents the summary of both the literature and empirical findings in this study. The literature findings are derived from Chapters 2, 3 and 4, while the empirical evidence is drawn from the data presented, analysed and interpreted in Chapters 5 and 6 respectively.

7.2.1 Summary of literature findings

The literature findings in Chapters 2, 3 and 4 centre around a conceptual framework on disability and cerebral palsy, the perspectives of and policies on inclusive education and the theoretical framework within which this study is conceptualised. The findings presented below are derived from the chapters mentioned.

7.2.1.1 *Findings relating to disability and cerebral palsy*

The scientific literature consulted in this study demonstrates the challenges brought about by a failure in defining disability and cerebral palsy, particularly in the context in which these children will participate (see sections 2.1 and 2.2.3). The lack of relevant teacher training was also found to impact curriculum accessibility for children with cerebral palsy. Furthermore, a paradigm shift from the medical to the social model of participation is proposed in the conceptualisation as well as the

successful delivery of academic services to these children (see section 2.2). There is a failure in the literature to produce the said definitions in the context and thus not only feeds into the segregation of these learners but exerts undue pressure on them to participate and progress with their peers in full-service schools. These children are expected to perform in accordance with standard expectations in society despite their compromised development (see section 4.3.1). These unrealistic expectations predispose them to failure and also affect their access to the prescribed curriculum in full-service schools with the result that they drop out of school (see section 1.1).

Although the emergence of the ICF aimed at, among other things, elucidating the definition of disability, it appears in the literature that the societal attitudes towards disabilities (see section 2.2.4) and the lack of a common understanding regarding the spectrum of disabilities, including cerebral palsy remains elusive (see section 2.3). In an attempt to contextualise this study and expose the academic challenges of these children, the types and classifications of cerebral palsy are discussed (see sections 2.3.1, 2.3.1.1, 2.3.1.2, 2.3.1.4, 2.3.2, 2.3.3, 2.3.3.1, 2.3.3.2 and 2.3.3.3). Of paramount importance is the cognitive profile of a child with cerebral palsy (see section 2.3.4) that firmly establishes the importance of understanding cerebral palsy from a neurodisability perspective (see section 2.2.4). Understanding the cognitive profile of children with cerebral palsy aids in determining their curriculum needs and enables the exposed strategies to promote their academic progress. The cognitive profile of children with cerebral palsy, which includes a discussion on dyslexia, dyscalculia and dysgraphia (see sections 2.3.4.1, 2.3.4.2 and 2.3.4.3) has further highlighted the gap in teacher training as a contributing factor in impacting curriculum accessibility for these children. It is evident from the literature consulted, that unless the teachers are trained specifically with regard to disability, acumen and the intervention strategies required to promote their curriculum access, these children will remain segregated and isolated from being recognised as members of the society.

The need for relevant teacher training in order to provide alternative ways to improve curriculum accessibility necessitates the discussion of the theories of development. Vygotsky's sociocultural theory (1978) (see section 2.5.1) and Piaget's cognitive

theory (1979) (see section 2.5.2) have been used in this study to put child development and disabilities in perspective.

Since the disparity between the developmental and chronological age is a problem in curriculum accessibility for children with disabilities in inclusive schools, the developmental theories mentioned used give insights into the academic requirements of these children (see section 3.3.3). Vygotsky's sociocultural theory (1978), in the context of this study, exposed new perspectives on teacher training being essential to the successful identification of the ZPD in order to support these children's access to the curriculum.

Piaget's cognitive theory (1979), on the other hand, is premised on the biological development of children. The literature examined reveals that it is important for teachers to understand atypical development in order to give these children the support they need, thus ensuring their curriculum accessibility in the context of their participation.

The admission and progression policies (see section 3.3.3) prescribed in accordance with the chronological ages in a South African context, thus have an impact on curriculum accessibility for children with disabilities and in doing so, they impair their progress. Studies in the literature propose the provision of concessions to promote curriculum accessibility for these children. The lack of teachers' skills to provide the aforementioned concessions is, however, a matter that has further impacts on these children accessing the curriculum and this affects the implementation of inclusive education.

7.2.1.2 Findings in relation to the perspectives and policies on inclusive education

The international perspective model was used in the implementation of inclusive education in Africa and South Africa. This perspective is believed to impede the successful implementation of inclusive education, particularly in South Africa, as it is the focus of this study. The international context differs from that of South Africa as a developing country. South Africa is a country struggling with relevant teacher

training to address the diverse learning needs of children in full-service schools. Additionally, these teachers often do not have insight into the available resources to support these children in accessing the curriculum and progressing through the school with their typical peers (see section 3.1).

Since the requirements for the successful implementation of inclusive education are different between the international and South African context, the adaptation of the strategy or support requirements is necessary to improve the success of the strategy. It was, therefore, necessary before the implementation of inclusive education in the South African context to determine, among other things, the teachers' qualifications, the number and types of disabilities in the different areas where these children should be included, the availability of support resources, and the human and assistive devices.

The development of inclusive education from an international perspective in this study was discussed using different legal frameworks (see section 3.2). The discussion was meant to put the origin of inclusive education into perspective (see section 3.2.6) and to emphasise the universal right that all the children in the world have to quality education (see sections 3.2.1, 3.2.3, 3.2.4 and 3.2.5). Of note from the discussion of these legal frameworks are the findings from the literature that teachers are integral to the successful implementation of inclusive education. Teachers are also expected to interpret and teach these legal frameworks to children in schools (see section 3.2.1). However, reality contradicts the expectations raised in the literature as many teachers in schools do not understand these rights, thus they compromise the accessibility to inclusive education. Furthermore, teachers in these schools are not involved in budgeting, monitoring and reporting the progress made in the successful implementation of inclusive education.

It emerged from the literature reviewed, both in African and South African contexts, that the successful implementation of inclusive education requires a change of the mindsets of all the stakeholders (see section 3.2.7). Research and collaborations were identified as essential strategies to address the challenges in different contexts. The need for these collaborations to be researched also emerged in the literature

as specific indicators for the success of these collaborations. The researched-based strategies have the potential to inform the policy in education and thus facilitate the provision of quality education to all children, including those with disabilities in rural special and full-service schools.

Matters, such as the cultural beliefs and the low socioeconomic status of rural environments, are disregarded and this is found to be a contributory factor impeding the implementation of inclusive education and the progress of children with cerebral palsy in the literature. Additionally, political-ideological, epistemological and pedagogical and institutional factors have emerged in scientific research as core factors in promoting the accessibility of the curriculum to these children in rural contexts (see sections 3.5.1, 3.5.2 and 3.5.3).

Despite the fact that these factors are regarded as being crucial, it appears that some of the policies, such as the Admission Policy (1996) in South Africa, contradict the developmental theories in the sense that admission ages are prescribed, which overlooks the developmental delays of children with disabilities. With this in mind, it is evident, in support of the literature, that researched-based investigations, the collaboration of all the stakeholders, the continuous monitoring of progress, the challenges and the involvement of teachers in decision-making are all integral to the successful implementation of inclusive education.

7.2.1.3 *Scientific findings relating to the theoretical framework*

Bronfenbrenner's Ecological Systems Theory was used as a scientific lens to understand the challenges, as well as to extract opportunities from the environment affecting or promoting curriculum accessibility for children with cerebral palsy, as they participated in the different ecological systems in this study. Despite the international origin of the theoretical framework employed in this study (see section 4.1), the emerging insights contextualise the requirements for curriculum accessibility in a rural South African context. The theoretical findings in accordance with the different ecological systems, as prescribed by Bronfenbrenner, were presented.

(i) Microsystem

According to Bronfenbrenner's ecological systems theory, it is important to manage the relationships in the microsystem as it is the closest system to the child's life and is responsible for shaping its future (see section 4.3.1). The mismanagement of these relationships has the potential to have a negative impact on the academic progress of a child with a disability. In rural contexts, where there is a lack of support staff, the interaction between the parents, teachers and peers in the microsystem should be encouraged in order to scaffold the development of children with disabilities and improve their curriculum accessibility.

However, the literature findings consistently identify factors, such as low socioeconomic status, the literacy levels of parents in the rural areas and the possibility of these parents who are cognitively affected themselves, as being contributory factors obstructing their ability to be involved in the educational careers of their children with disabilities. These issues also affect these parents' ability to choose opportunities that will facilitate their children's development, thus enhancing progression in rural schools (see section 4.3.1.2).

The lack of disability knowledge and insight among the teachers emerged as impacting on these children's academic progress in the literature (see section 4.3.1.3). The teachers in rural schools resort to using conventional methods of teaching to the detriment of children who required alternative methods of instruction.

While the relationships between the child with a disability and his/her siblings and friends is regarded as being crucial to facilitating the development of these children, the literature findings point out a challenge to these relationships. The literature reveals a spectrum of emotions experienced by the siblings of children with disabilities. The siblings feel neglected and intimidated by the attention their siblings with a disability receive from the parents (see section 4.3.1.2). Sibling uncertainty leads to children with disabilities being segregated and excluded from these play activities that would have the potential to offer learning opportunities. These factors affect the needed collaboration for academic success and the integration of children with disabilities into society.

(ii) Mesosystem

The mesosystem encompasses the interaction between two or more microsystems. In this study, this refers to the relationship between the parents and the teachers. It is important that parents, as the closest individuals to these children, who have a better understanding of their personal needs, manage these relationships. Managing the relationships is necessary to avoid upsetting emotional development which facilitates positive learning for children, particularly those with disabilities in the context of this study (see section 4.3.2). However, the low literacy levels of parents keep emerging as a stumbling block to managing the relationships between the different systems responsible for scaffolding the development of these children, and subsequently, their learning. Owing to low literacy levels, the parents are not able to support their children with homework or expose them to play activities that enhance development. While there are many intervention options available in different government departments, these parents are not aware of their rights to demand these for their children. It is even worse in a South African context where most professional services are offered in English. The interaction between the parents and the responsible government officials is hampered and compromised by the parents' inability to communicate in English (see section 4.3.2.1). The above factors, therefore, aggravate the lack of services for children with cerebral palsy and affect their access to the curriculum.

(iii) Exosystem

Although children are not directly involved in the processes happening in the exosystem, these affect their social-emotional development, thus having an impact on their curriculum accessibility (see section 4.3.3). It has emerged from the literature that the lack of expansive and cumulative teacher training and the support that teachers require regarding disabilities has an impact on the development, and access to the curriculum and progress of these children, mainly in rural schools (see sections 4.3.3.1 and 4.3.3.2).

The accessibility of the curriculum is possible where holistic assessments of the environment of participation are conducted and the required interdepartmental support is provided (see sections 1.5, 4.3.3.2, 4.3.3 and 5.4.3.2). However, whether

this is possible in the rural areas where there is a dearth of qualified personnel, is questionable. Notwithstanding these challenges, the literature reveals that the implementation of developmental policies encompassed in the exosystem is possible with the creation of appropriate environments by the governments. Creating conducive environments in the context of this study entails making available human resources, professional support staff, assistive devices and accessible infrastructure aimed at improving curriculum access for children with cerebral palsy.

(iv) Macrosystem

The macrosystem is the ecological system encompassing belief systems, culture, religion and laws in the ecological system. In the context of this study, these have been discussed with the aim of identifying factors impacting or promoting curriculum accessibility for children with cerebral palsy in rural inclusive contexts. Despite the policies and acts (see sections 3.2 and 3.3) affording all citizens universal access to human rights and quality education, it has emerged in the literature that belief systems and cultural inclinations in many communities are found to be issues impeding progress, particularly in the implementation of inclusive education and accepting children with disabilities as deserving members of the communities (see sections 4.3.4, 4.3.4.1 and 4.3.4.2).

The rejection of African countries in recognising culture as a building block for sustainable development is, among other things, an indication of undermining cultural resources in uplifting the rural development of these communities. In this regard, the recognition of culture can potentially alleviate the impact that concepts such as Ubuntu have on facilitating development (see section 4.3.5.1). It is further evident from the literature that in the context of resources, rural areas increasing their practising Ubuntu may inculcate patriotism and promote and alleviate support for children with disabilities. Community solidarity addresses academic as well as emotional support needed for children with disabilities in full-service schools.

(v) Chronosystem

The chronosystem as the outermost layer is described as representing all the transitions happening in a child's life. In the context of this study, it includes the implementation of inclusive education. Communities, as well as government departments, have a responsibility to ensure that the transition in the inclusion of children with disabilities in inclusive schools is handled in such a way that it promotes the successful progression of these children, particularly in rural schools.

Aligned to the importance of conducting research to provide intervention, an asset-based approach (see section 4.3.5.1) emerged as the core consideration to keep in mind for the successful implementation of inclusive education and to ensure the progression of children with disabilities in rural contexts. The research findings and the asset-based approach are complementary in informing the intervention strategies required to facilitate the educational participation of all children –thus, curriculum accessibility in the context of this study.

7.2.2 Summary of empirical data

This section presents the empirical findings derived from the methodology section presented in Chapter 5, and the analysis and interpretation of data obtainable in Chapter 6. The findings expose the factors in the ecosystem that can be used to create meaningful learning opportunities for children with cerebral palsy in rural schools. Participant, complete observation and focus group interviews were used as research instruments to explore the subsequent main findings that are presented. The headings below are derived from the summative overview of the themes and categories in this study (see section 6.8 and Table 6:12).

7.2.2.1 Accessibility of schools

Curriculum accessibility in the context of this study is not only confined to learners with cerebral palsy accessing reading material and the content prescribed in the curriculum. It encompasses access to the infrastructure, inclusive of transport to and from school. Although the reviewed literature is silent about transporting children with disabilities to schools, the empirical data in the rural schools which

were investigated reveal the inaccessibility of both the road infrastructure and the school environment for children with disabilities. These factors impair curriculum accessibility and the progression of children with cerebral palsy in rural schools.

A correlation between the literature and empirical data findings reveal a lack of human resources and teaching assistants to support children with cerebral palsy in rural areas (see sections 3.4.2, 3.4.3 and 6.6.1.1). Additionally, the lack of teamwork among the stakeholders in education to outsource the required resources emerged from the empirical findings as well as those of the literature. Similarly, the reviewed literature describes the availability of rural resources to facilitate the successful implementation of inclusive education and to support children with cerebral palsy progress (see section 4.3.5). Since these resources resonate with the rural communities, they are capable of changing the rural perceptions of disabilities, thus facilitating the integration of these children into society.

I am inclined to support the literature findings regarding the need for a paradigm shift of all the stakeholders in education to understand both the needs of children with cerebral palsy and to combine efforts in identifying resources in the environment to facilitate their curriculum access, and therefore to expedite their progress in rural schools.

7.2.2.2 *Understanding inclusive education and disability*

Inclusive education, disabilities and cerebral palsy remain hard to comprehend for the stakeholders in education in the context of this study. As such, these concepts affect the creation of meaningful learning opportunities for the children under investigation. The lack of insight into disability among the stakeholders in education in the rural areas has contributed to factors affecting the implementation of inclusive education and hindering the successful inclusion of children with cerebral palsy in rural schools.

While the teachers are expected to differentiate the curriculum for accessibility to all children in inclusive classes, the lack of teacher training emerged as a problem both in the literature and the empirical data collected (see sections 1.2, 1.3, 3.2.6, 3.3.6,

3.3.9 and 6.5.1.1). The lack of training has resulted in these teachers developing negative attitudes towards children with cerebral palsy. It also emerged that cultural beliefs in these contexts have contributed to the negative attitudes towards disabilities. Additionally, while resources, such as assistive devices, are essential to support children with cerebral palsy in accessing the curriculum, the socioeconomic status of the families emerged as a problem affecting the acquisition of such. The social grants that are meant to support these children and to acquire assistive devices are channelled to housekeeping in the household to the detriment of these children.

7.2.2.3 Creating inclusive cultures, producing inclusive policies and evolving inclusive practices

Although the aim of this study has been to create meaningful learning opportunities for children with cerebral palsy in rural schools, it cannot be claimed that the literature, as well as the pragmatic findings, are sufficient to improve curriculum accessibility for children with cerebral palsy in rural schools. However, first, as mentioned earlier, evidence-based interventions improve the outcomes for which they are intended and the same applies in this case. The indicators on the index of inclusion used in this study, namely creating inclusive cultures, producing inclusive policies and evolving inclusive practices, give support to the argument (see section 6.4).

While the policies are aimed to guide institutional objectives, international policies, particularly for the implementation of inclusive education and facilitating the progress of children with disabilities in rural areas, are identified as stalling the process. The reason is that these policies contradict the context of implementation. Therefore, using evidence-based results to create inclusive policies will point to the creation of relevant inclusive cultures in a sense that the strategies will be addressing those contextual challenges which impede curriculum accessibility in this case (see sections 6.4.2 and 6.4.1).

The literature in this study presents two identical approaches towards improving the implementation of inclusive education in rural contexts. First, the index of inclusion

advocates for inclusive practices to evolve, which is a continuous adaptation of policies and practices to develop those that are contextually relevant. Second, the monitoring of progress emerges in the literature as an essential strategy to identify the factors in the environment for the successful implementation of inclusive education. This having been said, it is evident from the empirical data in this study that inclusive policies and practices are not a one-size-fits-all, but countries need to monitor progress continuously and adapt them to improve curriculum accessibility for children with cerebral palsy in the context of implementation. The indicators on the index of inclusion used in this study pointed to the factors to facilitate the implementation of inclusive education and to create meaningful learning opportunities for children with cerebral palsy in rural schools.

7.3 RESEARCH CONCLUSIONS

The novelty of this study lies in the significance that the rural context brings into the academic discourse in ensuring the successful implementation of inclusive education and improving curriculum accessibility for children with cerebral palsy. While the focus of this study is on children with cerebral palsy, its potential in addressing the learning difficulties of other children with cognitive, physical and emotional disabilities in rural schools is worth acknowledging.

The final conclusion of this study is drawn by answering the three sub-questions followed by the main research questions posed in section 1.3.

7.3.1 Sub-question 1: What are the perceptions of teachers in rural schools regarding inclusive education?

The perceptions of rural school teachers regarding inclusive education point in different directions and persist throughout the literature, evidenced by the empirical research and the theoretical perspective. The commonality in these perceptions is the constant battle of the teachers to develop strategies to facilitate the implementation of inclusive education in rural contexts which are characterised by

a lack of resources, a lack of teacher training and a lack of support for these teachers.

While inclusive education is identified as a strategy that can be used to change social perceptions about disabilities, the aspiration cannot be achieved if the status quo remains in the sense that the teachers' perceptions remain negative. Furthermore, the teachers' perceptions cannot be singled out and reported in isolation when addressing inclusive education matters. Inclusive education, by its very nature, is a collaborative process between the stakeholders in education to ensure successful implementation. As such, the factors contributing to the teachers' perceptions need to be discussed from a holistic point of view.

The teachers in the explored contexts have not been trained in differentiating the curriculum for the access of all children in full-service schools. They have neither the insight into disability, nor the knowledge about the theories of development to be able to outsource alternative strategies to improve curriculum accessibility for children, particularly those with cerebral palsy. These teachers are left on their own without the support of the Department of Basic Education and the responsible structures. The teachers are left frustrated; therefore, they develop negative perceptions around inclusive education. The negative perceptions are fuelled by the lack of knowledge and the absence of the support required to improve curriculum accessibility for children with disabilities in their classrooms.

Despite calls from a government advocating for renewed disability perceptions in education policies, the implementation process in South Africa is failing. The failure by government to synchronise inclusive education policies into practice by providing teachers with the necessary training and support resources, compounds the teachers' negative perceptions around disabilities and inclusive education. These negative perceptions have an impact on curriculum accessibility for children with cerebral palsy, particularly in Full-service schools.

The teachers in rural schools identify the learning challenges in children with cerebral palsy, but the unavailability of any government structures to provide the

support needed for both the children and the teachers in these schools breaks the process down. The coordinator of the DBST, who is the responsible official for coordinating support among schools and support for the professionals, parents and the community, does not fulfil her obligation to make the collaboration work. Also, the office of the coordinator of the DBST is not equipped with footsoldiers to help coordinate the required support for the full-service schools. The cumulative challenges leave teachers with preconceived negative perceptions that stall the implementation of inclusive education.

7.3.2 Sub-question 2: How do teachers in rural schools teach learners with cerebral palsy?

The answer to this question was mainly derived from the data analysis and interpretation presented in Chapter 6 where the teachers in rural schools teaching children with cerebral palsy were interviewed.

Although the teachers from the three interviewed rural schools are aware that children with cerebral palsy require alternative teaching methods and resources to be able to access the prescribed curriculum, they do not have the insight to provide this. They do not have training on the required alternative methods or knowledge of the assistive devices available on the market for their recommendation. These teachers then use traditional methods of teaching, which alienate children with cerebral palsy, keeping them from accessing the curriculum. Furthermore, teachers do not have teacher assistants in their classes. They often put learners with cerebral palsy in the backseats of the classes and overlook their curriculum needs.

The teachers are under pressure from the circuit office manager to complete the prescribed syllabus. Therefore, they pay particular attention to typically developing children in an effort to meet the outcomes, as prescribed by the manager.

The progression policy in South Africa further widens the inequalities between children with cerebral palsy and their typical peers as it requires that these children are progressed with their age cohorts. The progression happens despite the fact that these learners have not achieved the expected outcomes in the previous

grades. The results of this are that these learners progress from grade to grade without acquiring the necessary skills required to read and write. Ultimately, the learners with cerebral palsy drop out of school and they remain dependent on their parents for survival and the vicious circle of poverty continues.

7.3.3 Sub-question 3: How can meaningful learning opportunities be made accessible to learners with cerebral palsy?

The answers to this question are presented with reference to the theoretical framework presented in Chapter 4 as well as the two theories of learning presented in Chapter 2.

Since the purpose of this study was to create meaningful learning opportunities for children with cerebral palsy in rural schools, at this point, it is important to declare that there is no one-size-fits-all strategy for this purpose. Children with cerebral palsy are unique and require individual and exclusive support strategies to be able to access the curriculum and progress through the school with other children without disabilities. The teachers are not expected to reinvent the wheel and come up with new strategies to support children with cerebral palsy in accessing the prescribed curriculum. The international strategies can be adapted and used as the basis for intervention in rural contexts. However, commitment from all the stakeholders is expected for the adaptation to address the rural challenges in this case.

First of all, the teachers are expected to be aware of the needs that children with cerebral palsy in mainstream classes present. These children are then subjected to the SIAS processes aiming at identifying specific challenges as well as the support strategies needed to facilitate progression and curriculum access in mainstream classes. These strategies are aimed to support children with cerebral palsy progress through school with other children without disabilities. Moreover, for children with cerebral palsy to progress with their peers, they are expected to acquire the academic skills that are equivalent to the developmental level of their peers

However, it is also important to mention that these teachers cannot implement the SIAS strategy without training and support from both the circuit manager and the coordinator of the DBST. Rather than these structures working in isolation toward the success of children with cerebral palsy, coordination, aiming at developing strategies to enforce the envisaged progression, is essential.

It is also desirable to explore the different ecological systems in order to ascertain the factors that impede or accelerate the accessibility of meaningful learning opportunities to children with cerebral palsy in specific contexts.

7.3.4 Main research question: What are the key requirements for meaningful learning opportunities for learners with cerebral palsy in rural schools?

The key requirements for meaningful learning opportunities for children with cerebral palsy in rural schools are broadly presented in this study as encompassing the pedagogic, ideological, institutional and epistemological factors. Unfortunately, as mentioned earlier, children with cerebral palsy are unique and require intervention strategies that will respond to their unique needs (see section 7.3.3). An oversight in the provision of any of the aforementioned factors could upset the accessibility of meaningful learning opportunities to these children, particularly in rural schools.

These factors are intertwined in a way that one cannot just respond to the pedagogic, institutional and epistemological requirements for children with cerebral palsy. It is necessary, as the factors are responded to, to consider the ideological factors in order to facilitate the accessibility of meaningful learning opportunities to learners with cerebral palsy.

Ideological factors in this study, encompasses the collaboration of theory and practice, economical, ideas and ideals that set apart the requirements for meaningful learning opportunities in rural schools from those in developed countries. In an ideological point of view, it is necessary to extract those practical factors in the environment standing in the way of providing pedagogic, epistemological and institutional requirements for learners with cerebral palsy in rural contexts.

- Against the backdrop of the teachers in rural areas lacking the epistemological knowledge about disabilities and the assistive devices learners with cerebral palsy need to improve curriculum accessibility, the teachers' training is the first absolute requirement for consideration. Incorporated into training should be, among others, developmental theory awareness, skills in identifying learning difficulties and sourcing the professional support these learners require to progress in schools. Additionally, the teachers in rural schools need to be trained regarding skills in differentiating the curriculum in mainstream classes and to improve its accessibility for all the learners. While teacher training in South Africa is found to be lacking in providing the skills mentioned above, the teachers in the special school explored can be used as training resources based on the in-service training they received through the Department of Basic Education.
- Considering the underdevelopment of the road infrastructure in the explored rural areas, accessibility cannot just be confined to the school environment for children using wheelchairs as assistive devices. Ideally, before the institutional accessibility is explored, it is necessary to check the travelling requirements for these children from home to school. Transport arrangements from home to school area requirement for these learners to arrive at school and be able to access the curriculum.
- The socioeconomic status of the parents in the rural areas has been found to be low, and as such, funding for transport and assistive devices for their children with disabilities is a challenge. It is, thus, necessary for the government to provide a budget for children with disabilities guided by these children's disability needs.
- The provision of support and professional staff to improve curriculum accessibility for children with cerebral palsy is essential. The infrastructure of the explored schools has not been built with children with disabilities in mind. The adaptations made do not respond to the accessibility needs of the spectrum of children with disabilities admitted to the schools. The provision of support and professional staff will, therefore, ensure the emotional, physical and psychological wellness, thus improving curriculum accessibility to these children.

- The belief systems in the explored rural communities have been found to be culturally deep-rooted. Despite efforts through government policies, such as the White Paper 6 on inclusive education promoting the inclusion of learners with disabilities in full-service schools, the segregation of these learners, particularly those with cerebral palsy, persists. The segregation of these learners affects their access to meaningful learning opportunities. Disability awareness is, thus, an integral consideration in creating meaningful learning opportunities for learners with cerebral palsy in rural contexts and in facilitating their inclusion into society.
- From a theoretical viewpoint, Bronfenbrenner's Ecological Systems Theory provided insight into the key requirements for meaningful learning opportunities in the rural areas. Exploring the context of implementation is necessary in order to improve the accessibility of these opportunities. Learning opportunities that are context-based resonate with learners and potentially improve the implementation of inclusive education and curriculum accessibility for learners with cerebral palsy in rural schools.

7.4 RECOMMENDATIONS

The aim of this study was to explore how rural school teachers teach children with cerebral palsy in order to make the curriculum accessible to them. In this section, the recommendations derived from the themes discussed in the previous chapter are presented. Since collaboration interdepartmentally and among the stakeholders has been identified as being critical for the successful implementation of inclusive education and creating meaningful learning opportunities for learners with cerebral palsy in rural schools, the recommendations below are presented, mindful of the collaboration mentioned.

In light of the importance of this collaboration, the responsibility for implementing these recommendations lies in the different levels of government—the national, provincial and district level.

7.4.1 Recommendation 1: Creating conducive environments for the policy

The national Department of Education in South Africa is responsible for developing policies and to ensure that a conducive environment is created for the policies to thrive. A conducive environment entails an interactive process between the implementation process and the envisaged outcomes of the policies.

It is recommended that the national Department of Education ensures that an environment conducive to the development and implementation of inclusive education policies is created in the rural settings. A conducive environment, in this case, means an effort to collaborate with the stakeholders in education and to budget for the cost and resources necessary for policy development and implementation. This will ensure that the strategies are context-based and will, therefore, facilitate the implementation of the policies and make the curriculum accessible for children with cerebral palsy in rural schools.

7.4.2 Recommendation 2: Collaboration between universities and the Department of Basic Education

The Department of Basic Education and the universities should collaborate in conducting inclusive education research. Research-based strategies and practices will ensure that the intended outcomes in responding to the environmental challenges are met.

Continuous research is a necessary factor to improve the relevancy of the implemented policies. The continuous adaptation of the policies also improves their relevance to the context of implementation. An adaptation strategy framework that looks into the environment of implementation, the recipients that the policy aims to benefit and the envisaged impact assessment, will be necessary.

Although inclusive education research was conducted in South Africa, it would seem that the government overlooked the need for continuous adaptations of the findings to be rural and cultural-specific. The lack of adaptation strategies to come up with factors that are culturally sensitive, addressing the belief systems of the communities, and dispelling negative attitudes towards disabilities and witchcraft, continues to affect the implementation of this policy (see section 4.3.4.1). This

oversight does not only affect the policy implementation in rural contexts but impairs curriculum accessibility for learners with cerebral palsy and blocks their progression to independence.

7.4.3 Recommendation 3: Collaboration between interdepartmental and interdisciplinary services

The national Department of Education should ensure interdepartmental and interdisciplinary collaboration between the Departments of Education, Social Development, Health and Transport to improve curriculum accessibility for learners with cerebral palsy in rural schools. The interdepartmental and interdisciplinary coordination ensures that the holistic needs of these children are met. Professionals from these departments must share best practices and recruit paraprofessionals to offer inclusive services in rural schools.

Learners with cerebral palsy in rural schools present a spectrum of needs to be able to access the curriculum. As such, it is crucial for the departments and disciplines to share insight to improve curriculum accessibility. In a South African context, where it is a challenge for these learners to travel to schools due to the lack of assistive devices and poor road infrastructure, collaboration is necessary. The Department of Basic Education in this case should ensure that systems are in place for schools to outsource the services from all the other departments when necessary.

The Department of Health has available professional staff for the provision of health, emotional, psychiatric services and assistive devices. The funding of all these services is the responsibility of the Department of Social Development. This department pays social grants to children with disabilities.

Strategic planning with clearly set priorities and objectives is necessary for these departments to provide the required services for learners with cerebral palsy. Planning for sharing the interdepartmental professional insight could lead to a cross-pollination of skills and the production of paraprofessionals to help address the skills shortage in rural schools.

7.4.4 Recommendation 4: Strengthening resource centres to improve the accessibility of services and resources to children with cerebral palsy in full-service schools

The coordinator of the DBST, in collaboration with the different government departments, must ensure that resource centres are strengthened. Resource centres for the purpose of this study are responsible for the provision of services, support and professional staff to facilitate the development and curriculum accessibility for children with cerebral palsy.

The lack of resources and services from professionals and support staff was found to be a challenge impeding curriculum accessibility for learners with cerebral palsy in rural schools. Moreover, the identified resource centres are not equipped with resources despite their purpose being to improve the availability of information, services and resources. The centralisation of services to resource centres is recommended as a strategy for full-service schools in rural areas to access these services.

The teachers in the special school (School 1) are equipped with insight into disability and trained in the differentiation of the curriculum for access to all the learners. Despite the fact that the school is a resource centre, the coordinator of the DBST does not use these teachers to transfer the required skills to other teachers in the full-service schools who are expected to admit learners with a spectrum of special needs.

7.4.5 Recommendation 5: Disability awareness in the community

Disability awareness drives by the coordinator of the DBST should be conducted to improve the rural communities' insight regarding disabilities in order to improve the acceptance of these children in rural schools. Children with disabilities are segregated, based on the cultural values and belief systems in these communities. This belief system does not only result in children with disabilities being segregated by their peers, but also affects the provision of support services from the staff in these schools.

It is, thus, recommended that the coordinator of the DBST fulfil her role to educate communities on disabilities to expedite the acceptance of these children, thus improving their curriculum accessibility.

7.4.6 Recommendation 6: Addressing disability-related socioeconomic matters

The Department of Social Development should subsidise the social grants to children with disabilities considering the expenses necessary for their specific disabilities. Disability needs are varied and costly; thus, a one-size-fits-all approach further hinders these children's access to the prescribed curriculum.

At present, the Department of Social Development in South Africa pays social grants to all the vulnerable children, including those with disabilities. However, all these children are awarded the same amount despite the severity of the disability and the assistive devices required. The amounts paid address the needs of some children with disabilities more than others. There are no set criteria used to determine the amounts based on the support requirements specific to a child's disabilities.

It is, thus, recommended that the Department of Social Development develops initiatives and efforts to address the socioeconomic needs of families with children with cerebral palsy based on their needs. The assessment of the children's motor, sensory, auditory and emotional needs must be conducted to align these to the financial needs. The national government must ensure that the parents of ambulatory and incontinent children are provided with subsidies to provide assistive devices to facilitate curriculum accessibility to their children.

7.4.7 Empowering the office of the coordinator of the district-based support team

The national Department of Education should empower the office of the coordinator of the DBST. The office of the coordinator of the DBST is the backbone of inclusive education success. The office is responsible for sourcing services and making sure that learners with cerebral palsy access these services, and by doing so, access the curriculum.

It is important for the national Department of Education and the coordinator of the DBST to centralise the services for children with disabilities at resource centres. The centralisation of the services and resources ensures easy access for the teachers and children in need from the relevant schools. However, this can only be possible if there is a planned collaboration initiated by the coordinators of SBSTs in full-service schools. The coordinators of the SBST need to ensure that there are systems in place to identify the challenges experienced by the children in their respective classrooms. The children's requirements need to be documented, and follow-ups should be conducted to assess the effectiveness of the intervention.

7.5 RECOMMENDATIONS FOR FURTHER RESEARCH

In light of the findings in this study, in this section, the recommendations for future research for the implementation of inclusive education and the creation of meaningful learning opportunities for learners with cerebral palsy in rural schools are presented.

- The study is replicated in an urban South African context where resources are available to ascertain whether the context is an issue in implementing the White Paper 6 inclusive education policy, thus making the curriculum accessible for children with cerebral palsy.
- The sampling requirement in the follow-up study consists of teachers who are trained to have insight into disability and the district office populated with support staff for both teachers and learners as well as affluent and educated parents. Interviews with participants of a different socioeconomic status or with different educational levels or with staffed districts offices may yield different or the same factors for the creation of meaningful learning opportunities for learners with cerebral palsy in these contexts. The results may confirm or invalidate the assumption in this study, thereby exposing new strategies for improving curriculum accessibility for children with cerebral palsy in a South African context.

7.6 LIMITATIONS

The teachers, the coordinator of the DBST and the parents of children with cerebral palsy have been interviewed for two reasons in this study. Firstly, they are regarded

as being the key stakeholders for the successful implementation of inclusive education. Secondly, the coordination of responsibilities among the stakeholders in education ensures the provision of the required support, thereby improving curriculum accessibility for learners with cerebral palsy in rural schools. However, the teachers' and parents' lack of insight into disability has overshadowed their contribution to factors capable of creating meaningful learning opportunities for these children in rural contexts. The low educational levels of parents have had an impact on the meaningful learning choices to improve curriculum accessibility for their children with cerebral palsy in this study. Notwithstanding these issues, the teachers' need for training and the parents' socioeconomic and educational statuses were core contributors to the creation of meaningful learning opportunities in this study.

The office of the coordinator of the DBST is understaffed and as such, could not perform their duties in sourcing support for teachers as well as children with cerebral palsy in schools. The lack of support results in teacher burnout and makes children with cerebral palsy unable to access the prescribed curriculum in rural schools. Human resource is paramount to this office to be able to contribute positively to curriculum accessibility in rural schools. The quality of contributions by the coordinator of the DBST has been overshadowed by a lack of support staff and resources in her office.

Therefore, having a satisfactory sample in this study, the findings confirm that transferring strategies in the implementation of inclusive education in developed countries cannot successfully address inclusive education challenges in rural South Africa. A conscious effort to address the rural factors averting the creation of meaningful learning opportunities is required in developing countries, including South Africa.

7.7 CONCLUDING REMARKS

Inclusive education and disabilities have received a considerable amount attention in the literature. However, most of these debates are internationally based and suggest intervention strategies based on the environmental resources in those

contexts. The empirical data in this study suggest the unavailability of resources in rural contexts and this has an impact on the implementation of inclusive education and curriculum accessibility for children with cerebral palsy in full-service schools.

The wealth of rural resources capable of improving the implementation process, creating meaningful learning opportunities, promoting curriculum accessibility and fostering independence for children with cerebral palsy is discounted. Performance indicators and research strategies to ensure the realisation of inclusive aspirations are non-existent. I have, nevertheless, realised that the unavailability of resources in the rural areas is measured against international standards. International standards affect the way the rural communities view the available resources in their environment. This view is translated as a lack of resources when, for example, a lack of employment in rural contexts can be transformed into an opportunity. Unemployed citizens could be trained as paraprofessionals, support staff and teacher assistants to give children with cerebral palsy access the curriculum in full-service schools.

South Africa is rated as a country with good policies, but the ability and effectiveness of government to implement these policies have encountered public scrutiny. I confirmed this assumption in conducting this study. The policies and acts to administer the implementation of inclusive education in South Africa are in place. Structures, such as the SBST, the DBST and resource centres, have been identified as mechanisms to facilitate the implementation process. However, more than 20 years after the strategy has been conceptualised, the implementation is still a challenge, and little if no progress has been made.

International theoretical lenses are mainly used to conduct research in South Africa. This study, in particular, used Bronfenbrenner's Ecological Systems Theory to explore the environment being researched. The theory pointed to the challenges and opportunities affecting and promoting curriculum access for learners with cerebral palsy in rural contexts. In view of the theoretical findings in this study, I am inclined to believe that the time has come for theoretical frameworks with an African perspective on disabilities and inclusive education to be developed. Contextually

relevant theories will undoubtedly yield results responding to rural contexts in the implementation of inclusive education, and in the process, expose children with cerebral palsy to meaningful learning opportunities.

The challenges may seem insurmountable, but strategic planning and a political will to explore the rural environments may yield resources capable of creating meaningful learning opportunities for children with cerebral palsy in rural contexts. In light of the insight of the research findings in this study, there is a need for Africa and South Africa, in particular, to realise that the international perspectives of policy implementation contradicts the local contexts.

Before the policies are developed, an analysis of the context of implementation and the continuous monitoring and evaluation of the progress are both necessary. Regular adaptation of these policies would be appropriate to the context of implementation. I believe that the appropriate political will, aligned with the vision and mission of inclusive education practices in rural schools, will facilitate the successful implementation of this.

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APPENDICES

APPENDIX A



17 August 2016

Department of Early Childhood Education

The Head of Department

Limpopo Department of Education

Private Bag X9469

Polokwane

0070

STUDY TITLE: Creating meaningful learning opportunities for children with cerebral palsy in South African rural schools

Dear Sir

REQUEST TO CONDUCT RESEARCH AT THREE SCHOOLS AND A DISTRICT OFFICE

1. INTRODUCTION

Your permission is hereby requested to conduct research in three schools and one District office in the Mopani District of Limpopo. These schools were identified because of their pilot project status for the Department of Basic Education in the implementation of inclusive education. These three schools include a special school, and two full-service school. The special school is a resource centre to support the full-service schools with teaching and learning resources. The

coordinator of the District-Based Support Team is responsible for coordinating support regarding curriculum implementation between the three schools. The names of the schools are Letaba Special School, Mariveni Full Service School and Nwaxindzhele Primary School, all three schools are situated in the Mopani District of Limpopo.

As a researcher, I have come to a realisation that ten years after the implementation of inclusive education, children with disabilities particularly those with cerebral palsy still find it difficult to access the general curriculum in rural schools. While literature is rich with evidence that teachers are essential for the implementation of inclusive education, I believe that the teacher training which the majority of teachers in South African schools received, was inadequate as teachers struggle to respond to the diverse educational needs of all children in rural schools.

2. THE NATURE AND PURPOSE OF THIS STUDY

It is the aim of this study to explore teachers' perceptions regarding the implementation of inclusive education, with an aim to determine how they teach children with cerebral palsy in order to create meaningful learning opportunities for these children.

3. EXPLANATION OF PROCEDURES TO BE FOLLOWED

Five teachers, one of which will be the coordinator of the School-Based Support Team (SBST), the coordinator of the District-Based Support Team (DBST) and a parent of a child with cerebral palsy from each school will be interviewed using semi-structured questions. Interviews with teachers and parents will take place at the identified schools and will last for an hour each. The interview with the coordinator of the District-Based Support Team will last for an hour and will take place at the District Office.

I will visit the aforementioned schools three times in order

- To casually observe participation and the accessibility of the school to children with cerebral palsy. The outcome of the observation will be recorded on a note book.

- To interview identified teachers' perceptions regarding the implementation of inclusive education. The interviews will be tape recorded.
- To clarify issues that emerged during the interviews with coordinators of the School-Based Support Teams.
- I will also visit the district office to conduct an interview with the coordinator of the District-Based Support Team. The interview will last for an hour.

Data from teachers will only be collected after school in order to avoid interfering with the daily running of the identified schools. Data will be collected after permission has been granted by the Ethics Committee of the University of Pretoria. You will be expected to sign the attached consent form if you agree/not agree to grant permission for the research sites to be used in this study. The study will comply with the following ethical principles:

- Participation will be voluntary and the participants may withdraw at any time.
- Participants will be asked for their informed consent.
- The participants will not be harmed or put at risk in any way.
- The confidentiality and anonymity of participants and the name of participating schools will be protected.
- The participants will not be subjected to any acts of deception or betrayal.

Following the completion of the study, research data will be stored at the University of Pretoria for 15 years. The findings of the study will be made available to you and will be shared with other professionals in article format.

I hope this letter will provide you with enough information to grant me permission to use the identified research sites for the purpose of data collection. Should you have any queries in this regard, please contact me or my supervisor at:

Researcher: Mrs NS Thuketana

Supervisor: Dr MG Steyn

0836757899

Department of Early Childhood Education

susan.thuketana@up.ac.za

mg.steyn@up.ac.za

I,

_____ the Head of the Limpopo
Department of Education, hereby grant/do not grant permission for three schools
and a district office to be used as research sites to collect data for the
implementation of inclusive education. I understand that participants and research
sites in this study will remain anonymous.

The Head of the Department, Limpopo Province

Signature: _____

.....

Researcher

.....

Date

.....

Supervisor

.....

Date

APPENDIX B



Faculty of Education

Fakulteit Opvoedkunde
Lefapha la Thuto

17 August 2016

Department of Early Childhood Education

STUDY TITLE: Creating meaningful learning opportunities for children with cerebral palsy in South African rural schools

The Principal

Nwaxindzhele Primary School

Dan Village

Tzaneen

0850

Dear Madam

REQUEST TO CONDUCT RESEARCH AT THE SCHOOL UNDER YOUR LEADERSHIP

1. Introduction

I am asking for permission to conduct research at the school under your leadership. I believe the school will provide evidence rich data since it was identified by the Department of Basic Education as a pilot school for the implementation of inclusive education. In order to give you the context, I include the following information. This will enable you to decide whether you agree/not agree to grant permission for this study to be conducted at your school.

2. The nature and purpose of the study

As a researcher, I have come to a realisation that ten years after the implementation of inclusive education, children with disabilities particularly those with cerebral palsy still find it difficult to access the general curriculum in rural schools. Literature is rich with evidence that teachers are essential for the implementation of inclusive education and making curriculum accessible to all learners. However, the teacher training in South Africa did not prepare teachers to teach children with diverse educational needs.

It is therefore the aim of this study to explore teachers' perceptions regarding the implementation of inclusive education, with an aim to find out how they teach children with cerebral palsy, in order to create meaningful learning opportunities and improve curriculum accessibility for these children. As the principal, you will be expected to help identify five teachers and one parent of a child with cerebral palsy willing to participate by responding to questions in an interview. One of the teachers must be the coordinator of the School-Based Support Teams (SBST). The interviews will not interfere with your school programme but will take place after school.

3. Explanation of procedures to be followed

Since my study is about creating meaningful learning opportunities for learners with cerebral palsy in rural schools, I will visit the school three times:

- During the first visit, I will come to the school only to observe how these children interact with other children and how they respond and are supported in a classroom situation.
- During the second visit, which will be after school, a focus group interview with the five identified teachers, one being the coordinator of the School-Based Support Team willing to participate will be conducted. The interviews will last for an hour.
- I will only come for the third visit if there are issues that emerge during the focus group interviews to clarify with the coordinator of the School-Based Support Team.

4. Risk and discomfort involved

This study will not expose participants to any risk or harm, as no sensitive information will be required from these teachers.

5. Possible benefit of the study

You may not benefit directly from granting permission for the use of the school under your leadership as the research site, but doing so may help the Department of Basic Education realise what constitutes meaningful learning opportunities for children with cerebral palsy, and also may lead to additional resources to improve curriculum accessibility for these children in rural school. Data will only be collected after permission has been granted by the Ethics Committee of the University of Pretoria. The following ethical considerations will be adhered to;

- Participation will be voluntary and the participants may withdraw at any time
- Participants will be asked for their informed consent. This must come first
- The confidentiality and anonymity of participants and the schools will be protected.
- The participants will not be subjected to any acts of deception or betrayal.

Following the completion of the study, the research data will be stored at the University of Pretoria for 15 years. Findings of this study will be made available to you upon request and will be shared with other professionals in article format.

Please complete the attached consent letter indicating whether you agree/disagree to grant permission for this study to be conducted at the school under your leadership. Should you have any queries in this regard, please contact me or my supervisor at:

Researcher: Mrs NS Thuketana

0836757899

susan.thuketana@up.ac.za

Supervisor: Dr MG Steyn

Department of Early Childhood Education

mg.steyn@up.ac.za

I, _____, the principal, hereby agree/do not agree that this study be conducted at the school under my leadership. I also understand that,

- I will be expected to help identify five teachers and one parent of a child with cerebral palsy willing to participate in this study. One of these teachers must be the coordinator of the School-Based Support Team.
- Participation is voluntary.

Principal

Signature: _____

.....

Researcher

.....

Date

.....

Supervisor

.....

Date



Faculty of Education

Fakulteit Opvoedkunde
Lefapha la Thuto

17 August 2016

Department of Early Childhood Education

STUDY TITLE: Creating meaningful learning opportunities for children with cerebral palsy in South African South African rural schools

The Principal

Mariveni Full-Service School

P.O Box 8

0870

Dear Madam

REQUEST TO CONDUCT RESEARCH AT THE SCHOOL UNDER YOUR LEADERSHIP

1. Introduction

I am asking for permission to conduct research at the school under your leadership. I believe the school will provide evidence rich data since it was identified by the Department of Basic Education as a pilot school for the implementation of inclusive education. In order to give you the context, I include the following information. This will enable you to decide whether you agree/not agree to grant permission for this study to be conducted at your school.

2. The nature and purpose of the study

As a researcher, I have come to a realisation that ten years after the implementation of inclusive education, children with disabilities particularly those with cerebral palsy still find it difficult to access the general curriculum in rural schools. Literature is rich with evidence that teachers are essential for the implementation of inclusive education and making curriculum accessible to all

learners. However, the teacher training in South Africa did not prepare teachers to teach children with diverse educational needs.

It is therefore the aim of this study to explore teachers' perceptions regarding the implementation of inclusive education, with an aim to find out how they teach children with cerebral palsy, in order to create meaningful learning opportunities and improve curriculum accessibility for these children. As the principal, you will be expected to help identify five teachers, one being the coordinator of the School-Based Support Team (SBST) and one parent of a child with cerebral palsy willing to participate by responding to questions in an interview. One of the teachers must be the coordinator of the School-Based Support Teams (SBST). The interviews will not interfere with your school programme but will take place after school.

3. Explanation of procedures to be followed

Since my study is about creating meaningful learning opportunities for learners with cerebral palsy in rural schools, I will visit the school three times:

- During the first visit, I will come to the school only to observe how these children interact with other children and how they respond and are supported in a classroom situation.
- During the second visit, which will be after school, a focus group interview with the five identified teachers, one being the coordinator of the School-Based Support Team willing to participate will be conducted. The interviews will last for an hour.
- I will only come for the third visit if there are issues that emerge during the focus group interviews to clarify with the coordinator of the School-Based Support Team.

4. Risk and discomfort involved

This study will not expose participants to any risk or harm, as no sensitive information will be required from these teachers.

5. Possible benefit of the study

You may not benefit directly from granting permission for the use of the school under your leadership as the research site, but doing so may help the Department of Basic Education realise what constitutes meaningful learning opportunities for children with cerebral palsy, and also may lead to additional resources to improve curriculum accessibility for these children in rural school. Data will only be collected after permission has been granted by the Ethics Committee of the University of Pretoria. The following ethical considerations will be adhered to;

- Participation will be voluntary and the participants may withdraw at any time
- Participants will be asked for their informed consent. This must come first
- The confidentiality and anonymity of participants and the schools will be protected.
- The participants will not be subjected to any acts of deception or betrayal.

Following the completion of the study, the research data will be stored at the University of Pretoria for 15 years. Findings of this study will be made available to you upon request and will be shared with other professionals in article format.

Please complete the attached consent letter indicating whether you agree/disagree to grant permission for this study to be conducted at the school under your leadership. Should you have any queries in this regard, please contact me or my supervisor at:

Researcher: Mrs NS Thuketana

0836757899

susan.thuketana@up.ac.za

Researcher

Supervisor: Dr MG Steyn

Department of Early Childhood Education

mg.steyn@up.ac.

Supervisor

I, _____, the principal, hereby agree/do not agree that this study be conducted at the school under my leadership. I also understand that,

- I will be expected to help identify five teachers and one parent of a child with cerebral palsy willing to participate in this study. One of these teachers must be the coordinator of the School-Based Support Team.
- Participation is voluntary.

Principal

Signature: _____

.....

Researcher

.....

Date

.....

Supervisor

.....

Date



Faculty of Education

Fakulteit Opvoedkunde
Lefapha la Thuto

25 June 2016

STUDY TITLE: Creating meaningful learning opportunities for children with cerebral palsy in South African rural schools

Principal investigator: NS Thuketana

DAYTIME AND AFTER HOURS TELEPHONE NUMBER(S):

Daytime numbers: 0124204007

Afterhours: 0836757899

The Principal
Letaba Special School
P.O Box 2445
Tzaneen
0850

Dear Sir

REQUEST TO CONDUCT RESEARCH AT THE SCHOOL UNDER YOUR LEADERSHIP

1. Introduction

I am asking for permission to conduct research at the school under your leadership. I believe the school will provide evidence rich data since it was identified by the Department of Basic Education as a pilot school for the implementation of inclusive education. In order to give you the context, I include the following information. This will enable you to decide whether you agree/not agree to grant permission for this study to be conducted at your school.

2. The nature and purpose of the study

As a researcher, I have come to a realisation that ten years after the implementation of inclusive education, children with disabilities particularly those with cerebral palsy still find it difficult to access the general curriculum in rural schools. Literature is rich with evidence that teachers are essential for the implementation of inclusive education and making curriculum accessible to all learners. However, the teacher training in South Africa did not prepare teachers to teach children with diverse educational needs.

It is therefore the aim of this study to explore teachers' perceptions regarding the implementation of inclusive education, with an aim to find out how they teach children with cerebral palsy, in order to create meaningful learning opportunities and improve curriculum accessibility for these children. As the principal, you will be expected to help identify five teachers, one being the coordinator of the School-Based Support Teams (SBSTs) willing to participate by responding to questions in an interview. The interviews will not interfere with your school programme but will take place after school.

3. Explanation of procedures to be followed

Since my study is about creating meaningful learning opportunities for learners with cerebral palsy in rural schools, I will visit the school three times:

- During the first visit, I will come to the school only to observe how these children interact with other children and how they respond and are supported in a classroom situation.
- During the second visit, which will be after school, a focus group interview with the five identified teachers, one being the coordinator of the School-Based Support Team willing to participate will be conducted. The interviews will last for an hour.
- I will only come for the third visit if there are issues that emerge during the focus group interviews to clarify with the coordinator of the School-Based Support Team.

4. Risk and discomfort involved

This study will not expose participants to any risk or harm, as no sensitive information will be required from these teachers.

5. Possible benefit of the study

You may not benefit directly from granting permission for the use of the school under your leadership as the research site, but doing so may help the Department of Basic Education realise what constitutes meaningful learning opportunities for children with cerebral palsy, and also may lead to additional resources to improve curriculum accessibility for these children in rural school. Data will only be collected after permission has been granted by the Ethics Committee of the University of Pretoria. The following ethical considerations will be adhered to;

- Participation will be voluntary and the participants may withdraw at any time
- Participants will be asked for their informed consent. This must come first
- The confidentiality and anonymity of participants and the schools will be protected.
- The participants will not be subjected to any acts of deception or betrayal.

Following the completion of the study, the research data will be stored at the University of Pretoria for 15 years. Findings of this study will be made available to you upon request and will be shared with other professionals in article format.

Please complete the attached consent letter indicating whether you agree/disagree to grant permission for this study to be conducted at the school under your leadership. Should you have any queries in this regard, please contact me or my supervisor.

Yours sincerely

Researcher: Ms NS Thuketana
0836757899
susan.thuketana@up.ac.za

Supervisor: Dr MG Steyn
Department of Early Childhood Education
mg.steyn@up.ac.za

Yours sincerely

Susan Thuketana
Researcher

Dr MG Steyn
Supervisor

Consent Form

Study title: Creating meaningful learning opportunities for children with cerebral palsy in South African rural schools

I, _____, the principal, hereby agree/do not agree that this study be conducted at the school under my leadership. I also understand that,

- I will be expected to help identify five teachers willing to participate in this study. One of these teachers must be the coordinator of the School-Based Support Team.
- Participation is voluntary.

Researcher: NS Thuketana

Signature: _____

Principal

Signature: _____



Faculty of Education

Fakulteit Opvoedkunde
Lefapha la Thuto

17 August 2016

Department of Early Childhood Education

Study title: Creating meaningful learning opportunities for children with cerebral palsy in South African rural schools

REQUEST TO CONDUCT OBSERVATION AT THE SCHOOL UNDER YOUR LEADERSHIP

Dear Principal

I hereby ask for permission to conduct an observation schedule at the school under your leadership. As part of my thesis, I am required to conduct research which will involve observation of how teachers teach and support all children in class, as well as how children with cerebral palsy interact with other typically developing children. I believe your school will provide rich data since it was identified by the Department of Basic Education as a pilot school for the implementation of inclusive education. Should you be willing to grant me permission, you need to understand what this study entails. At the end of this letter, there will be a consent form that you can fill in to indicate your willingness to assist me.

THE NATURE AND PURPOSE OF THE STUDY

As a researcher and former teacher at a special school, I have come to the realisation that years after the implementation of inclusive education, children with disabilities particularly those with cerebral palsy, still find it difficult to access the

general curriculum. Literature is rich with evidence that teachers are essential for the implementation of inclusive education and making the curriculum accessible to all learners. However, it seems that teacher training in South Africa do not prepare teachers to address the diverse educational needs of all learners.

It is therefore the aim of this study to explore teachers' perceptions regarding the implementation of inclusive education, with an aim to determine how they teach children with cerebral palsy, in order to create meaningful learning opportunities and improve curriculum accessibility for these children.

EXPLANATION OF PROCEDURES TO BE FOLLOWED

Observation will take place during school hours but not interfere with school activities. The observation schedule will last for two hours, and the following will be observed;

- How children with cerebral palsy interact with other typically developing children at the school.
- If there are signs of bullying from other typically developing children.
- The support that children with cerebral palsy receive from the school.
- The accessibility of the school for these children.
- The availability of academic and mobility assistive devices that children with cerebral palsy receive from the school.
- Availability of systems for academic support at the school.

RISK AND DISCOMFORT INVOLVED

This study will not expose participants to any risk or harm, as observations will be conducted and general questions relating to their teaching methods will be asked.

POSSIBLE BENEFIT OF THE STUDY

Your school may not benefit directly from participating in this study, but data gathered from your school may provide the Department of Basic Education with information pertaining to meaningful learning opportunities for children with

cerebral palsy in rural schools. As such, resources may be better coordinated to improve curriculum accessibility for these children.

PARTICIPANTS MAY WITHDRAW AT ANY TIME

If you grant permission for your school to be used as a research site, participation will still be voluntary and participants may withdraw at any time without any negative consequences.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has received ethical clearance from the Ethics Committees of the Department of Health as well as the Faculty of Education of the University of Pretoria

CONFIDENTIALITY

The confidentiality and anonymity of participants and the schools will be ensured. Pseudonyms will be used to identify participants, and participants will be referred to as Participants 1, 2, 3, 4 and 5. The schools will be identified as Research Site A, B and C.

Following the completion of the study, the research data will be stored at the University of Pretoria for 15 years. Findings of this study will be made available to you as well as the teachers upon request and will be shared with other professionals in article format.

CONSENT TO PARTICIPATE IN THIS STUDY

This study will not commence until you have given permission for this study to be conducted at the school under your leadership.

I trust that you will consider this request favourably. Please complete the attached consent slip and return to me at:

Researcher: Mrs NS Thuketana

0836757899

susan.thuketana@up.ac.za

I, _____, hereby give consent / do not give consent to Mrs Susan Thuketana to conduct her observation schedule at the school under my leadership. I understand that the observation schedule will take place at the school and last for two hours. I also understand that accessibility of the school, interaction between children, signs of bullying and support for children with cerebral palsy will be observed.

.....

Principal

.....

Date

.....

Researcher

.....

Date

.....

Supervisor

.....

Date

APPENDIX C



17 August 2016

Department of Early Childhood Education

PARTICIPANTS INFORMATION AND INFORMED CONSENT DOCUMENT

Study title: Creating meaningful learning opportunities for children with cerebral palsy in South African rural schools.

Dear Teachers

You are hereby invited to participate in a research study to investigate how inclusive education is implemented for children with cerebral palsy. According to the Department of Basic Education, teachers are essential to the successful implementation of inclusive education and making curriculum accessible for all children, and that is why I request your participation.

South Africa is in the process of implementing inclusive education; however, research indicates that teachers, and particularly teachers in rural schools experience challenges in the teaching of learners with diverse educational needs. As a researcher and a former teacher in a special school, I have come to a realisation that children with disabilities, particularly those with cerebral palsy still find it difficult to access the general curriculum in rural schools.

THE NATURE AND PURPOSE OF THE STUDY

The purpose of this study is to explore rural teachers' perceptions regarding inclusive education, with an aim to find out how they teach children with cerebral palsy in order to create meaningful learning opportunities for these children. Your participation will help give perspective to teachers' perceptions regarding the implementation of inclusive education.

EXPLANATION OF PROCEDURES TO BE FOLLOWED

Should you agree to participate in the study, you will be requested to partake in an interview of approximately an hour, which will be conducted at the school. Your willingness to participate will be indicated by signing a permission slip (attached).

RISK AND DISCOMFORT INVOLVED

No risk or discomfort is foreseen in participation, as you will only be requested to share your expert knowledge on the topic. The interview will also be conducted at a place that is suitable to you, presumably the school.

POSSIBLE BENEFITS OF THIS STUDY

You may not benefit directly from this study, but your participation may help the Department of Basic Education understand teachers' perceptions in the implementation of inclusive education. These perceptions may affect curriculum accessibility for children with cerebral palsy. The understanding of these perceptions may facilitate an enhanced and hopefully a more rapid implementation of inclusive education, thus helping to create meaningful learning opportunities for children with cerebral palsy.

MAY I AT ANY TIME WITHDRAW PARTICIPATION FROM THIS STUDY?

Participation in this study is voluntary; you may withdraw your participation at any time without any negative consequences. Pseudonyms will be used to secure confidentiality and to protect your identity. Arrangements for conducting the interviews will be made after permission has been granted by the Ethics Committee of the University of Pretoria.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has received ethical clearance from the Ethics Committee of the Department of Health as well as the Faculty of Education of the University of Pretoria

CONFIDENTIALITY

Your confidentiality and anonymity of the schools will be ensured, you will only be identified as participant 1, 2 and 3.

Following the completion of the project, the research data will be stored at the University of Pretoria for 15 years. The findings of the study will be made available to you upon request and will be shared with other professionals in article format. I hope this document has given you enough information to agree/disagree participating in this study.

CONSENT TO PARTICIPATE IN THIS STUDY

This study will not commence until you have given consent to participate. If you have read and understood what is expected from you in this document, please sign the attached form to agree/not agree participating in this study and return to:

Researcher: Mrs NS Thuketana

0836757899

susan.thuketana@up.ac.za

I, _____, the teacher in the identified school for the implementation of inclusive education, hereby **give consent / do not give** consent to Mrs Susan Thuketana to conduct an interview with me. I understand that my identity will be kept confidential and that I can withdraw from the study at any time.

.....

Teacher

.....

Date

.....

Researcher

.....

Date

.....

Supervisor

.....

Date

APPENDIX D



Faculty of Education

Fakulteit Opvoedkunde
Lefapha la Thuto

17 August 2016

Department of Early Childhood Education

PARTICIPANTS' INFORMATION AND INFORMED CONSENT

STUDY TITLE: Creating meaningful learning opportunities for children with cerebral palsy in South African rural schools

Dear Parent

REQUEST FOR PERMISSION TO PARTICIPATE IN A RESEARCH STUDY AND INFORMED CONSENT DOCUMENT

You are hereby invited as the parent of a child with cerebral palsy in the Mopani Region of Limpopo Province, to participate in a research study to investigate how inclusive education is implemented for these children. Inclusive education is an approach where all children, regardless of their abilities, are included in one classroom.

South Africa is in the process of implementing inclusive education; however, research indicates that teachers, and particularly teachers in rural schools experience challenges in the teaching of learners with diverse educational needs. As a researcher and a former teacher in a special school, I have come to a realisation that children with disabilities, particularly those with cerebral palsy still find it difficult to access the general curriculum in rural schools.

THE NATURE AND PURPOSE OF THE STUDY

The purpose of this study is to explore rural teachers' perceptions regarding inclusive education, with an aim to determine how children with cerebral palsy are taught in order to create meaningful learning opportunities for these children. Your participation as a parent of a child with cerebral palsy will help give perspective to their needs with regards to inclusive education.

Explanation of procedures to be followed

Should you agree to participate in the study, you will be requested to partake in an interview of approximately an hour, which will be conducted at the school your child attends. Your willingness to participate will be indicated by signing a permission slip (attached).

RISK AND DISCOMFORT INVOLVED

No risk or discomfort is foreseen in participation, as you will only be requested to share your experiences on the topic. The interview will also be conducted at a place that is suitable to you, presumably the school your child attends.

POSSIBLE BENEFIT OF THIS STUDY

You may not benefit directly from this study, but your participation may help the Department of Basic Education understand parents' perceptions in the implementation of inclusive education. The understanding of these perceptions may facilitate an enhanced and hopefully a more rapid implementation of inclusive education, thus helping to create meaningful learning opportunities for children with cerebral palsy.

WITHDRAWAL FROM THIS STUDY

Participation in this study is voluntary; you may withdraw your participation at any time without any negative consequences. Pseudonyms will be used to secure confidentiality and to protect your identity. Arrangements for conducting the interviews will be made after permission has been granted by the Ethics Committee of the University of Pretoria.

HAS THE STUDY RECEIVED ETHICAL CLEARANCE?

This study has received ethical clearance from the Ethics Committees of the Department of Health as well as the Faculty of Education of the University of Pretoria

CONFIDENTIALITY

Your confidentiality and anonymity will be ensured, you will only be identified as Parent A, B, C from school 1, 2 or 3.

Following the completion of this study, the research data will be stored at the University of Pretoria for 15 years. The findings of the study will be made available to you upon request and will be shared with other professionals in article format. I hope this document has given you enough information to agree/disagree participating in this study.

CONSENT TO PARTICIPATE IN THIS STUDY

This study will not commence until you have given consent to participate. If you have read and understood what is expected from you in this document, please sign the attached form to agree/not agree participating in this study and return to:

Mrs NS Thuketana

Researcher

0836757899

susan.thuketana@up.ac.za

I, _____, parent of a child with cerebral palsy, hereby **give consent / do not give consent** to Mrs Susan Thuketana to conduct an interview with me. I understand that my identity will be kept confidential and that I can withdraw from the study at any time.

.....
Coordinator of the District-Based Support Team. Date

.....
Researcher Date

.....
Supervisor Date



APPENDIX E

17 August 2016

Department of Early Childhood Education

PARTICIPANTS' INFORMATION AND INFORMED CONSENT DOCUMENT

STUDY TITLE: Creating meaningful learning opportunities for children with cerebral palsy in South African rural schools

The Coordinator of the District-Based Support Team

Mopani District

Tzaneen

0870

Dear Sir/Madam

PARTICIPANTS' INFORMATION AND INFORMED CONSENT DOCUMENT

You are hereby invited as the coordinator of the District-Based Support Team (DBST) in the Mopani Region of Limpopo Province, to participate in a research study to investigate how inclusive education is implemented for children with cerebral palsy. According to the Department of Basic Education, the DBST is responsible for coordinating support between special, mainstream and full service schools in order to make the curriculum accessible for all children, which is why I request your participation.

South Africa is in the process of implementing inclusive education; however, research indicates that teachers, and particularly teachers in rural schools experience challenges in the teaching of learners with diverse educational needs. As a researcher and a former teacher in a special school, I have come to a realisation that children with disabilities, particularly those with cerebral palsy still find it difficult to access the general curriculum in rural schools.

THE NATURE AND PURPOSE OF THE STUDY

The purpose of this study is to explore rural schoolteachers' perceptions regarding inclusive education, with an aim to find out how they teach children with cerebral palsy in order to create meaningful learning opportunities for these children. Your participation as an official responsible for giving support to teachers will help give perspective to their perceptions regarding the implementation of inclusive education.

EXPLANATION OF PROCEDURES TO BE FOLLOWED

Should you agree to participate in the study, you will be expected to partake in an interview of approximately one hour, which will take place at the district office. Your willingness to participate will be indicated by signing a permission slip (attached).

RISK AND DISCOMFORT INVOLVED

No risk or discomfort is foreseen in participation, as you will only be requested to share your expert knowledge on the topic. The interview will also be conducted at a place that is suitable to you, presumably the district office.

POSSIBLE BENEFIT OF THIS STUDY

You may not benefit directly from this study, but your participation may help the Department of Basic Education understand teachers' perceptions in the implementation of inclusive education. These perceptions may affect curriculum accessibility for children with cerebral palsy. The understanding of these perceptions may facilitate an enhanced and hopefully a more rapid implementation of inclusive education, thus helping create meaningful learning opportunities for children with cerebral palsy.

VOLUNTARY PARTICIPATION

Participation in this study is voluntary; you may withdraw your participation at any time without any negative consequences. Pseudonyms will be used to secure confidentiality and protect your identity. Arrangements for conducting the interviews will be made after permission has been granted by the Ethics Committee of the University of Pretoria.

HAS THE STUDY RECEIVED ETHICAL CLEARANCE?

This study has received ethical clearance from the Ethics Committee of the Department of Health as well as the Faculty of Education of the University of Pretoria.

CONFIDENTIALITY

Your confidentiality and anonymity will be ensured, you will only be identified as Participant 1 and the district office will be identified as Research site 4.

Following the completion of this study, the research data will be stored at the University of Pretoria for 15 years. The findings of the study will be made available to you upon request and will be shared with other professionals in article format. I hope this document has given you enough information to agree/disagree participating in this study.

CONSENT TO PARTICIPATE IN THIS STUDY

This study will not commence until you have given consent to participate. If you have read and understood what is expected from you in this document, please sign the attached form to agree/not agree participating in this study and return to:

Researcher: Mrs NS Thuketana

0836757899

susan.thuketana@up.ac.za

I, _____, the District-Based Support Team coordinator, hereby give consent/ do not give Mrs Susan Thuketana permission to conduct an interview with me. I understand that my identity will be kept confidential and that I can withdraw from the study at any time.

.....

Coordinator of the District-Based Support
Team.

.....

Date

.....

Researcher

.....

Date

.....

Supervisor

.....

Date

APPENDIX F



Participation and Complete Observation Schedule

Observation	Field notes
<ul style="list-style-type: none">I will observe how children with cerebral palsy interact with other typically developing children at the school.	
<ul style="list-style-type: none">If there are signs of bullying from other typically developing children.	
<ul style="list-style-type: none">The support that children with cerebral palsy receive from the school.	
<ul style="list-style-type: none">The accessibility of the school for these children.	
<ul style="list-style-type: none">The availability of academic and mobility assistive devices that children with cerebral palsy receive from the school.	
<ul style="list-style-type: none">Availability of systems for academic support at the school.	

APPENDIX G

BERNICE BRADE EDITING Member of the Professional Editors' Guild

FREELANCE WRITER, PROOF READER AND EDITOR
WEB RESEARCHER AND RESEARCH STRATEGIST
ENGLISH SPECIALIST
ESTABLISHED 1987

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9 June 2018

P O Box 940
LONEHILL 2062
South Africa

To whom it may concern: Certificate of Editing

This letter serves to confirm that in **June 2018** I did the proofreading and the language editing for the PhD thesis of

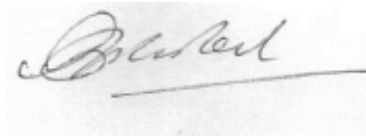
NKHENSANI SUSAN THUKETANA
Student Number 24523047

Titled: *Creating meaningful learning opportunities for children with Cerebral Palsy in rural schools*

This document is being submitted in fulfilment of the requirements for the degree

PHILOSOPHIAE DOCTOR
In the **FACULTY OF EDUCATION**
Of the **UNIVERSITY OF PRETORIA**

I have proofread and edited the entire body of the thesis, including the introductory pages, but have not been asked to edit the list of references or the appendices. This editing principally involves proofreading, language, style and grammar editing; and also checking the text for clarity of meaning, sequence of thought and expression and tenses. I have also noted any inconsistencies in thought, style or logic, and any ambiguities or repetitions of words and phrases, and have corrected those errors which creep into all writing. I have written the corrections on the hard copy and have returned the document to the author, who is responsible for inserting these. Please note that this confirmation refers only to editing of work done up to the date of this letter and does not include any changes which the author or the supervisor may make later.



Date: 9 June 2018

Bernice McNeil BA Hons NTSD



If editors respect the academic purpose of thesis writing and the priority of the supervisor, we can help students (and ourselves). As one member told us: "We are a valuable resource for students as long as we edit these papers in an ethical way—a way in which ... the work that students submit is indeed their own, only more polished." Guidelines for Editing Theses - The Editors' Association of Canada / l'Association canadienne des réviseurs

Material for editing or proofreading should ideally be submitted in hard copy. In electronic copy, it is too easy for the student to accept editorial suggestions without thinking about their implications Queensland University of Technology Higher Degree Research Guidelines

Proprietor: Bernice McNeil BA Hons, NSTD Member of the Classical Association of South Africa
Member of the English Academy of Southern Africa