DEVELOPING A FRAMEWORK FOR PARENTS AND EDUCATORS IN LOW-INCOME COMMUNITIES TO ENHANCE ACCESS TO RESOURCES THAT EDUCATE CHILDREN PRESENTING WITH AUTISM SPECTRUM DISORDER

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ABSTRACT

Background: The policy for Inclusive Education in South Africa, the White Paper 6, states that all children can learn with support. Research suggests that there is a lack of access to education and resources for children with ASD living in low socio-economic communities. Education support services are under-resourced and unable to deal with the enormous number of learners with special needs. Globally, there is an appalling lack of dedicated school and learning facilities for children affected by autism. In special needs schools, children with autism are placed in classes with children with other disabilities. This is often as a result of either little understanding of their learning needs or resource constraints such as no schools close by to accommodate autistic learners.

Aim: The study aimed to develop a framework for parents and educators in low income communities to enhance access to resources for the education of children presenting with autism spectrum disorder. The study had two phases which were conducted using a multi research strategy with a qualitative approach and aligned using the logic model.

Methodology: The study was completed in two phases during the process of conducting the research. Phase one consisted of three stages to identify the problems: Stage one explored best practice models in education for children with ASD; Stage two conducted a needs analysis with parents and teachers to identify the developmental and educational needs of children with ASD; Stage three explored the educational programmes currently implemented within special needs schools to accommodate children with ASD. This involved interviews with teachers and educational stakeholders within the field of special needs. The findings of Phase one indicated the need for an intervention, framework or guidelines to assist the crisis in South Africa pertaining to

educational resources for children with ASD. Phase two was aimed at the development of the framework by using the logic model as a methodological framework.

Results: The following findings were concluded in Phase one according to Bronfenbrenner's ecological systems theory: (1) Microsystem: The lack of resources affects both the child with ASD and the parent. The lack of resources in communities and access to schooling presents a challenge as there is a clear need for more schools. Therefore, the barrier identified is a lack of community resources; (2) Mesosystem: The breakdown in communication from the top down serves as a barrier to the successful implementation of inclusive education. Effective communication lines and collaboration will result in parents being more informed, teachers and education providers gaining knowledge for effective teaching and implementation of policy and procedure. Educational officials will be well informed of the concerns of parents and educational stakeholders. Therefore, creating a platform for engagement would be beneficial; (3) Exosystem: Specialised training for teachers working with learners diagnosed with ASD is imperative as the development of a learner is dependent on the teacher's level of experience, skills and knowledge. Training opportunities for both special education teachers and mainstream teachers to gain the knowledge for effective inclusion will allow more learners access to education; (4) Macrosystem: Children with ASD are faced with exclusion from the education system and class environment. Learners are expected to fit into the education system, which results in many learners either being denied access or misplaced and lost in the education system. Aligning the curriculum to be more inclusive of learners with ASD will assist them in the classroom, allowing them more access.

Conclusion: This thesis aimed to develop a framework for parents and educators in low-income communities to enhance access to resources for children presenting with autism spectrum disorder. The framework has implications for special needs education (inclusive education) parents,

teachers, stakeholders and children with ASD. The implications of this framework highlight the importance of educational resources for children with ASD in low-income communities. The results of this study and the framework will assist with understanding the importance of interaction among parents, teachers and educational stakeholders. The roles are clarified and success is dependent on the relationships between the micro, meso, exo and macrosystems levels.

Ethics: Ethics approval was obtained by the University of the Western Cape's Higher Degrees and the University's Senate Committee. Permission was granted by the Western Cape Education Department and school headmasters to proceed with the data collection. All non-governmental structures that formed part of the study were consulted and granted permission for the study. Ethics principles were applied and ensuring confidentiality and anonymity was upheld, including informed consent from participants who agreed to participate in the study.

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KEYWORDS

Autism Spectrum Disorder

Inclusion

Education

Special needs

Access

Resources

Barriers

Ecological systems theory

DECLARATION

I, Bronwyn Sarah Mthimunye, hereby declare that the ***Developing a framework for parents and educators in low income communities to enhance access to resources that educate children presenting with Autism Spectrum Disorder*** is my own work. I also declare that it has not been submitted for any degree or examination at any other university and all sources I have used or quoted have been indicated and acknowledged by complete references.

Name: Bronwyn Sarah Mthimunye   Date: August 2019

Bronwyn Mthimunye

_____

Signature

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Jeremiah 29:11

[11] For I know the plans I have for you," declares the Lord, "plans to prosper you and not to harm you, plans to give you hope and a future."

I am grateful to God for allowing me this opportunity to achieve and successfully complete my PhD. I am forever thankful to God for placing his hand of protection over me, when things seemed impossible Gods strength kept me going.

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DEDICATION

I dedicate this thesis to every young person in Bonteheuwel, I am proof that resilience

and dedication can make your dreams come true!

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LIST OF ABBREVIATIONS AND ACRONYMS

ASD: Autism Spectrum Disorder

DoE: Department of Education

DSM-5: Diagnostic Statistical Manual of Mental Disorders

IE: Inclusive Education

LM: Logic Model

UNESCO: United Nations Organisation for Educational, Scientific and Cultural Development

WCED: Western Cape Education Department

WC: Western Cape

EWP6: White Paper 6 on Special Needs Education: Building and Inclusive Education and Training System

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Publications that have been produced from this thesis and the status thereof:

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Mthimunye, B. S., Roman, N. V., & Pedro, A. S. (2018). Factors which Enhance or Hinder Meeting the Educational Needs of Autistic Children in Western Cape Province, South Africa: A Parents' Perspective. *International Journal of Special Education*, *33*(2), 279-294.

Book chapter published

Mthimunye, B., S., Roman, N.V., & Pedro, A. S. (2016). Autism Spectrum Disorder and Self Determination Theory: The Importance of Family involvement (pp.119-132). In N.V. Roman & E. Davids, Self-determination Theory: A Family Perspective. New York: Nova Science Publishers.

Manuscripts under review

Mthimunye, B., S., Pedro, A. S. & Roman, N.V. (2019). A scoping review that was conducted focusing on educating children with autism spectrum disorder: A scoping review on evidence-based practice modules used in the classroom. Submitted to *Journal of Psychology in Africa.*

Mthimunye, B., S., Pedro, A. S. & Roman, N.V. (2019). South African teachers and their perspectives on the barriers to the educational development of learners with autism spectrum disorder. Submitted to the *International Journal of Special Education*.

Mthimunye, B., S., Pedro, A. S. & Roman, N.V. (2019). Promoting an inclusive education system for children with autism spectrum disorder: Perspectives of stakeholders**.** Submitted to the *Journal of Educational Studies.*

Mthimunye, B., S., Pedro, A. S. & Roman, N.V. (2019). The development of a framework for parents and educators in low-income communities to enhance access to resources that educate children presenting with autism spectrum disorder. Submitted to the *South African Journal of Psychology.*

CHAPTER ONE

ORIENTATION OF THE STUDY

1.1 Introduction and background

The current statistics of autism worldwide indicates that 1 in 59 children are diagnosed with autism (Autism and Developmental Disabilities Monitoring Network Surveillance, 2014). International trends show that the prevalence of autism is increasing annually as more people are being diagnosed with autism spectrum disorder (ASD). Furthermore, Baio (2012) found that boys are five times more likely to be diagnosed with ASD than girls. In South Africa, the prevalence for ASD is unknown in many parts of the country due to a lack of research conducted in Africa (Ametepee & Chitiyo, 2009). Autism South Africa (2012), indicates that there will be 933 new cases of children being diagnosed with ASD each month, 216 cases per week and 31 cases per day. Therefore, one may conclude that every 45 minutes a child is born who will develop ASD in South Africa. In the Western Cape, approximately 10 children are diagnosed with ASD each week at three of the governmental hospitals (Autism South Africa, 2012).

ASD is a neurodevelopmental disorder that affects the way a person's brain and body works. Children with ASD exhibit a wide range of behaviours. ASD is a serious neurodevelopmental disorder that impairs a child's ability to communicate and interact with others. It includes restricted repetitive behaviours, interests and activities (American Psychiatric Association, 2013). ASD is characterised by what is known as the quadrant impairments which include the following: language and communication, socialisation, rigidity in thinking and behaviour, and sensory disturbances (Autism Western Cape, 2014). Furthermore, these issues cause significant impairment in social, occupational and other areas of functioning. Children with ASD generally find it difficult to make

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friends with other children as a result of difficulty in communication. Imaginative play is also difficult and some children may not speak at all. Other symptoms include obsessions; fears; a lack of awareness of danger; ritualistic play and behaviour; inappropriate eye contact; hypersensitivity to sound, light and spinning objects; and hand flapping. A child does not have to exhibit all these signs and symptoms to be diagnosed with ASD, while some children displaying these symptoms may not have ASD. The level of intellectual functioning differs from person to person and to various degrees (Autism Western Cape, 2014). The intellectual level could range from average to above average as well as severe intellectual difficulty (Baio, 2012).

Early detection and intervention is highly recommended for children diagnosed with ASD (Robins, Fein, Barton & Green, 2001). Early detection is not always possible, especially in low-income areas as although the facilities are there, they are not always accessible to parents. For example, schooling is a huge challenge for many parents of children with ASD (Mthimunye & Mwaba, 2014). Only a few schools are equipped or able to accommodate children with ASD and those that are able to accept children with ASD have specific criteria in order for children with ASD to be eligible for acceptance into the school. Children wanting to attend these schools must be assessed and if they do not meet the criteria for admittance to a school, they have to stay at home (Autism South Africa, 2012). The inclusive education policy the White Paper 6 advocates that a learner with special needs should be accommodated at schools in their home communities with additional support and if necessary, a modification of the curriculum (Department of Education, 2001).

Children with ASD characteristically present with developmental delays and therefore age appropriate milestones are invariably delayed. Parenting a child with developmental delays can place huge demands on parents and often cause chronic fatigue and depression, making them feel overwhelmed (Remington et al., 2007). It is especially overwhelming for many parents to get the

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child appropriately assisted in terms of education and care (Twoy, Connolly & Novak, 2007). In order for a child to be fully supported and developed holistically, multidisciplinary healthcare services such as physiotherapy and speech and occupational therapy are required (Halterman, Magyar & Montes, 2009; Rao & Beidel, 2009). These support services are not always accessible to parents. In many communities in South Africa and particularly in low income communities, it is challenging for parents to access these services adequately and promptly. These challenges include services that are either far from the community, financial constraints, as well as some parents who are not well informed as to what kind of healthcare is required or where they should go for help due to a lack of psycho-education (Mahlo, 2011).

In a previous study conducted by Mthimunye and Mwaba (2014), the experiences of single mothers of children with ASD and how they coped with raising an autistic child was explored. The results indicated that there are very few resources, educational support, care and access to education available for children with ASD. Participants identified many challenges in parenting a child with ASD, some of these challenges ranged from schooling, finances, behavioural issues and society's misconception of ASD. A study conducted by Mahlo (2011) concurred with these findings. During the interviews, the participants indicated that schooling is a major challenge for children on the autism spectrum. Children are often placed on a waiting list for school acceptance and placement; parents are asked to be patient and await feedback (Mthimunye & Mwaba, 2014). With few options available, many parents turn to day care centres in their communities to assist with child care even though these centres are not equipped for taking care of children diagnosed with ASD. Teachers at mainstream schools are not specifically trained to manage such cases, therefore parents are obliged to care for their child/children themselves and are compelled to give up their full-time employment. Parents are then responsible for the development of the child,

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fulfilling the role of a full-time teacher and at the same time having to find a means of providing for their children's daily cost of living (Mthimunye & Mwaba, 2014). Having reviewed literature in this area, it was challenging to locate documented research in South Africa that addresses managing access and resources to educate a child with ASD. Therefore, the current study seeks to develop a framework for access and resources to manage and educate a child with ASD.

1.2 Problem statement

The education system in South Africa has many challenges and children with special needs find it difficult to develop academically. The barriers that many children with ASD face are not being addressed (Mahlo, 2011). Education support services are under-resourced and unable to deal with the large number of learners with special needs. For children affected by autism, school or learning facilities dedicated to them is appallingly lacking worldwide. Children with ASD in special needs schools are placed together with children with other disabilities due to either little understanding of their learning needs or resource constraints such as no schools close by to accommodate learners with ASD (Baird, Simonoff, Pickles, Chandler, Loucas, Meldrum & Charman, 2006). Many children with ASD with normal or even high IQs are mistakenly treated as mentally retarded and are deprived of learning opportunities (Vogel, 2008). Schools closest to the child diagnosed with ASD are full and have long waiting lists, with the result that many parents find it difficult placing their child in a school. The limited resources available should be valued (Vogel, 2008), however access to these limited resources is challenging. Schools with resources are limited and only a few learners get access to those schools, leaving the rest destitute (Mthimunye & Mwaba, 2014). Parents find it challenging identifying appropriate placements for their child with ASD. The number of learners diagnosed with ASD is on the increase and it is increasingly difficult to find solutions that meet their needs. Furthermore, research suggests that there are insufficient support

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services for parents of children with autism, which might help them cope with stress (Whitaker, 2002). This is not only happening in low income communities but seen across many communities.

Given the challenges parents have and the lack of resources and difficulty accessing services, this study aims to develop a framework for parents and educators in low-income communities to enhance their access to resources for the education of children presenting with ASD. There is no research focusing on the access and resources for educating a child with ASD and therefore this study will aim to address this concern within our society (Walker, 2015).

1.2.1 Research questions

- What are the educational and developmental needs of a child with ASD?
- What does previous research suggest on the issues related to access to schooling for children with ASD?
- What educational programmes are available for children presenting with ASD in a low socio-economic community?
- What frameworks or structures are currently implemented to ensure accessibility to resources for managing and educating a child with ASD?

1.3 Aim of the study

The aim of the study is to develop a framework for parents and teachers to enhance access to resources for managing and educating a child with ASD in low-income communities. Low-income communities are characterised by low educational accomplishments, high unemployment rates, low-income and high levels of crime and violence (Savahl et al., 2015).

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1.3.1 Objectives of the study

The following are the main objectives of this study:

Objective 1: Explore best practice models in education for children with ASD.

Objective 2: Conduct a needs analysis with stakeholders to identify the developmental and educational needs of children with ASD.

Objective 3: Explore the educational programmes within special need schools currently implemented to accommodate children with ASD.

Objective 4: Develop a framework for parents and teachers to enhance access to resources for managing and educating children presenting with ASD.

1.4 Significance of the study

The findings of this study will provide information that will contribute towards the development of an inclusive education system. This study will investigate and assess the need for more resources to enable a child with ASD to have a place in society. Bronfenbrenner's theory undergirds the study and according to Bronfenbrenner (2005), a society cannot operate effectively without its counterparts and working together as a system. A society functions as a whole when all parts are proactive such as the micro-, meso-, exo-, macro- and chronosystem. These systems form an integral part in the successful implementation and delivery of an inclusive education system. Therefore, services providing education and care for children with ASD cannot be viewed in isolation but rather from an ecological perspective. This involves obtaining a holistic view on matters pertaining to limited access to education, unavailability of schools and educational

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resources, difficulty in obtaining the needed support, inaccessibility and costs associated with the educational demands and needs of children with ASD (Franz, Adewumi, Chambers, Viljoen, Baumgartner & de Vries, 2018). Families of a child with ASD experience difficulties accessing health care and educational services (Thomas, Ellis, McLaurin, Daniels & Morrissey, 2007). Child and family characteristics associated with the use of services for ASD have been limited (Higgins, Bailey & Pearce, (2005). The study will raise awareness and contextual understanding of the needs of children with ASD living in low socio-economic communities in Cape Town, South Africa. This study will provide a clear image into the reality of parents, caregivers, teachers and children with barriers to learning. The findings will not only add to the literature, but serve the child, parents, DoE and teachers. The study findings will be disseminated and shared with the DoE and the organisations that serve the communities to assist parents and children with ASD. The needs of children with ASD are not met and too many parents find themselves unable to make their voices heard (Mthimunye & Mwaba, 2014). This study was not focused solely on low-functioning or high-functioning ASD but rather on both not to disadvantage any children. Stakeholders can take from the recommendations and apply it to both low-functioning or high-functioning ASD.
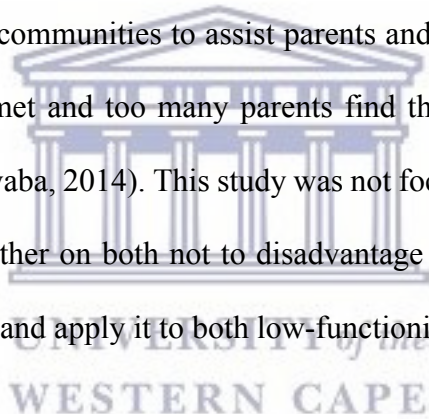
1.5 Definitions and operational definitions of terms

Access: This term refers to having the ability to enter a place such as a school (DoE, 2001). In this study, the term was used to describe the difficulty parents have gaining access to schooling for their child who has been diagnosed with ASD.

Autism spectrum disorder: According to the American Psychological Association (2013), this term refers to a neurological disorder that affects development, which is characterised by difficulty in communication and interaction with others. In some cases, there is a presence of repetitive

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behaviour. This study frequently referred to the disorder as the study was aimed at researching children with ASD.

Barriers: The term is defined as a fence or obstacle that hinders movement and access (DoE, 2001). This study identified many barriers and these formed a large part of the study and the aims set in developing a framework.

Child: In South Africa, according to the Children's Act 38 of 2005 section 17, a child is classified as anyone under the age of 18. However, a child has a right to make certain decisions independently before he or she becomes an adult. This study primarily focused on those children with special needs not receiving the same educational opportunities as a child without no special need.

Ecological systems theory: This is an account of the environment being viewed as systems that include all levels of society. The various systems may influence our behaviour and vary from system to system (Bronfenbrenner, 2005). These systems are known as the microsystem, mesosystem, exosystem, macrosystem and the chronosystem. All of these systems were discussed in the study. The influence of these systems is of vital importance.

Inclusive education: The term is widely used and refers to the process that strives towards reducing exclusion within schools, especially for children with special educational needs (UNESCO, 2017). Exploring ways in which this can be better implemented for those with special needs to benefit from an inclusive education system.

Low-income communities: According to the Savahl, S., Adams, S., Isaacs, S., September, R., Hendricks, G., & Noordien, Z. (2015), this refers to the type of class an individual forms part of, in this instance low socio-economic status is directed at the financial position and work experience.

Resources: According to DoE (2001) resources are described as materials that are available to a person or organisation. This study refers to resources available in the community such as schools, hospitals, social services, police etc.

Special needs: Refers to a school context where a child requires support due to specific educational needs as a result of learning difficulties. These difficulties can be physical, behavioural or emotional (DoE, 2001). During this study, the term special needs is frequently used as a child on the autism spectrum is classified as a special needs child requiring support.

Stakeholder: A person who has an interest in a particular topic or something that is of concern to them (DoE, 2001). In this study, the stakeholders are those who are closely involved in the education system, have an interest in special needs and a strong belief in having an inclusive education system that is more accessible.
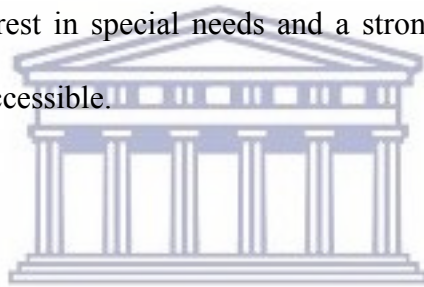
1.6 Thesis structure

The structure of this thesis is presented in chapters, with the results presented in the format of separate manuscripts. These manuscripts have not been published but have been submitted for publication. Each chapter ends with a reference list and the chapters are structured as follows:

Chapter one: Introduction. This chapter explains all concepts explored during the study. It reflects on the current literature and highlights the influences lack of resources have on children with ASD within low-income communities in the Western Cape, South Africa. The introduction chapter highlights the importance of developing a framework that is appreciative and beneficial for the educational development of a child with ASD, their parents, teachers, educational stakeholders and the broader community.

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Chapter two: Conceptual Framework. Bronfenbrenner's ecological systems model is largely explored and discussed in this chapter. The various systems identified by Bronfenbrenner highlight the impact these systems have on the developing child, with particular reference to learners with ASD and the impact it has on their educational development.

Chapter three: Methodology. This chapter discusses in depth the various approaches used to gather the data to meet the objectives of the study. There were two study phases used for the development of the framework. This chapter will inform the rationale, research design, methodologies used, and the procedures involved to ensure the integrity of the data processed and analysed. This chapter will include the paradigm used for this study and discussed in length.

In Chapters four to eight I discuss the results and findings of the study and will be presented in manuscript format. Below is an overview of the results chapters:

Chapter four: This chapter highlights the scoping review that was conducted focusing on educating children with autism spectrum disorder: A scoping review on evidence-based practice modules used in the classroom. This manuscript was submitted to *Journal of Psychology in Africa.*

Chapter five: This chapter reports on a qualitative study which was conducted with parents who are raising a child with autism spectrum disorder. The study was aimed at exploring the factors which enhance or hinder the educational needs of children with ASD in the Western Cape Province, South Africa: A parents' perspective. This manuscript was submitted and published in the International Journal of Special Education 2018.

Chapter six: A qualitative study was conducted with teachers working at schools that are inclusive and teaching learners that are on the autism spectrum. The study aimed to examine the views of South African teachers and their perspectives on the barriers to the educational development of

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learners with autism spectrum disorder. This manuscript was submitted to the *International Journal of Special Education*.

Chapter seven: This study involved a qualitative research approach and aimed to explore stakeholder's views. The stakeholders were from various schools, the local community and education officials. The promoting of an inclusive education system for children with autism spectrum disorder: A stakeholder's perspective and their suggestions on inclusive education. This manuscript was submitted to the *Journal of Educational Studies.*

Chapter eight: The final study was conducted using a workshop method for gaining consensus of the framework that was developed based on the subsequent studies. The development of a framework for parents and educators in low-income communities to enhance access to resources that educate children presenting with autism spectrum disorder. This manuscript was submitted to the *South African Journal of Psychology.*

Chapter nine: Discussion, Recommendations and Conclusion. This final chapter provides an overall discursive summary of the thesis. This chapter also identifies the limitations and recommendations for practice and future research.

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2.1 Introduction

This chapter presents the conceptual framework for the study and contains the literature review and the theoretical framework. The theoretical framework of the study is Bronfenbrenner's ecological systems theory. The current study explores the concept of ASD and the impacts on a child with ASD. Children with ASD are affected by these factors and issues related to the context in which they find themselves. The review of the literature is followed by the theoretical framework which focused on Bronfenbrenner's ecological systems theory and its application to the child with ASD and the influences of the context on children with ASD.

2.2 Literature review

2.2.1 Autism spectrum disorder

ASD is a disorder that is characterised by a spectrum, so to the degree to which a child (or adult) is affected by his or her difficulties. ASD is a condition that affects communication and the ability to make sense of the world. It has various levels of intellectual disability, mild intellectual disability and an IQ of 50 to 70, moderate intellectual disability and an IQ of 35 to 49, severe intellectual disability and an IQ of 20 to 34 and lastly profound intellectual disability and an IQ less than 20. There are 85 percent of people with intellectual disabilities that are classified under the mild category and many achieve academic success. People with moderate intellectual disability have fairly good communication skills but cannot typically communicate on a complex level. An

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average of 4 percent of those diagnosed with intellectual disability are classified under the severe category (American Psychiatric Association, 2013).

Children with mild to moderate intellectual functioning are challenged on various levels and need specialised support to perform well academically (Gregor & Campbell, 2001). Children mildly affected can live a relatively independent life, while others may require lifelong support (Mthimunye & Mwaba, 2014). Children with ASD have some difficulty in three main areas: (1) social communication where children are unable to communicate effectively and find it challenging to articulate and construct sentences which affects their speech. Some children with ASD may not have any speech while others may have limited speech; (2) social interaction can be difficult for children with ASD as they cannot hold eye contact, making friends can be a challenge, while maintaining friendships and playing with other children is not always successful; (3) social imagination is rather challenging as many children with ASD find this near impossible as ASD affects children's ability cognitively, and imaginary play and creating stories etc. can be a tough task (American Psychiatric Association, 2013). Children who present with Asperger syndrome have good speech and language skills but may tend towards monologue and find conversation hard. Non-verbal communication, for instance eye contact, expressions and gestures can be very confusing for children with ASD. Social interaction can be difficult for children with ASD. They may prefer to spend time alone or find it hard to make friends. They often have difficulty recognising and understanding the feelings of others. Difficulties with social imagination can make children with ASD very wedded to routine and easily distressed by change. They may also have very fixed and sometimes unusual special interests (Maestro et al, 2005). Due to the nature of ASD, children need specialised educational intervention to assist them in progressing and achieving their educational goals.

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2.2.2 Special needs versus Special education

According to Barton (2003) argued that the term inclusive education should be politically driven and must be viewed as a process of transformation. The change that is needing to happen that is viewed as complex and multifaceted. Society should reach a point whereby the notion of discrimination is nonexistent. According to Barton (2003) he expressed his frustration at the level of oppression, segregation, exploitation and exclusion of children with special needs. Furthermore Tomlinson (1982) suggests that special education should be viewed at a form of sociology and Barton (1997) took a similar stance alongside other prominent authors in the field such as Ballard (1996); Skritic (1995) and Biklen, Ferguson & Ford (1989). The authors mentioned all had one thing in common, holding the idea that the approach to special education must be that of a social interest not focused on the individual differences. Barton (2003) argues that disability is not a punishment or result of some sinful deed or act. It's not a sickness nor a charity sentiment, it is a crucial human rights matter. According to Hurst (1996) the same sentiment was shared explaining that the interactions should come from a freedom view and freedom of choice with non-discrimination and have a society that is inclusive in nature. This should not only be defined by the color of your skin, the community you were raised in nor judged by your socio-economic status.

A great amount of practice that involves children with special needs are characterised by the term 'special educational needs' which is now seen as an old paradigm. The term special education can have a negative connotation and stereotypes attached. This leads to the many children being denied access to the mainstream education due to the labeling and term used to describe those with learning barriers. The term 'special' indicates difference, uniqueness and separation creating a sense of segregation amongst those that are not viewed as 'special' (Annual Ministerial Review of

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the UN Economic and Social Council (ECOSOC), 2011). The paradigm has shifted on the new focus the notion changes the education structure, the way learning takes place and the manner in which the curriculum is taught and assessed. This is meant to encourage diversity and not for the pupil to fit the school but the school to change for the pupils according to their needs. The concept of inclusive practices in all areas of the school must be instilled with modifications (UNESCO, 2005).

On a global scale, IE is the mainstreaming, integrating, normalising and creating a less restrictive schooling environment. Inclusion implies equal opportunity for all learners within one school system. It is a system whereby all learners are seen and recognised as having different needs. This means that all learners should be respected and treated fairly when accessing education. This system allows for learners to learn together and their individual differences, special needs and disabilities are respected. IE worldwide has become a challenge such as in Australia, as well as in some European countries, there has been an increase of learners with special needs in mainstream schools. Support for these learners is provided in various ways dependant on their needs (Forlin, 2001). This indicates that South Africa is not the only country embracing the inclusive principles. Important to note is that IE means that no discrimination or unjust treatment should be practiced. According to Choate (2000), the United States of America was the first country to introduce an anti-discrimination legislation in education regarding special needs. In Canada, all learners are accommodated in mainstream schools with specialised support (Peters, 2004). Canadian teachers receive direct support that is very effective for their classroom environments (Porter, 2000). Currently, there is an international shift towards IE where learners are schooled in the least restrictive environment possible. Worldwide, the situation has changed in schools and these changes are even more radical than the developments affecting the position of children and parents

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(Guler, de Vries, Seris, Shabalala & Franz, 2018). Parental involvement is what leads to the decisive factor in the development of IE worldwide (Engelbrecht, Oswald, Swart, Kitching & Eloff, 2005).

2.2.3 Policy (International and National)

Policy is a very important point of departure especially given the nature of inclusion and the shift that's needing to happen. According to Cheshire (2006) the mainstreaming of policy and practice is important to ensure effectiveness. In the United Kingdom, Republic of Ireland, Greece, Portugal and Malta the European Disability Action Mainstream Assessment Tool (EDAMAT) a set of guidelines were developed to assess the mainstreaming of disability issues. They found the following to be very beneficial: (1) The *engagement* active involvement the representatives and policy makers should be in partnership throughout the stages of developing the policy; (2) have *access* this refers to physical access to information and the communication involved coming from all levels; (3) the *resourcing* this will ensure engagement and access possible; lastly (4) enforcement and monitoring the removal of any inequalities caused. According to Slee (2011) "The rhetoric, texts and meanings of policy makers do not always translate directly and obviously into institutional practices. They are inflected, mediated, resisted and misunderstood, or in some cases simply prove unworkable".

The UNESCO (2009) 'Policy Guidelines on Inclusion in Education' that was developed through the global consultation in Geneva. The guideline specified at this event represented the shift and not exclusive, the focus is not on special education needs but rather speaks to all learners (Salamanca, 1994). The policy outlined the following: "Inclusion is thus seen as a process of addressing and responding to the diversity of needs of all children, youth and through increasing

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participation in learning, cultures and communities, reducing and eliminating exclusion within education. It involves changes and modifications in content, approaches, structures and strategies, with a common vision that covers all children of the appropriate age range and a conviction that it is the responsibility of the regular system to educate all children" (UNESCO, 2009).

Post-apartheid, South Africa is striving for change since 1994 with much political change this includes a changed education system to address and consider all citizens (Badat & Sayed, 2014). The South African Constitution Act of 1996 includes the Bill of Rights that speaks about the rights of all learners, regardless of race, gender, sex, colour, sexual orientation, disability, religion, conscience, belief, culture or language to basic education and access to educational institutions (Republic of South Africa, 1996). Education in South Africa is not a privilege, it is a right (Bhorat, 2004). The Post 1994 policies are striving for education change based on the international practices and based on principles such as equality and human rights (Christie & Alkin, 2008). In the White Paper 6, DoE (2001), IE and training are defined in policy terms which acknowledge that all learners can learn and need support, accepting and respecting that they are all different in some way and have different learning needs that should be equally valued.

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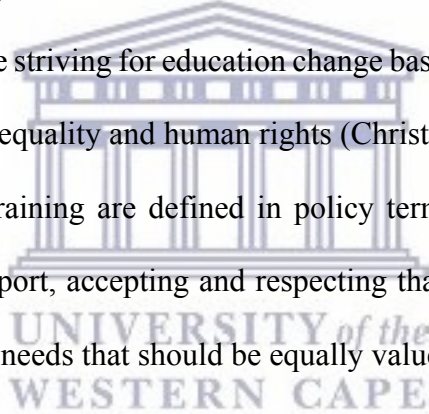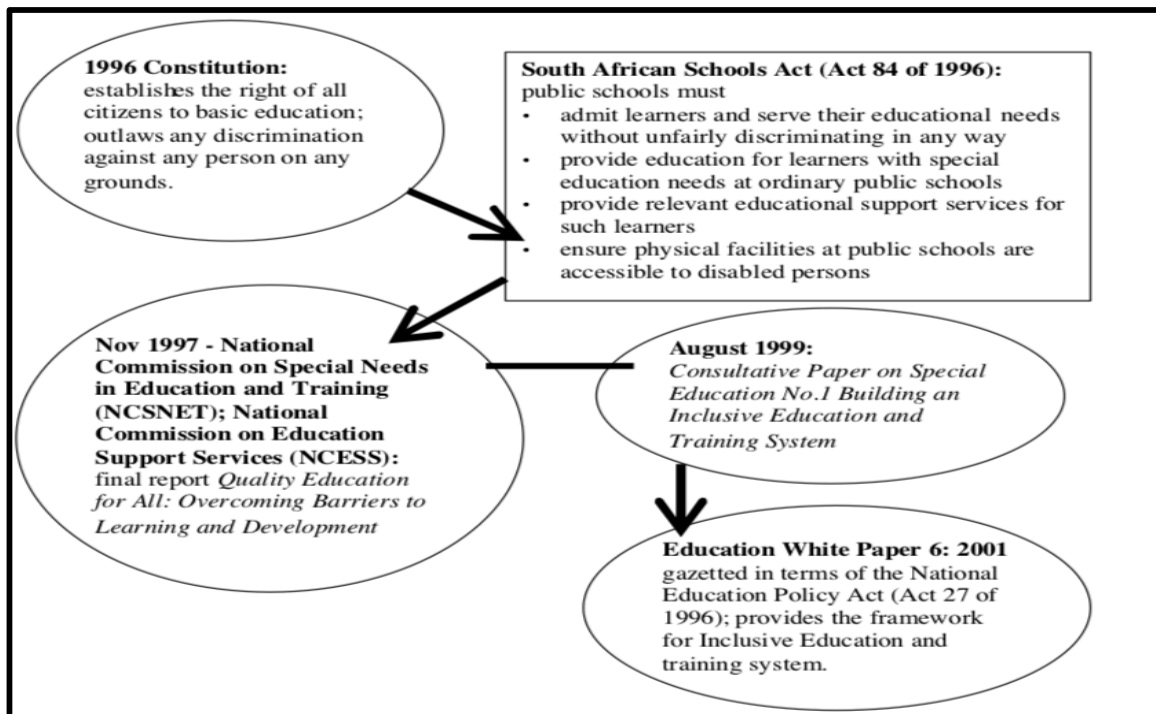
Figure 2.1 Constitutional changes supporting IE overtime (DoE, 2007)

Provision should be made for all children with special needs, including children with significant disabilities. Equal opportunities such as educational services in their neighbourhood schools should be provided, thus enabling learners to acquire the much-needed skills they need to enable them to live and function independently in society as fully productive and responsible citizens (Mahlo, 2011).

The DoE is striving to move away from the special needs approach and adopt a more inclusive approach for learners with difficulties (Engelbrecht, Nel, Smit & van Deventer, 2016). The change in approach is to better understand the learner and address the challenges with a more positive and inclusive approach. The diagrams below present an illustration of what the department aims to achieve.

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The 'special needs' approach:
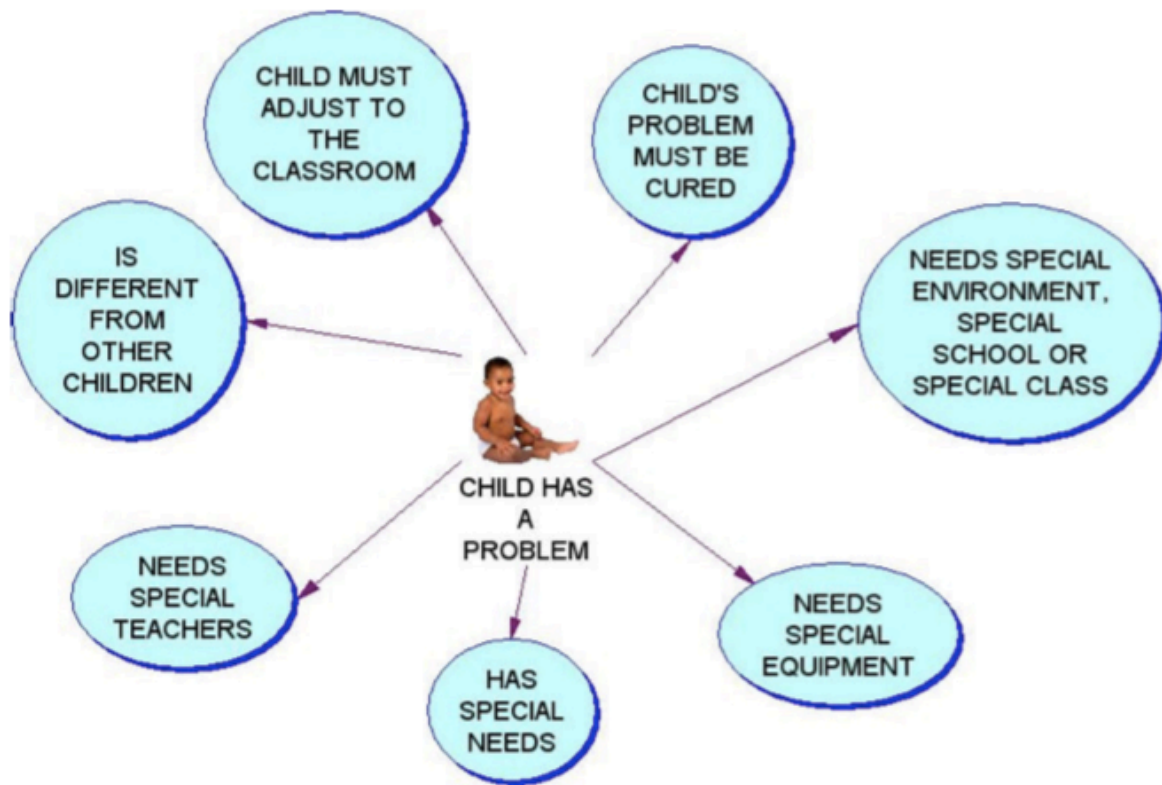
Figure 2.2 Implementing White Paper 6 (DoE, 2007)

Figure 2.2 illustrates that the child is at the centre of the problem and spreading out from the child are the many issues being raised. The issues raised are a clear indication that the child is faced with difficulty and needs special attention and care. The shift away from this approach is important for the development of the child, not only within a school context, but also within a broader social context.

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The 'inclusive education' approach:

Figure 2.3 Implementing White Paper 6 (DoE, 2007)

Figure 2.3 illustrates the education system as being problematic and that the learner is suffering due to the challenges present in the current system. This illustration is not only supported by the DoE research and literature, but is also confirmed through other studies (Mthimunye & Mwaba, 2014; Donohue & Bornman, 2014; Engelbrecht, Nel, Smit & van Deventer, 2016). In light of the illustrations in figures 2.2 and 2.3, the DoE is striving to move towards inclusion and addressing the issues raised in Figure 2.3 in order to achieve a successful inclusive education system. This requires moving away from viewing a child with ASD as a problem to focusing on changing the education environment to suit the needs of every child presenting with special needs. The figures illustrate the reality of many children struggling with discrimination due to the way they are perceived. Globally there's a notion that children with ASD are 'special' and need 'special' treatment ranging from medical healthcare, personal hygiene, caregiving and educational support.

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The level of support might differ and so does the level of educational support, the pedagogy plays an important role within the classroom environment.

2.2.4 Inclusion pedagogy

There are two pivotal issues related to pedagogy and inclusion, this involves the pedagogy being used by teachers within the classroom environment and the secondly the pedagogy of teacher training (Forgacs, 2012). Forgac (2012) found that teachers base their teaching on a teacher focused presentation as a result of this learners does not engage in student lead activities. Pedagogy is critical during the pre-service stage of the teacher training, in service training and at all other levels. According to Loreman (2007) to achieve successful inclusion teachers have to strive for an educational climate and they should set practices and possess a positive attitude that is in support of policy, research based classroom practices, flexible curriculum choice and pedagogy this should involve the community and teachers must have the passion for training and meaningful reflection. The document on inclusion by UNESCO (2005) indicated that training should be provided to equip teachers, they need the skills and resources/materials to teach effectively. Professional development is key in following an inclusive pedagogy (Operati & Brady, 2011). An inclusive curriculum should be well structured, flexible and relevant to the diverse needs of children. The used and implementation of such curriculum will be guarantee that children will have a right to education (UNESCO, 2008). Countries have adopted policies on IE after the Salamanca Statement (UNESCO 1994) there is a gap between what is taught to teachers prior to qualifying and they often find a mismatch between what they have been taught whilst training and the practical skills and knowledge needed after qualifying. This questions the readiness for implementation of IE in the classroom.

Forlin (2012) raised a critical point pertaining to competence on the following matter: teacher's knowledge of legislation and policies to ensure understanding and putting this into practice. Meanwhile Jordan, Glenn and McGhie-Richmond (2010) states that for effective inclusion practice teachers must demonstrate the ability to clearly communicate, set high but manageable expectations for all learners, have a routine that allows for free time to engage in small group discussions and one on one attention and lastly spend time with those learners that might find the work difficult or challenging. According to Florian and Rouse (2009) supported three core aspects that should form part of teacher education: (1) teachers must be comfortable and have an understanding that difference is a normal facet to human development; (2) teachers must understand that they have the ability and capabilities to teach all children; lastly (3) teachers must find collaborative ways of working.

2.2.5 Importance of interventions

Intervention plays a pivotal role in the development of children with ASD. Contemporary comprehensive behavioural curricula borrow from developmental or cognitive approaches (such as addressing joint attention, reciprocal imitation, symbolic play, and theory of mind and using indirect language stimulation and contingent imitation techniques). Some developmental models (e.g., the Denver model) and the structured teaching approach of the Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH) program use behavioural techniques to fulfil their curriculum goals (Myers & Johnson, 2007). The TEACCH program is one of the most valid treatment program (Virués-Ortega, Arnold-Saritepe, Hird & Phillips, 2017). TEACCH is a clinical service and professional training program, based at the University of North Carolina at Chapel Hill that has incorporated and contributed to the evidence base of autism interventions. The TEACCH program has been specifically designed for children with autism: it

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takes into account the features of the disorder and tries to minimize the child's difficulties using structured and continuous intervention, environmental adaptations, and alternative communication training (Mesibov, Shea & Schopler, 2004).

In the TEACCH program, before using and engaging with the programme you need to be trained and competent. All operators are generalists, and besides their previous education and specialization, they benefit from further training which includes theory and practice on ASD. In regular classrooms, the intervention is variable because it depends on the methodology of each teacher. The TEACCH program follows precise routine and rewards are given when work is completed. This facilitates the child's independence while decreasing the need for assistance. In regular classrooms, the verbal system is normally used in combination with gestures. In the TEACCH program, communication is individualized (i.e. objects, pictures, drawings, written words are used according to the child's developmental level) and represents an alternative to verbal communication, even though the two systems are often integrated (Mesibov & Shea, 2010). This approach has been adopted in Hong Kong and proposed in many cities such as Taiwan, Shanghai and Guangzhou. TEACCH is effective for children with autism at different levels of functioning and is useful beyond childhood (Tsang, Shek, Lam, Tang & Cheung, 2007). Though children with ASD need specialised educational interventions, their accessibility to resources are questioned. Without the needed educational support and resources, parents and children with ASD are faced with an enormous challenge.

2.2.6 Resource implications for mainstream

According to Stubbs (2008) special school are allocated a higher percentage of resources to assist teachers, parents and learners. However, mainstream schools do not receive the same amount of

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resources. This argument is that if mainstream schools need to service all learners the allocation of resources should be prioritised and relooked. The disproportion of resources and allocation is not sustainable as every learner needs support at some stage in the schooling journey (Stubbs, 2008). Therefore, the need to have resources available to the broader community would be beneficial. In relation to this learners with low functioning and high functioning ASD would need different levels of support. Mainstream teachers are feeling the pressure due to not having adequate resources to support learners on various levels. According to Chakrabarti (2017) learners with low functioning ASD can be a challenge and teachers experience enormous challenges. Thus, teachers are encouraged to work collaboratively and share resources. Given that special schools have the skills and mainstream teachers should seek support from nearby special schools (Mulholland & O'Connor, 2016). Despite the resource implications and challenges faced Salamanca Statement (UNESCO, 1994) reiterated that the guiding principle of inclusion is that all learners should with physical, linguistic, social or emotional needs and intellectual difficulties must be accommodated in mainstream. Even though this is an international stance this is applicable within a South African context too.
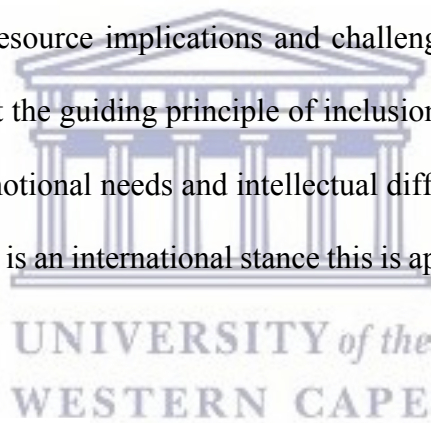
2.2.7 Education in South Africa

The United Nations Educational, Scientific, and Cultural Organization (UNESCO, 1990) identified six goals which specifically aimed to improve early childhood education. The goals included provision of free and compulsory education for children of school going age; life skills programs for parents and adults; a 50% improvement in literacy skills and elimination of gender discrimination within education by 2015. South Africa was one of the countries to commit to these goals and has successfully met some of the goals when reviewed in 2000 (Anderson, Case & Lam, 2001). South Africa is performing well when compared to other developing countries, however,

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some concerns have been raised (Van der Berg, 2007). Segregation within South African schools is still a challenge haunting South Africans, in particular black South Africans, since the apartheid regime (Lomofsky & Lazarus, 2001). Even though the concept of segregation has been eliminated and the education system is striving for inclusiveness, children with disabilities are still faced with a degree of discrimination and inequality. Despite the South African constitution addressing the rights to education and redressing the inequalities by providing low-income communities with subsidies, there are still challenges within the system (Lam, Ardington & Leibbrant, 2011). The White Paper 6 (Department of Education, 2001) was introduced with the aim of improving the education system and creating an inclusive society for all children with special needs and disabilities. Many countries are struggling with the implementation of an inclusive schooling system and putting policy into practice.

2.2.8 Accessibility and availability of resources

There are many people, mainly in low and middle-income countries, who are unable to access health care and educational services such as primary health care and schooling (Adebayo, Uthman, Wiysonge, Stern, Lamont & Ataguba, 2015). In South Africa, access to health and education for all is constitutionally enshrined; yet considerable inequities remain, largely due to distortions in resource allocation. There are many access barriers that do not allow children to have easy access to school, especially learners with special needs (Mahlo, 2011). A study done by Mahlo (2011) shows that special needs education support services are not always within the reach of many people and that mainstream schools located within their residential areas should have inclusive schooling to support children with special needs. Many children are faced with the burden of having to travel vast distances and incur high travel costs, especially in rural areas. Globally, policy has turned to universal health coverage as a remedy for inaccessible, unaffordable health services (Harris,

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Goudge, Ataguba, McIntyre, Nxumalo, Jikwana & Chersich, 2011). This means that the higher one's socio-economic status, the more accessible these health care services are. The implications are that people living in low-income communities may find access and availability of these health services more challenging (Harris, Goudge, Ataguba, McIntyre, Nxumalo, Jikwana & Chersich, 2011). While a child with ASD needs adequate intervention, the parent also needs support and guidance with the daily stressors that come with parenting an autistic child (Mthimunye & Mwaba, 2014). Some of these parents have not been able to obtain much needed health care service for their child because accessibility to these health services are extremely difficult (Franz, Adewumi, Chambers, Viljoen, Baumgartner & de Vries, 2018). Many parents are challenged financially, and low-income communities find it tough to keep up with the demands presented on a daily basis which range from educational demands to daily survival. The accessibility to resources is embedded in the community context and the socio-economic status of parents.

2.2.9 Implications for children with ASD with low socio-economic status (SES)

According to the Centre for Disease Control (2014), nationally, one quarter (25.0%) of families of children without special needs are poor, twice as many (53.3%) families of children with health conditions, 33.93 % of families with children with disabilities and 35.5% of families of children with behavioural problems are also poor. Almost one in two (45.3%) families with children with multiple special needs or with more than one child with special needs is poor. All of these families experience significantly more rent and food insecurity than do families of children without special needs. More than twice as many families with children experiencing health conditions lacked health insurance (35.6%) compared to families of children who are generally healthy (15.9%). Even after controlling for demographics and socioeconomic status, the presence of a child with special needs has a separate and significant effect on family economic hardship as measured by

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going without food, the inability to pay rent, mortgage or utility bills, and having no health insurance coverage (van Dyck, Kogan, McPherson, Weissman & Newacheck, 2004).

When raising a child with diagnosed with ASD and living in a low-income community, there are special services needed to assist the parent/caregiver or guardian. Services need to be delivered in a way that supports inclusion and the need of parents to work. In a study done by Popkins (2002), many of the parents expressed the degree to which they were affected when their children needed special services such as occupational therapy, speech therapy, physiotherapy, etc. and how they cannot afford these services. Parents were worried about not having access to these services dues to a lack of funding. Parents faced with financial difficulties do not have the privilege of accessing private education which limits their access to resources. This places any child at a disadvantage. However, with support and a well-structured schooling environment within a government schooling system, a child can excel.

2.3 Theoretical framework

This study mainly used Bronfenbrenner's ecological systems theory in addressing the influence of the various systems on children with ASD and the roles and responsibilities within a contextual view. The study is framed within the micro-, meso-, exo-, macro- and chronosystems. The framework is therefore well suited as it addresses the perceived causes, including the implications, influences and interactions between the various ecological systems. Although Bronfenbrenner (2005) addresses human development through his theory, it does not address the systematic developmental changes. Many theorists have critiqued the ecological systems theory as it fails to address the developmental changes of an individual. This poses a concern for many developmental theorists (Schischka, Rawlinson & Hamilton, 2012).

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This study is positioned within Urie Bronfenbrenner's ecological systems theory (1979), which has been renamed and is now known as Bronfenbrenner's bio-ecological systems theory (Bronfenbrenner, 2005). This theory is relevant to the present study because it focuses on the interaction between the individual's development and the various systems that are interlinked within the general social context. The systems are all interlinked and play an integral part in the development of an individual. Therefore, this theory is best suited for the nature of the present study. This theory does not only focus on the social context and its importance, but also on the individual from both a personal and individual perspective. Bronfenbrenner's bio-ecological systems theory has five systems, namely the Microsystem, Mesosystem, Exosystem, Macrosystem and Chronosystem (Bronfenbrenner, 2005), all of which contribute towards the development of an individual and can have either a positive or negative influence (Haihambo, 2010).

The microsystem is a crucial part of the system as it is closely related to the developing person (the child) and the relationships and bonds created within their immediate environment. The settings that form part of the microsystem are schools, family, workplace and peer groups. The successful building of relationships and bonds is dependent on the structure of the microsystem (Bronfenbrenner, 1979; 1992). Children of school going age are affected by the microsystem as the following relationships become pivotal to the child's education and development. The teachers, fellow pupils, the classroom setting and interaction, the curriculum, teaching styles and methods that the teacher uses in the classroom, the amount of attention and quality time spent with the child, the physical conditions, etc. all form part of the microsystem and affect the child's development. In summary, these relationships form part of the schooling system that is classified as the microsystem (Bronfenbrenner, 2005). This system can either add significant value and promote learning and progress or cause more harm to the child if the system has barriers or is flawed.

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In this study, *the mesosystem* is described as a system that has one or more links to another system. Whether a child is in school or not will be affected by this system and the relationships formed in order to reach a specific goal. This study explores that relationship between school and the family and this relationship becomes important, especially if a child is faced with learning challenges or needs extra support. The mesosystem is known for having strong linkages and communication is key to the success of this relationship to achieve progress and development. The teacher and parent relationship in goal setting and decision-making forms a strong base for this system (Bronfenbrenner, 2005).

The exosystem is less direct and does not have direct influence or impact. However, through other systems and linkages that are formed, the individual will eventually be affected. According to Swart and Pettipher (2005), the exosystem consists of more than one setting or environment that may not actively influence what happens in a particular setting. This study places emphasis on the education system and the structures that have been put in place to ensure learning, the design and key purpose that govern teaching and learning practices. Many challenges have been identified within the exosystem ranging from health care, social development and the education system (Yorke, 2008). In this study, the exosystem refers to the support structures that work closely with the school and the Department of Education (DoE). If this support if flawed, the child who is dependent on support and assistance will suffer.

The macrosystem consists of culture, ideology, rules and regulations, and policies that are regulated by government or structures that cannot easily be changed. In this study, the macrosystem can be referred to as the policy making level within the education system. The national DoE governs the implementation of policies and rules pertaining to IE. Bronfenbrenner (1992) later added a fifth level that he found to be important and significant.

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The fifth system was called *the chronosystem*, that refers to the changes that take place over time. The chronosystem primarily focuses on the effect of change or stability, reflecting not only on the child's characteristics but taking into account the change in environment over a period of time (Bronfenbrenner, 2005).

The use of Bronfenbrenner's bio-ecological systems theory emphasises the importance of an interconnected relationship from the top down to benefit the child within a school setting context. The barriers faced and the context that one needs to consider are highlighted through the use of Bronfenbrenner's Theory. The challenges and barriers within the education system are not reliant on the individual or school to address, but rather on society as a whole. Therefore, a systemic approach is needed. Applying Bronfenbrenner's (2005) bio-ecological systems theory allows this study to identify and view education and schooling within a particular context (social context) and indicates the importance of interaction (Partin, 2017). The microsystem is critical for the developing child, especially the schooling system that forms part of this system. The schooling system and environment must be conducive and promote teaching and learning. Much of a child's development and learning experiences are formed during their school going years (Bronfenbrenner, 2005). This study acknowledges that a child is dependent on the interrelated systems within the education system. The implementation and support provided from the top down will either affect the child in a positive manner if the system is supportive or fail the child if implementation is not done effectively.

Bronfenbrenner's theory has been used in studies related to child development, special needs and education (Mahlo, 2011; Bronfenbrenner, 1994; Härkönen, 2005; Johnson, 2008). Bronfenbrenner's theory can be used to understand the contextual dilemmas in developing an inclusive education system for learners with ASD. The *microsystem* is seen as the inclusive

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classroom and desired setting to see a child excel academically. The systems that fall outside of the microsystem influence the implementation of inclusion both within and outside the microsystem. The *mesosystem* includes the collaboration and interaction among professionals. Their decisions and actions can either affect the child in a negative or positive manner. The *exosystem* is governed by policies that are set up by individuals who are not directly affected by these policies. Due to societal values and beliefs, the *macrosystem* affects the events that take place in the *microsystem*. This study will examine the variables that influence the level of school access for children with ASD; examining parents' perceptions, teachers practices and beliefs, educational stakeholders' views related to the mesosystem, exosystem, macrosystem and chronosystem, e.g. parents, stakeholders, policy and practices and the influence these have on IE practices. Interactions among the various levels have a strong impact on the success of inclusion (Skidmore, 2004).

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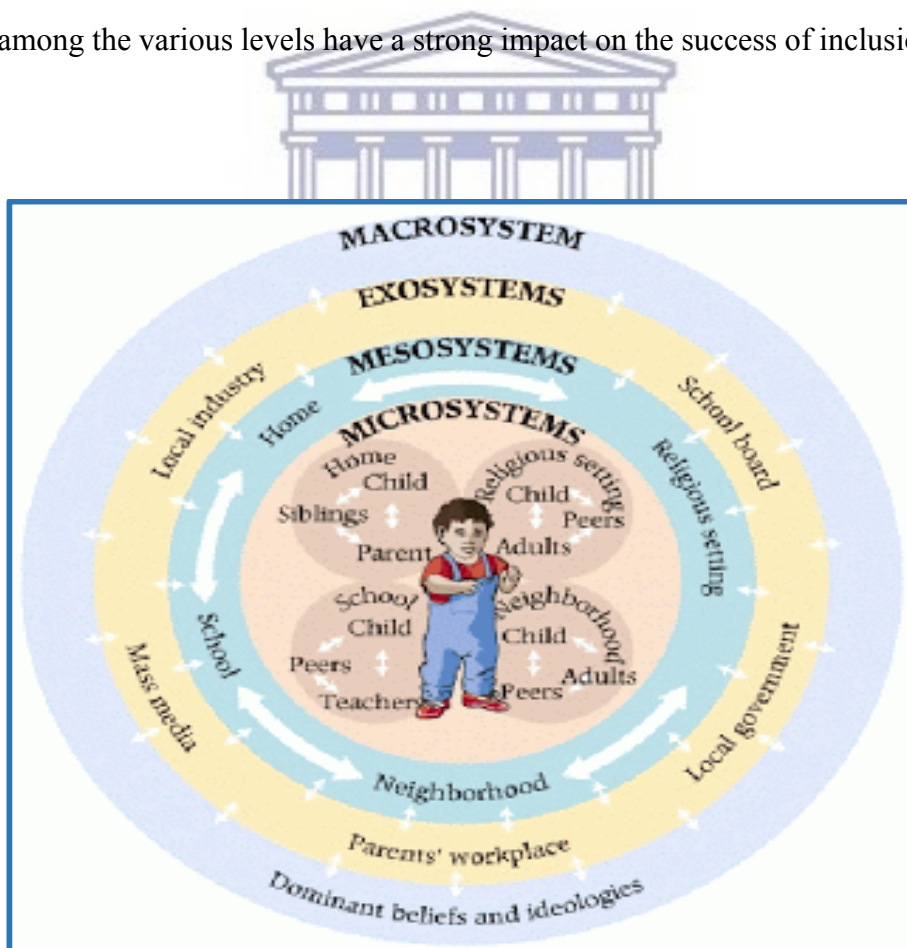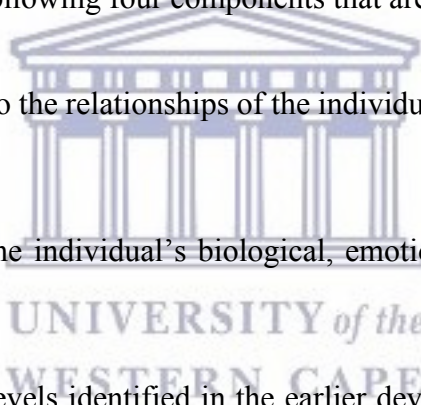
Chronosystem: Dimension of Time

The Chronosystem form part of the outer layer

Figure 2.4 The Bio-ecological model of human development (Bronfenbrenner & Morris, 2006)

Bronfenbrenner's revised version of his systems theory discussed the importance of processes, person, context and time. The Process-Person-Context-Time model (PPCT) forms a critical part of Bronfenbrenner's theory (Bronfenbrenner, 2005; Bronfenbrenner & Morris, 2006; Evans & Wachs, 2010). This study will focus on and engage the most recent version of the systems theory, including the PPCT model.

The PPCT model suggests the following four components that are interrelated:

a. Process – that is related to the relationships of the individual and the context in which they find themselves;

b. Person – that involves the individual's biological, emotional, cognitive and behavioural aspects;

c. Context – involves the levels identified in the earlier development of the theory, namely the microsystem, mesosystem, macrosystem and exosystem;

d. Time – change that takes place over time considering the individuals' context.

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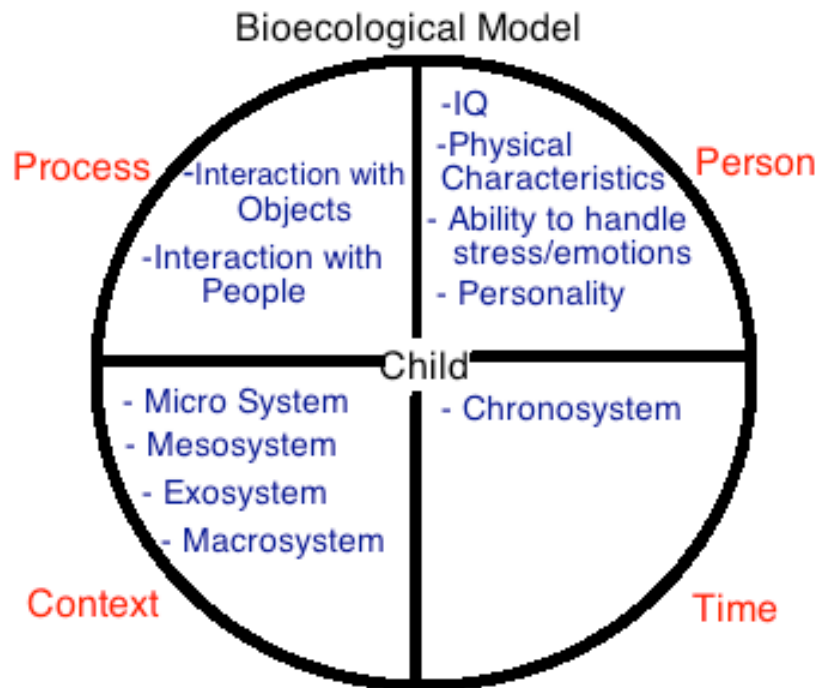
Figure 2.5 The bio-ecological model (Bronfenbrenner & Morris, 2006)

Bronfenbrenner's theory is relevant to this study as the focus is mainly on understanding barriers to learning through the use of a multi-level approach to explore their interconnections. The theory allows for the understanding of barriers within the education system that pose a difficulty for a child with special needs. Bronfenbrenner's theory allows one to look beyond the child and focus on the barriers within the systems proposed by the ecological systems theory. Barriers are not only presented by the child alone, but by what is presented in society as a whole. The interconnections within the systems can either pose a risk/barrier or contribute towards effective teaching and learning (Arishi, Boyle & Lauchlan, 2017). Applying Bronfenbrenner's (1979) ecological systems theory acknowledges the school as a social context that interacts with all the levels within the system.

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2.3.1 Bronfenbrenner's ecological systems theory: A critique

Bronfenbrenner's ecological systems theory accounts for the many complexities when considering development. This application is understood universally and is applicable worldwide. However, the challenge arises when aiming to apply this in practice. The following primary factors that influence this challenge have been identified:

(1) Bronfenbrenner's ecological systems theory lacks the detailed mechanisms needed for guidance. A greater scope is needed when dealing with the ecological and environmental detail. This is crucial in building a developmental account of any individual. The framework by Bronfenbrenner does not provide a full account for the mechanisms needed for development; (2) there is no balance in the ecological systems theory. Bronfenbrenner's theory does not address the hierarchy of various systems. No emphasis is placed on whether the microsystem or mesosystem has a stronger influence on the child or individual. The classification of information is not clear and left unknown; (3) Bronfenbrenner's ecological systems theory is viewed as difficult to implement. The reason for this is that when applying Bronfenbrenner's theory, it is necessary to factor the smallest possible influence. All factors are systematically influential, and implementation can be rather daunting. Furthermore, due to the complexity and the concept of holism, it is especially difficult to apply reductionist principles. This is needed to create an operationalised framework that can be developed for practical implication and analysis (Elliott & Davis, 2018).

Another critique posed by Christensen (2016) is the concept of resilience, which Bronfenbrenner's ecological systems theory fails to address. The inclusion of this concept would have provided an understanding of human development and societal influences. Christensen (2016) argues that

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resiliency provides a better understanding of individual capacity. Resilience instils a sense of purpose, ability and belief that the future can be bright. It also provides a sense of motivation, goal setting, and direction that allows for educational aspirations. According to Miller (2008), being resilient gives us the strength and ability to bounce back from any challenging or difficult situation presented through adversity. Bronfenbrenner's theory focuses solely on the negative influence rather than the positive influence adversity can pose such as looking at individuals brought up in negative environmental circumstances who become successful based on the resilience factor.

2.4 Conclusion

This chapter aimed to explain and discuss relevant literature pertaining to ASD and the theoretical framework was discussed in detail. Literature clearly indicates that education for children with ASD is under researched and needs attention. Access to schooling for children with special needs particularly ASD is a battle that continues for many parents. This chapter highlighted the importance of IE and the impact other factors have on the development of a child with ASD. Lastly, the chapter discussed the critiques pertaining to Bronfenbrenner's ecological systems theory.

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

An in-depth account of the methodology used for the present study. The study used various techniques to collect data to support the research topic and meet the aim and objectives of the study. In its overall application, the information in this chapter is focused on how the research was applied. This chapter begins by describing the methodological approach and the research design used to implement the study. The ethical considerations, trustworthiness and limitations of the study are also presented in this chapter.

3.2 Aim of the study

The overall aim was to develop a framework for parents and teachers to enhance access to resources for managing and educating children with ASD in low-income communities. According to Savahl, Adams, Isaacs, September, Hendricks & Noordien (2015) low-income communities are characterised by low educational accomplishments, high unemployment rate, low income and high levels of crime and violence

There were four objectives set for the present study:

3.3 Objectives of the study

The following are the main objectives of this study:

Objective 1: Explore best practice models in education for children with ASD.

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Objective 2: Conduct a needs analysis with stakeholders to identify the developmental and educational needs of children with ASD.

Objective 3: Explore the educational programmes within special need schools currently implemented to accommodate children with ASD.

Objective 4: Develop a framework for parents and teachers to enhance access to resources for managing and educating children presenting with ASD.

3.4 Methodological approach

The study employed a qualitative research design to enhance the richness and depth of the enquiry. This will provide insight and assist with exploring the aims of the study. The approach assumes that peoples' subjective experiences are real, that people should be heard and listened to and that the most suitable methodology is qualitative (Patton, 2005). Qualitative studies are in-depth and inform subjective experiences, and the aim is not to generalise the findings but to tap into people's personal experiences – the insider perspective (Patton, 2005). The qualitative component was followed by a workshop for consensus involving experts, community members and parents. Qualitative research allows for an enquiry that is viewed as systematic, exploring a particular social phenomenon within a natural setting. This phenomenon includes the lived experiences of people and the interaction between individuals and groups within a number of contexts, as the shaping of these relationships is important. The perception of each person's experience is unique to them, and the in-depth nature of qualitative research allows the researcher to capture that true experience. In qualitative research, the researcher becomes the primary data collection instrument. Without the researcher, the study cannot commence (Denzin & Lincoln, 2011). The researcher studies the events that occur and why things happen in a certain context and not in others, as well as the

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meaning events have for the participants being studied (Howell, 2012). Conducting qualitative research calls for open mindedness, no matter how complex the situation might be. Data is best retrieved in a natural setting, capturing the events in their true form. Due to the nature of qualitative research, qualitative researchers enter the world of the participants. This is achieved by entering their natural setting, where they might be experiencing the events being researched (Creswell, 2013). Face-to-face engagements create a one-on-one experience over time when collecting data from participants. Qualitative research is concerned with the participants' perspective of their own experience and their perception of a matter. Once a rapport has been established and trust has been gained, the participants will share more. Empathy should be shown at all times while conducting the research (Rubin & Babbie, 2016).

The data analysis process is inductive, creating patterns that relate to the subject being studied. The themes that emerge are viewed as a reflection of the participants' lived experiences. Therefore, quotations are used throughout the results section of a qualitative research report to support and acknowledge the participants' input (Saldaña, 2015). This study captured the experiences of parents, teachers, educational stakeholders and the broader community. This was achieved through in-depth data collection techniques to ensure that all participants' contributions were fully comprehended from their unique perspectives (Marshall & Rossman, 2014). Qualitative research is strongly linked to constructivism/interpretivism; it is also described as an in-depth enquiry.

3.5 Philosophical paradigm

Philosophical assumptions inform the choices that are of fundamental importance in research (Creswell, 2013). Philosophical assumptions are derived from paradigms that direct the research activities. A paradigm is a collection of rules that delineate the research boundaries and process

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(Huitt, 2011). Polit and Beck (2010) refer to a paradigm, also known as "worldview", as a general perspective on the complexities of the real world. However, according to Babbie (2013) paradigms don't explain anything, but rather provide a logical framework within which theories are created. Thus, it appears that theories and paradigms are interconnected throughout the quest for the meaning of existence (Babbie, 2013). In other words, theories and paradigms are intertwined. Creswell (2013) suggests that the research paradigm used in a study is vastly dependent on the researcher's beliefs about the world. Furthermore, Creswell (2013) emphasises the significant contribution of philosophical paradigms in research. He alludes to the broad research approach as the interaction between three (3) important components, namely the philosophical worldview, research methods and research design (Creswell, 2013). Thus, the conclusion that can be drawn is that researchers need to think carefully about the paradigm they bring to the study, the research design that is related to the paradigm, and the specific research method that transforms the research approach into practice (Creswell, 2013).

According to Babbie (2013), in social research, paradigms are often classified according to the ways in which they address to the fundamental philosophical questions of "*Ontology*: What is the nature of reality? *Epistemology*: What is the relationship between the inquirer and that being studied? *Axiology*: What is the role of values in the inquiry? *Methodology*: How should the inquirer obtain knowledge?". Creswell (2013) highlighted four (4) philosophical perspectives in social research, namely postpositivism, constructivism, transformative and pragmatism.

Basic Beliefs	Post-positivism	Constructivism	Transformative	Pragmatic
Axiology (nature of ethical behavior)	Respect privacy; informed consent; minimize harm (beneficence); justice/equal opportunity	Balanced representation of views; raise participants' awareness; community rapport	Respect for cultural norms; beneficence is defined in terms of the promotion of human rights and increase in social justice; reciprocity	Gain knowledge in pursuit of desired ends as influenced by the researcher's values and politics
Ontology (nature of reality)	One reality; Knowable within a specified level of probability	Multiple, socially constructed realities	Rejects cultural relativism; recognizes the various versions of reality are based on social positioning; conscious recognition of consequences of privileging versions of reality	Asserts that there is single reality and that all individuals have their own unique interpretation of reality
Epistemology (nature of knowledge; relation between knower and would-be known)	Objectivity is important; the researcher manipulates and observes in a dispassionate objective manner	Interactive link between researcher and participants; values are made explicit; created findings	Interactive link between researcher and participants; knowledge is socially and historically situated; need to address issues of power and trust	Relationships in research are determined by what the researcher deems as appropriate to that particular study
Methodology (approach to systematic inquiry)	Quantitative (primarily); interventionist; decontextualized	Qualitative (primarily); hermeneutical; dialectical; contextual factors are described	Qualitative (dialogic), but quantitative and mixed methods can be used; contextual and historical factors are described, especially as they relate to oppression	Match methods to specific questions and purposes of research; mixed methods can be used as researcher works back and forth between various approaches.

Figure 3.1 Illustration of the basic beliefs and the four major paradigms

(Reproduced from Mertens, 2010)

Constructivism, sometimes referred to as social constructivism, is stereotypically seen as suitable for qualitative studies. Researchers with a constructivism worldview believe that individuals seek understanding of existence by constructing subjective meaning from their life experiences (Creswell, 2013). This paradigm is generally complex as it rejects the narrowing of categorised ideas while promoting inductive generation of meaning. This characteristic is important because constriction of meaning from life experience varies from one individual to another. Thus, constructivist researchers often focus on social interaction of various individuals in a specific

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context. The constructivist paradigm was seen as appropriate for this study; the assumption held is that individuals seek to gain an understanding of the world in which they live. According to Creswell (2013), subjective meaning is gained through experiences and directed towards certain things. The terms constructivist/constructivism and interpretivist/interpretivism are used interchangeably within literature. Constructivists hold the opinion that every individual constructs his/her own knowledge and that this process of construction is an active process. Therefore, constructivists conclude that knowledge is created all the time. Reality is seen as being socially constructed and influenced by the presence of diverse unique interpretations by various individuals. According to Goldkuhl (2012), in this ontology, cognitive elements become pivotal in the construction and interpretation of experiences. The cognitions refer to the thoughts, meaning, intentions and beliefs that form part of the orientation and understanding the world. One principle of interpretivism is interaction between the researcher and participants during the data collection process. The data being relayed to the researcher becomes important as this is where the construction of meaning takes place. Interaction external to the study is not included. This study included parents/guardians, educational stakeholders and teachers in order to obtain data from different individuals of the same interest within the context of the Western Cape Province in South Africa.

3.6 Methodological framework

This study was guided by the logic model, which serves as a framework on which the study based its findings, and which structured the findings to develop a framework as set out in the objectives. The Logic model (LM) is widely used for planning and used across many field ranging from education, science, engineering and health. The LM served as road map and lead to the framework development. The LM was used to guide the research and serve as a framework for the current

research study. Over the past two decades, evaluators have found the LM extremely useful in the monitoring and evaluating processes. It is a useful tool for conceptualising and serves as a planning tool and a communication link with others involved.

3.6.1 The logic model as a research framework

The model is focused on how a programme will work given the problems that have been identified through the research conducted. The LM strives to solve the conditions and identify key elements that may have a positive impact on the identified problem (Funnell & Rogers, 2011). Elements that form part of the construction of the model are: (1) resources; (2) activities; (3) outputs; and (4) immediate and long-term outcomes, including possible external factors that may have an influence (Knowlton & Phillips, 2012). The building of an LM helps to plan expectations and how they affect the elements that form part of it.
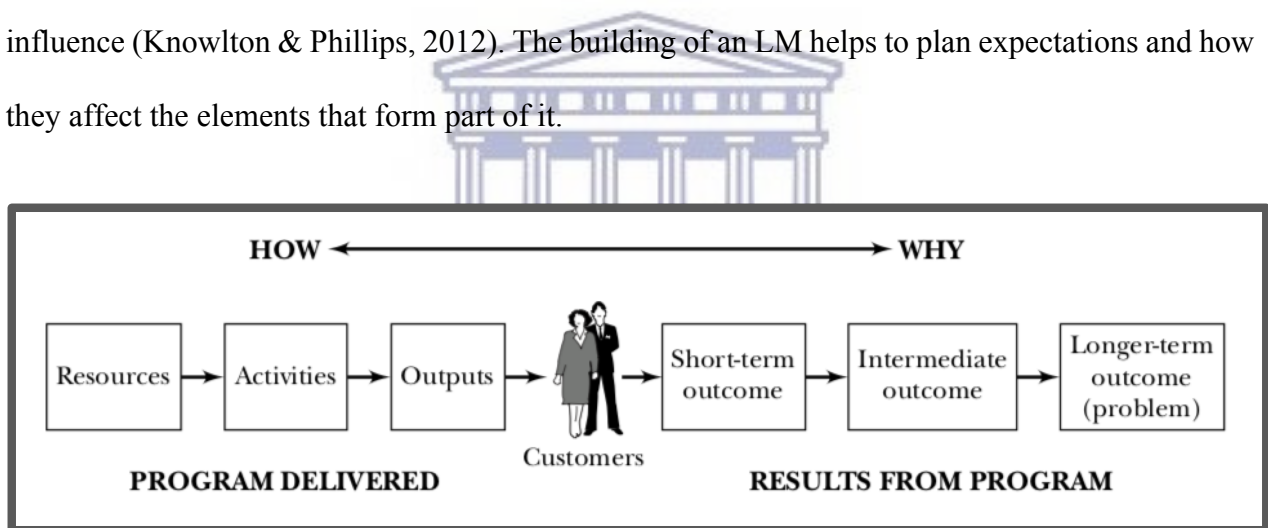
Figure 3.2 Basic logic model   (McLaughlin & Jordan, 2004).

The basic elements that feature in the LM have unique meanings, defined below:

(1) Resources: refers to the inputs needed to see change. These include human resources, physical goods and financial resources that may be required to see improvement and

change. The inputs needed for the development of a framework involve those related to ASD, teachers, parents and educational stakeholders.

(2) Activities: refers to the action steps that need to be taken to put the programme/framework into action. The activities form a large part of the implementation, and the success of the framework is grounded in the activities and how they are executed. The activities for this study will be targeted at the group that formed part of the study and all participants involved.

(3) Outputs: refers to the stage where the services rendered are aimed at the participants. The researcher plays an integral role in forming the outputs as this has a direct impact on the participants. Services must be streamlined and the proper services must be aimed at the correct stakeholders. In this study, we considered the parents, teachers and educational stakeholders, as well as children with ASD, who are the ultimate beneficiaries of these services.

(4) Outcomes: refers to the stage where the results are captured and noted based on the activities and outputs. LMs have multiple set outcomes: the short-term outcomes, which are very closely related to the possible cause; the immediate outcomes, which are a clear result of the short-term outcomes; and the long-term outcomes, which result from the benefits accrued by the immediate outcomes.

The LM has one key aspect, communication, which has the ability to bring people together and form part of the programme being set and the execution thereof. The study developed a framework for parents and educators in low-income communities to enhance access to resources for educating children presenting with ASD. The LM served a solid foundation by which the study was guided. The LM has five stages that need to be followed.

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The logic model is constructed in five stages:

Stage 1—collecting the relevant information

Stage 2—describing the problem the program will solve and its context

Stage 3—defining the elements of the model in a table

Stage 4—drawing the logic model

Stage 5—verifying the model

Figure 3.3 Stages in building the logic model   (McLaughlin & Jordan, 2004).

3.7 The overall study

3.7.1 Research setting for the overall study

This study was conducted in Cape Town, situated in the Western Cape Province. The City of Cape Town is one of the capital cities of South Africa, along with Bloemfontein and Pretoria. The country's Parliament in based in Cape Town. The Western Cape Province is one of the nine provinces in South Africa. Cape Town is at the southern-most part of Africa. The city is divided into four districts known as the North, South, Central and East metropolitan districts. This study covered all four metropolitan districts. Cape Town has a population of approximately 6 279 730, 11,3% of the total population of South Africa. The city has three main languages: Afrikaans, spoken by 46,6% of the population; isiXhosa, spoken by 31,1%; and English, spoken by 19,6%. Within Cape Town there are rural and urban communities with various socio-economic backgrounds and challenges. The study focused on low-income communities as they are highly affected due to lack of resources.

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Figure 3.4 Map of Cape Town, South Africa and the local communities

Source: (Western Cape Education Department, 2012)

3.7.2 The overall research design

Phase one primarily dealt with understanding the problem, the study gathered data by means of a scoping review, qualitative in-depth individual interviews and focus group discussions to meet its set objectives. These were conducted with parents, teachers and educational stakeholders that were involved directly and actively. The data gathered informed the development of the framework that is presented in **Phase two** of the study, in which a framework consensus and input workshop was conducted. Figure 3.3 represents the research designs.

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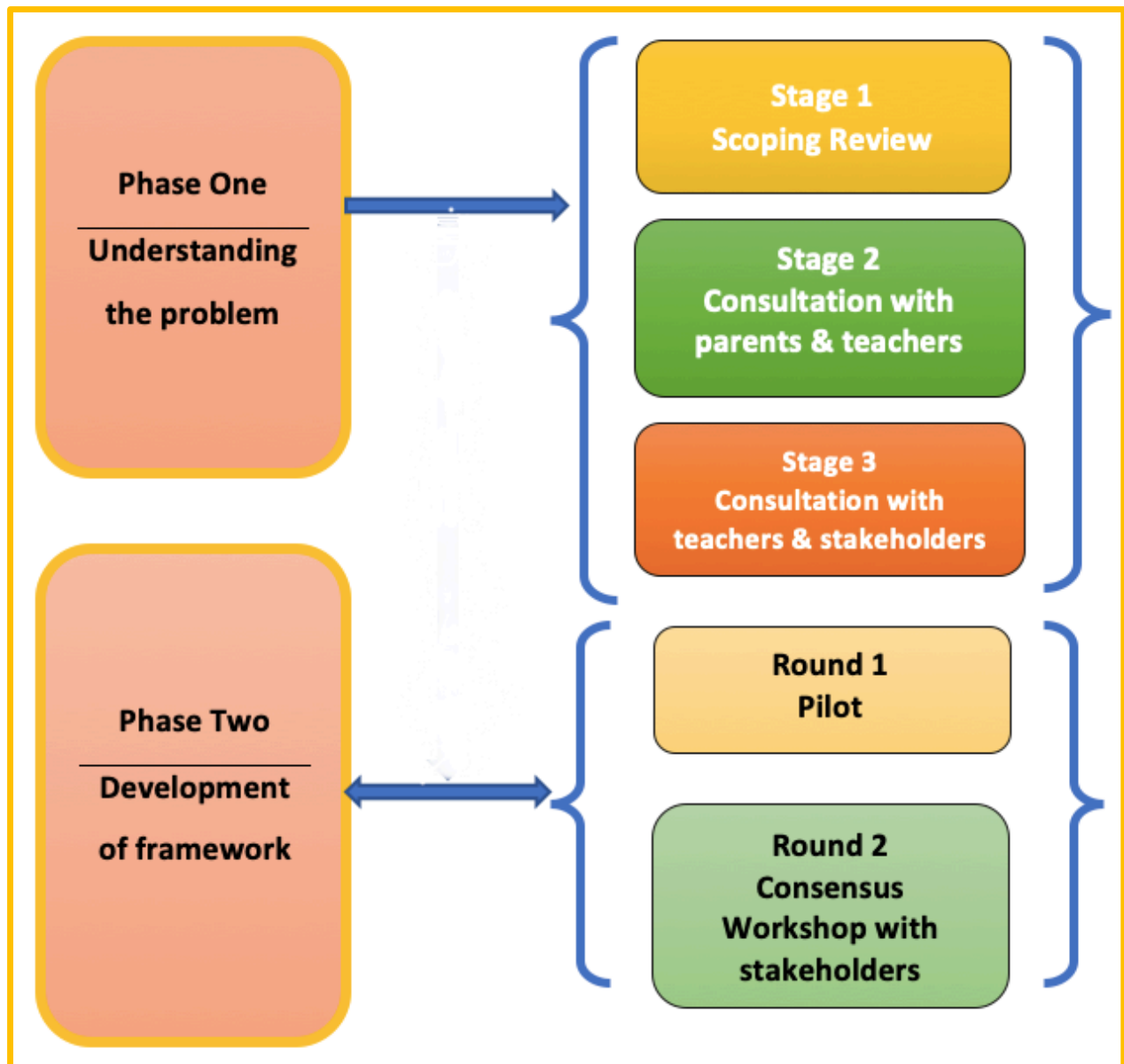
Figure 3.5 The overall study

Consultation refers to the individual interviews that were conducted with parents, teachers and stakeholders. These interviews were conducted by both the researcher and a research assistant.

3.7.3 Phase one: Understanding the problem

3.7.3.1 Stage one: Scoping review

Objective 1: To explore best practice models in education for children with ASD

Research design: The review followed the five stages proposed by Khan, Kunz, Kleijnen and Antes (2003). The five stages are as follows: stage one: framing the question; stage two: identifying relevant work; stage three: assessing the quality of studies; stage four: summarising the evidence; and stage five: interpreting the findings. The scoping review aimed to widely integrate and identify research, using structured and replicable procedures (Littell, Corcoran & Pillai, 2008). Scoping reviews allow for the extraction of scientifically valid intervention studies and thus provide a rigorous method of identifying evidence-based results. Scoping reviews are becoming more widely used in the social sciences, especially in psychology and education (Littell et al. 2008). A scoping review attempts to collate all empirical evidence that fits pre-specified eligibility criteria in order to answer a specific research question. It uses explicit, scoping methods that are selected with a view to minimising bias, thus providing more reliable findings from which conclusions can be drawn and decisions made. The scoping review conducted in this study addressed the best practice models in education for children with ASD. The research question asked: "What are the educational and developmental needs of a child with ASD?" The scoping review was included in the broader study to exploring best practice models in education for children with ASD. The practice models were not focused on pedagogy but rather on the educational and developmental needs whether they are being met through these practices. Gathering this information and background on educational programmes used and the resources involved informed the development of the framework. The needs of children with ASD were highlighted and whether

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they are being met through the classroom practices. Even though the broader study explores matters pertaining to policy, inclusion, special provision, access and resources. The educational models and programmes indicate the needs being met and the level of inclusion and accessibility within the classroom. The scoping review does not only set the tone for the study but highlights the importance of best practices and the needs of children being met what is involved the success of these practices. It is important to understand what is being practiced, the resources needed and the effectiveness thereof. The results of the scoping review (see table 8.2) will be triangulated alongside the subsequent studies that formed part of the broader aim developing a framework for access and enhance resources for children with ASD.

Inclusion and exclusion criteria: Studies published in English between 2006 and 2016 were considered for the study. This time frame allowed the most recent research to be accessed (Meline, 2006). Qualitative, quantitative and mixed method studies were included, as well as studies in which a model/framework had been developed. Scoping reviews and prevalence studies were not included in the search and were automatically excluded.

Search strategy: The following databases were used to extract data: Wiley Online, EBSCOhost, Sabinet, Sage, PsycARTICLES and BioMed. The search comprised three phases: (1) an initial title search, (2) an abstract search, and finally (3) a full review of the finally selected articles. The keywords used for the search were: special needs education, educational frameworks, access, resources, children, schools.

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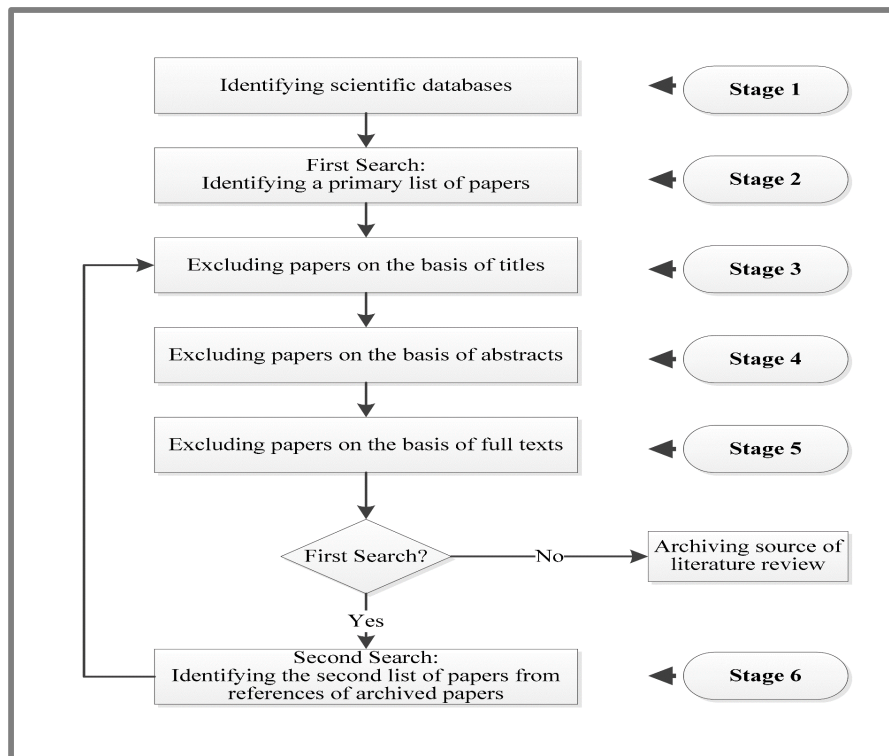
Figure 3.6 Study selection procedure step by step

(Ghanbarzadeh, Ghapanchi, Blumenstein & Talaei-Khoei, 2014).

Data extraction and synthesis: Data extraction was done using a data extraction sheet that served as a guide to gathering the information for the review. Information was gathered and recorded on a spreadsheet with the following headings: author & year, study design, participants, geographic location, instruments, interventions, programme description and results/outcomes, all in line with the research question. The synthesis of the scoping review is qualitative, not quantitative (Armstrong, Hall, Doyle & Waters, 2011). Therefore, a narrative review approach was used for this study. This approach is focused on the gathering of information that addresses the context and substance, and is less concerned with evaluating the quality of evidence. It is suited to both quantitative and qualitative studies (Dixon-Woods, Agarwal, Jones, Young & Sutton, 2005).

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3.7.3.2 Stage two: Parents and teachers

Objective 2: Conduct a needs analysis with stakeholders to identify the developmental and educational needs of children with ASD.

This stage consisted of two parts: (1) parents and (2) teachers.

Research design: Burns and Bush (2006) explain that exploratory research sets the groundwork for research studies, exploring the research questions and providing the findings. An exploratory research design refers to the gathering of information and is not limited to a particular paradigm such as qualitative or quantitative (Wood & Ross- Kerr, 2011).

Exploratory research design: Babbie (2013) suggests that there are three (3) most common and valuable reasons to conduct a research inquiry, namely exploration, description and explanation. In social research, all three reasons may be applied within one research inquiry. However, for the purpose of this study, an explorative research design was applied. According to Sarantakos (2012), exploratory studies employ an open, flexible and inductive approach in attempting to uncover new insights into the phenomenon.

According to Babbie (2013), an exploratory design serves the following main purposes: "(1) to satisfy the researcher's curiosity and desire for better understanding, (2) to test the feasibility of undertaking a more extensive study, and (3) to develop the methods to be employed in any subsequent study."

According to Polit and Beck (2012), explorative studies are undertaken when a new area is being investigated or when little is known about the area of interest. Furthermore, explorative research

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is used to investigate the full nature of the phenomenon and other factors related to it. In this study, an exploratory design was used to gain insight into the perceptions of parents, teachers, educational stakeholders and community members regarding the availability and access to education for children with ASD. The use of an exploratory design supported the understanding of the phenomenon and assisted with the development of the framework.

Part one: Parents

Participant selection: Purposive sampling allows for the recruitment of participants who are knowledgeable and willing to provide the information and experiences the researcher is seeking (Bernard, Wutich & Ryan, 2016). For this phase of the study, the sample comprised parents from various backgrounds but who had one thing in common: a child on the autism spectrum. There were 40 parents who agreed to participate in the study. As parents had to meet the criteria before participating, it was ensured that all participants had a child formally diagnosed with ASD. The criteria included parents who had a child in grade one or was not attending school at all but was of school-going age. The children did not participate in the study, however parents indicated that their children ranged between 7 and 12 years of age. Parents indicated that they were having difficulty finding appropriate schooling for their children as most parents reported having their child home and not receiving formal education. Semi-structured focus group discussions were conducted within the four districts of Cape Town, with 10 parents purposively selected per district/school. These participants provided rich data and valuable input that addressed the objective of the study. The data collection process could only commence once permission was obtained from the Senate Research Committee at the University of the Western Cape.

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Data collection: The participants who were approached those that fit the criteria. The focus groups were conducted with 10 parents (mother, father, guardian or caregiver) present at the time of the focus group. There were 4 sessions with 10 parents present in each session, concluding a total of 40 parents participating in the focus group. The focus groups were conducted at a venue convenient for the participants, a venue that was easily accessible and user friendly.

De Vos, Delport, Fouche and Strydom (2011) emphasise that focus group interviews are intended to elicit information regarding participants' experiences and perceptions about the subject of the research. Focus group interviews are purposeful discussions among participants who share the same or similar backgrounds. The focus groups provided a platform for parents to speak freely and allowed them the opportunity to engage with other parents who are raising a child with ASD. The focus group discussions were 45 to 60 minutes in duration and each session was recorded in its entirety. Permission was given by all participants for the focus discussions to be recorded and kept in a safe place. All focus groups were conducted in English and participants were comfortable expressing themselves.

Focus group strengths: The focus group discussions created a platform for personal and group feelings to be heard. This data collection technique can be beneficial to both the researcher and the participant. There were savings in costs and time spent gathering data by having the 40 participants attend (4 groups of 10) in the same setting at the same time. Participants all brought their own unique experiences, which allowed other participants to engage and gain insight. Clarification was key in these group discussions to eliminating misconceptions and allowing participants to seek clarity (Stewart & Shamdasani, 2014; De Vos et al., 2011).

Focus group weaknesses: There are disadvantages to using group discussions, such as discussions that are unrelated to the topic being studied, including disagreements among participants. There was some difficultly in managing and controlling the groups as they displayed signs of frustration due to the nature of the topic being researched. In some instances, it was difficult to engage participants as they seemed hesitant to share their experiences to a group of people they didn't know. This made it important to ensure that participants felt free to engage without imposing on them. Focus group discussions may be intimidating to participants as they are required to voice their input to the broader group. This may distract participants and allow for withdrawal to occur (Brink, 2003; De Vos et al., 2011).

Data collection tools: A semi-structured interview guide was developed to assist with leading the focus group discussions (see Appendix F). This provided guidance and ensured that the objectives were kept in mind while conducting the study.

Part two: Teachers

Participants: Participants from various schools were invited to participate in the study. Participants from the North, East, South and Central Metropolitan districts were invited to ensure representation across various communities. Participants were purposively selected and a sample of eight special education teachers agreed to participate who ranged between 30 and 55 years of age. This study included only qualified teachers working with learners who have been diagnosed with ASD. They ranged from 2 years to 30 years of teaching experience in the field of ASD. The teachers were all teaching and providing support to learners at their respective schools providing extra lessons and try to involve parents to assist them. The participants were accessed through the school headmaster, who informed me of those interested in participating.

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Data collection: Individual interviews were arranged with participants who agreed to participate. There were 8 special education teachers that participated and the interviews were held at the respective schools where the teachers worked. This ensured that all participants felt comfortable and free to share their experiences from the comfort of their learning environment. The interviews were conducted by both the primary author and a co-facilitator that assisted with the process. Interviews were conducted in English and lasted between 45 and 60 minutes. They were recorded at all times with the permission of all participants.

Data collection tools: A semi-structured interview guide was used during the interviews (see Appendix E). In-depth interviews were conducted, allowing the participants to share their experiences and provide a deeper account of the subject being questioned. The questions were open ended questions and focused on the following aspects: (1) knowledge of IE; role as a teacher; strategies used; educational needs of learners; approaches; challenges; barriers and access to education. The questions were structured in line with the research objectives.

Data analysis were the same for both stage one and two, following the steps outlined by Braun and Clarke (2006) explained below: After the completion of all focus group discussions and individual interviews, the recordings were transcribed successfully and the analysis process commenced. The focus group discussions and individual interviews were analysed and transcriptions were organised and reduced (Babbie, 2001). Thematic analysis was utilised to analyse the data. In addition, as prescribed by Braun and Clarke (2013), the following six steps were outlined: (i) familiarising yourself with the data by transcribing and reading it; (ii) generating codes in an organized way and coding points of interest in the data; (iii) searching for themes by collating codes into themes; (iv) reviewing themes in relation to the coded extracts; (v)

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defining and naming the themes as part of an ongoing analysis, and refining the specifics of each theme; (vi) producing the report. The steps identified by Braun and Clarke (2013) are discussed below:

(i) *Familiarising yourself with the data:* This becomes key when having to read the transcripts to ensure full understanding and comprehension of the interviews. This process can be time-consuming yet it is a very crucial part of the process (Riessman, 2003). Close attention was given to the transcriptions as the reading and interpretation must be of high priority when analysing the data (Lapadat & Lindsay, 1999). Once the data were transcribed, it was read through a number of times to ensure accuracy in interpretation and analysis. While reading through the transcripts, notes and markings were made pertaining to the relevance in relation to the objectives set out. The reading process was in-depth, as skimming and scanning is not part of the process and is not advised (Braun & Clarke, 2013).

(ii) *Generating codes:* This process became easier once I became familiarised with the data presented in the transcripts. The codes that were identified are all phrases made by participants in line with the objectives of the study. The codes were presented in the form of sentences, or in some cases in the form of a single word. The codes were identified utilising a software package that assists with the organising of data. The software package used was ATLAS.ti for Mac, version 1.6, which highlighted the relevant data and code accordingly. The process was made easier by the use of the software package, as it simplified referencing the data and going back at any time to make amendments. During the coding process, reference was made to many codes that would lead to the themes (Braun & Clarke, 2013).

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		Name ^			Groups
		No code group			
◇	○	Better use of funding	▬▬▬ 7	▭ 0	
◇	○	Children are being misplaced	▬ 3	▭ 0	
◇	○	Creating an exclusive education system	▬▬ 5	▭ 0	
◇	○	Enabling learners with ASD	▬ 1	▭ 0	
◇	○	Ensuring Inclusive education	▬ 2	▭ 0	
◇	○	Existing policies must be reviewed	▬ 4	▭ 0	
◇	○	Government to provide training opport...	▬ 1	▭ 0	
◇	○	Hopeful	▬ 1	▭ 0	
◇	○	Inclusion a global challenge	▬ 1	▭ 0	
◇	○	Inclusive education not prioritised	▬ 4	▭ 0	
◇	○	Increase of statistics	▬ 1	▭ 0	
◇	○	Lack of awareness and autism knowled...	▬▬ 6	▭ 0	
◇	○	Lack of human resources	▬▬▬ 7	▭ 0	
◇	○	Lack of resources	▬▬▬ 7	▭ 0	
◇	○	Lack of schools	▬▬▬ 9	▭ 0	
◇	○	Lack of teacher training	▬▬ 5	▭ 0	
◇	○	Learners needs are not met	▬ 1	▭ 0	
◇	○	Learners with no access to schooling	▬▬▬ 8	▭ 0	
◇	○	Mainstream schools are prioritised	▬ 1	▭ 0	
◇	○	Mainstream teachers not equipped	▬ 3	▭ 0	
◇	○	Missed communication Top_down	▬ 4	▭ 0	
◇	○	New perspective on inclusion	▬ 1	▭ 0	
◇	○	Poor monitoring of policy implementation	▬ 4	▭ 0	
◇	○	Poverty cycle	▬ 3	▭ 0	
◇	○	Providing training and resources	▬ 4	▭ 0	
◇	○	Schools are not adequately informed a...	▬ 1	▭ 0	
◇	○	Statistics are inaccurate	▬ 1	▭ 0	
◇	○	strengthening maistream schools as in...	▬▬ 6	▭ 0	
◇	○	Struggling with curriculum implementat...	▬ 3	▭ 0	
◇	○	Teacher assistance is essential	▬ 1	▭ 0	
◇	○	Teachers are overloaded	▬ 2	▭ 0	
◇	○	Training and consultation provided by e...	▬ 3	▭ 0	
◇	○	Western Cape doing better	▬▬ 6	▭ 0	
◇	○	Working towards a better education sy...	▬ 4	▭ 0	
		Result: 34 of 34 Code(s)			

Figure 3.7 Coding using ATLAS.ti for Mac, version 1.6

(iii) *Searching for themes:* This stage involved generating a list of different codes that could potentially form part of the themes. ATLAS.ti was used to work on the existing codes and generate themes (Braun & Clarke, 2013).

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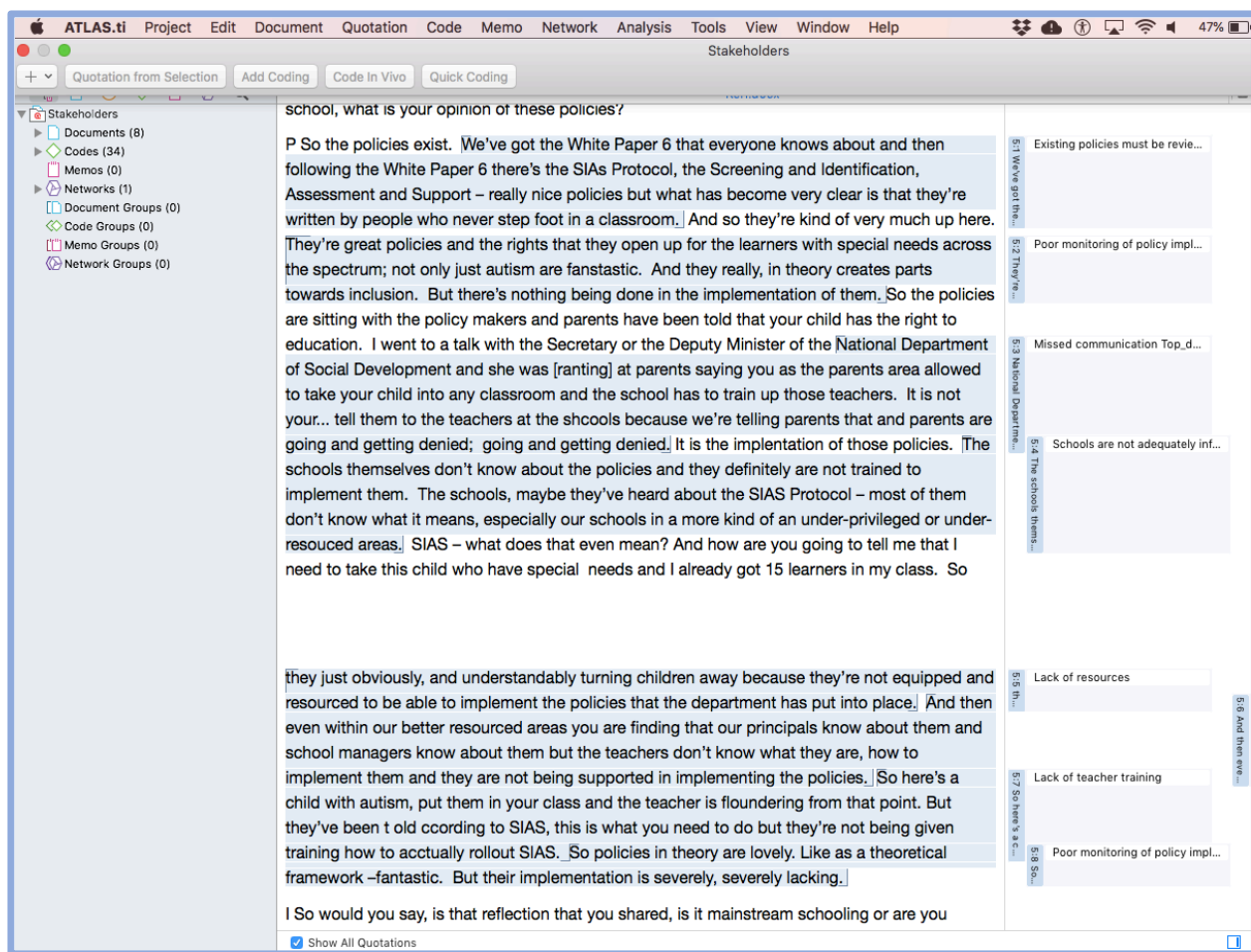
Figure 3.8 Themes using ATLAS.ti for Mac, version 1.6

(iv)   *Reviewing themes in relation to the coded extracts:* This stage entailed going back to the codes and themes to see whether the relationships and connections are satisfactory. This process ensured that information provided is coherent and reflects the views of the participants and in line with the objectives. Once the data fits the theme, it is clear that the process is done thoroughly (Braun & Clarke, 2013). This can be done in many ways, such as using mind maps or going back to notes that were made. ATLAS.ti was used for this stage.

http://etd.uwc.ac.za/

(v)   *Defining and naming the themes as part of an ongoing analysis:* This stage entailed capturing the essence of the themes identified to create a particular narrative. The naming of the themes was finalised after continuous evaluation and revision, at which point they were easily described in a sentence (Braun & Clarke, 2013).

(vi) *Producing the report:* During this final step, a report was generated from ATLAS.ti. The report has the final themes, codes and quotations. It provided a detailed account of the data collected and the analysis process. This report is concise and provides evidence that is vivid in that it contains the participants' experiences (Braun & Clarke, 2013).
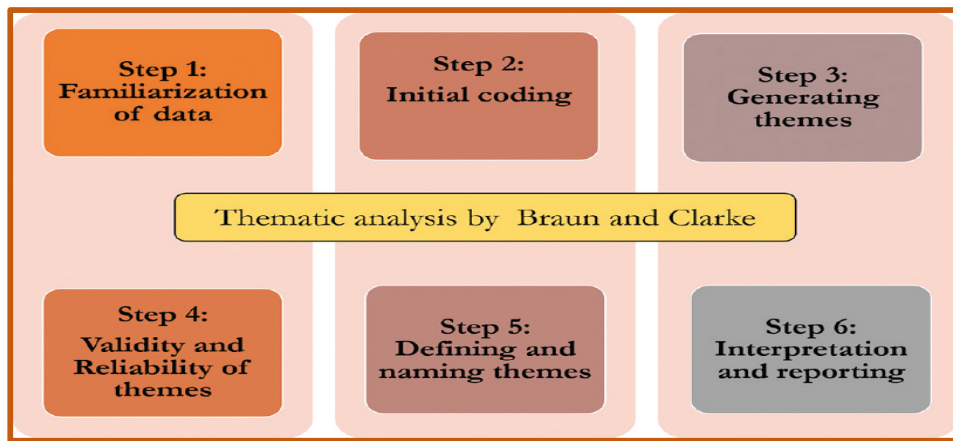
Figure 3.9 Summary of the thematic analysis process by Braun and Clarke (2013)

ATLAS.ti. a specialised research software package was used to firstly extract the data, catergorised and made links between the data segments using the various transcripts that were uploaded onto ATLAS.ti. While keeping the objectives and aim in mind and all relevant statements pertaining to the topic were identified. This process involved keywords and phrases that were all descriptive in nature and used for note keeping. These notes added meaningful fragments in the transcripts thereafter structural coding was used to answer the identified questions (Friese, 2013). According to MacQueen, McLellan-Lemal, Bartholow and Milstein (2008) structural coding "applies to a

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content based or conceptual phrase representing a topic of inquiry to a segment of data related to a specific research question, used to frame the interview". The group of re-occurring statements were done and grouped in appropriate categories, thereafter organised into themes and lastly a data analysis process was then followed as explained above (See Figures 3.8 and 3.9).

3.8 Data triangulation

Data triangulation involved the different sources of information this is to increase the validity of the study. This study included the following special education teachers, educational stakeholders such as individuals from non-profit organisations, professionals in the field of education, health and social studies and lastly parents (illustrated in Table 8.2 illustrates data triangulation). The results of the previous studies are provided in Table 8.2 below detailing the themes that emerged both horizontally and vertically across all the sample groups. The themes have been organised according to Bronfenbrenner's ecological systems theory. The research process was initiated by identifying the relevant persons that would participate in the study. In-depth interviews were conducted with each of the groups including focus group discussions, individual interviews and a workshop. Various perspectives were gained on the matter being researched and the outcome. Feedback was provided from the participating groups and compared to determine areas of agreement and areas of divergence (Wilson, 2014).

Advantage: Triangulation include "increasing confidence in research data, creating innovative ways of understanding a phenomenon, revealing unique findings, challenging or integrating theories, and providing a clearer understanding of the problem" (Thurmond, 2001).

Disadvantages of Triangulation: Triangulation can be time-consuming and a lengthy process. Collecting of data involves planning and a high level of organization skills (Thurmond, 2001).

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3.7.3.3 Stage three: Educational stakeholders and teachers

Objective 3: To identify the educational programmes currently being implemented in special needs schools to accommodate children with ASD.

This stage consisted of two parts: (1) stakeholders and (2) teachers.

Part one: Stakeholders

Participant selection: Participants were purposively selected. They were all knowledgeable on the matter being researched and could relate to the study and objectives set for the study. This allowed participants to add significant value to the study and their input was rich in data (Bernard, Wutich & Ryan, 2016). All the participants were from the Cape Town area and represented all four Metropolitan districts. The stakeholders were from various backgrounds, but all participants had worked in the field of special needs education, working together with government to achieve ultimate inclusion. Participants were professionals such as educational personnel, field workers from non-profit organisations and educational stakeholders from both private and government sector with a number of years' experience working towards inclusion in schools. The selection criteria were simple; all participants had some connection to the education field and had added value in their own capacity, making each participant unique in terms of their contribution. There were eight stakeholders that participated in the study ranging from middle to senior leaders in the field of education.

Data collection: An email invitation was sent to participants in non-governmental organisations (NGOs), private and government settings, to participate in the study. The email contained the information sheet with all the relevant details and outlined the aims and objectives of the study.

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Participants voluntarily agreed to participate in the study and were informed of the venue that would be convenient and accessible to them. Informed consent (see Appendix B) was given on the day of the interview and participants signed and returned the form. All the interviews were conducted in English and lasted 45 to 60 minutes. Interviews were conducted by both the researcher and the research assistant, both professional and competent to carry out the data collection.

Data collection tools: A semi-structured interview guide was used while conducting the interviews (see Appendix D). The in-depth interviews allowed the participants to share their experiences and provide a deeper account of the subject being questioned.

Part two: Teachers

Participants: Participants from various schools were invited to participate in the study. Participants were from the North, East, South and Central Metropolitan were invited to ensure representation across various communities. Participants were purposively selected and a sample of 8 teachers agreed to participate who ranged between 30 and 55 years of age. This study included only qualified teachers working with learners who are on the autism spectrum. They ranged from having 2 to 30 years of teaching experience in the field of ASD. The teachers that agreed to participate were from schools situated in low-income communities. The participants were accessed through the school headmaster, who informed me of those interested in participating.

Data collection: Individual interviews were arranged with the 8 teachers that agreed to participate. A semi-structured interview guide (see Appendix E) was used during the interviews. In-depth interviews were conducted allowing the participants to share their experiences and

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provide a deeper account of the subject being questioned. The interviews were held at the respective schools in which the teachers worked. This ensured that all participants felt comfortable and free to share their experiences from the comfort of their learning environment. The interviews were conducted by both the primary author and a co-facilitator who assisted with the process. Interviews were conducted in English and lasted between 45 and 60 minutes. They were recorded in their entirety with the permission of all participants.

Data collection tools: These interviews used a semi-structured interview guide. In-depth interviews allowed the participants to share their experiences and provide a deeper account of the subject being questioned. The interview guide can be seen in Appendix D.

Data analysis: The data analysis was carried out using Braun and Clarke's (2013) steps on thematic analysis, as discussed in objective two. The analysis process was conducted successfully, clear and concise in its approach as described in Figure 3.9.

3.8.1 Phase two: Framework development and consensus workshop

This phase included two rounds that involved the framework consensus by conducting a workshop. The framework was developed based on the findings of the previous studies/stages and phases of the broader study. The framework is structured according to the LM, as it describes the linkages between resources, activities and short and long-term outcomes. The framework served the following purposes: (a) identifying clearly who is responsible for which tasks; (b) helpful to improve current system; and (c) addressing the various levels of intervention involved. The LM consists of the following five stages:

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Stage one: *Collecting information that is relevant and specific to the designing of the model.* The information gathering can be done using various methods and sources. This study used various methods and the research gathered data through individual interviews and focus group discussions. A scoping review was conducted in phase one to provide a clear indication as to what literature is available that can provide relevant details pertaining to the study.

Stage two: *Clearly defining the problem and context.* This was done in phase one and two. The problem was defined through the data that were gathered and made sense of through the use of Bronfenbrenner's ecological approach. The ecological systems theory helped by putting the results into perspective and giving them a strong theoretical underpinning. The findings allowed for the shaping of the LM. The contextual factors that contribute towards the challenges were made clear.

Stage three: *Defining the elements that form part of the logic model.* After obtaining all the data from the study, they went through a process whereby they were categorically placed as the information was obtained. The research for this study was guided by Bronfenbrenner's ecological systems. The research categorised the findings according to the systems theory, and this allowed for better understanding. The findings were questioned and backed up by what participants had to say and contribute.

Stage four: *Drawing the logic model.* According to Rush and Ogborne (1991), there are various ways in which a researcher can present the results. A LM usually involves diagrams, columns and a number of rows allowing for the insertion of information that should form part of the LM. The researcher was guided by the titles used in a LM. The filling in and completion was simple as the researcher had all the data needed for the drawing and completion.

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Stage 5: *Verifying the logic model with stakeholders.* The verification process is the last step and involves the reviewing of the LM. The framework developed was guided by the use of the LM steps and approach in order to present the framework. The appropriate stakeholders participated in the reviewing and verification of the framework based on the LM. This was a platform for the stakeholders to engage and ask some critical questions. Before the reviewing occurred, a pilot run took place prior to the actual workshop. This is explained in detail below:

Table 3.1 Stages in building a logic model (applied)

STAGE 1
Collecting the relevant information
A literature review and scoping review was conducted and presented in chapters two & four
STAGE 2
Describing the problem
Phase one (understanding the problem) results in chapters four to eight
STAGE 3
Defining the elements
The horizontal and vertical themes presented in chapter eight (table 8.2)
STAGE 4
Drawing the logic model
The framework is presented using the LM in chapter eight (table 8.5)
STAGE 5
Verify the model
The framework was verified by conducting a consensus workshop in chapter eight

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Round one: A pilot run was conducted; a workshop was arranged with experts in the field and they had an opportunity to review the framework and provide feedback. The framework was emailed to all experts, who were researchers and academics in the field of education and childhood development. The reviews looked at the following: (1) whether the framework addressed the objectives; (2) if appropriate terms are used; (3) appropriateness of the design; and (4) the viability of the framework. The feedback was given after the presentation and mainly focused on strengthening the emphasis on the child and prioritising the framework accordingly.

Outcomes of pilot study

After the presentation, participants had the opportunity to provide feedback based on the framework that had been developed. The participants provided verbal feedback and a recording was made of the feedback to allow for revisiting and for clarity. The main concern highlighted was that although the framework was aimed at the child as the main focus, this was not as clear as it should be. It was agreed that the child should be highlighted, with the parent, teachers and stakeholders being part of the overall aim of the study. One way this was to be achieved was by incorporating Bronfenbrenner's bio-ecological model as part of the framework. The positive feedback outweighed the negatives, however: the scope of the study and the framework was seen as well-structured. The objectives were clearly addressed and the steps taken to develop the framework were clear and concise throughout.

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Round two

Participant selection: A consensus workshop was conducted with participants from various educational backgrounds. Participants were from Cape Town in the Western Cape Province, South Africa, and came from areas all around the city. Participants included experts, community members, activists, parents and educational stakeholders. The purpose of this workshop was to present the findings of phase two (objective 2, 3 and 4). Participants had knowledge and both direct and indirect experience with the matter being addressed. Participants included both males and females, ranging between 30 and 50 years of age, and they were purposively selected. There were 12 participants that participated in the workshop. Participants showed great interest in the objectives of the study and agreed to invite others whom they felt would contribute significantly. Participants were as follows: teachers (mainstream) (n=2), teachers (special needs) (n=2), a psychologist (n=1), parents (n=3), a guardian (n=1), government officials (n=2) and a registered counsellor (n=1).
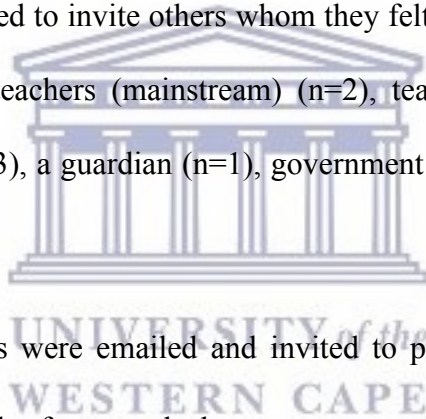
Data collection: Participants were emailed and invited to participate in the workshop and provide valuable feedback on the framework that was presented. They were provided with an information sheet pertaining to the study and the aim of the activity. They were well informed and agreed to sign the consent form (Appendix B) to participant in the workshop. The workshop was held in a venue that was close to all participants and accessible. The venue was private and the environment was conducive for the nature of the activity. The workshop was conducted in a face-to-face format and participants could engage with other participants and debate on the matter. All workshop material was conducted in English and feedback responses were in English too. The workshop lasted four hours including a 30-minute break. The goal of the workshop was to discuss

and clarify issues that surfaced in phases one and two. The statements of the previous phases were presented during the workshop and participants had an opportunity to contribute towards the lack of access to schooling for children with ASD. A draft of the framework was sent to all participants via email for review prior to their attending the workshop, and they had adequate time to do so.

The participants were seen as reviewers of the framework presented to them. They reviewed the key components identified in the previous phases, namely: (1) *Inadequate resources available in the community and schools;* (2) *Lack of collaboration;* (3) *Teachers' lack of knowledge and skills;* (4) *An inclusive education for all learners with ASD aligned with the curriculum.* For each of these components, there were prescriptive statements and key activities. The workshop participants had the opportunity to review each of the prescriptive statements and the changes were made in the second version of the framework. Most of the feedback that was provided in round one dealt with structuring and refining the main objective. The input provided during the workshop formed part of the third version of the framework. Participants agreed that the framework addressed the matter being researched and viewed it as valid. There were four sessions attached to the workshop aimed at answering specific questions. The workshop participants were asked the following questions during the workshop:

1. Is the proposed framework realistic and feasible?

2. Is the framework aimed at the appropriate target audience for successful outcomes?

3. Who are the persons responsible for the various tasks and activities?

4. Who is affected by this framework and its possible outcomes?

5. What needs to be changed based on the existing framework that was presented?

6. Are there any further suggestions, comments or recommendations?

Data Analysis: In this study, the framework that was designed and developed used stimulated techniques allowed for data transparency to support the primary data being presented during the workshop (Kumar, Yammlyavar & Nielsen, 2007). The data obtained from the workshop was produced through written information and collaboration among participants. Event recalling and audio recordings, as well as note-taking were used to support the inference of data pertaining to the framework that was developed.

3.9 Ethical statement

Ethics in research is a serious matter and researchers need to adhere to the strict rules and codes of practice (Kosslyn & Rosenberg, 2005). The human rights and human dignity of all the participants must be treated with respect (Babbie, 2001). The research proposal of this study was presented and then submitted for Higher Degrees Ethics approval. Ethical clearance was granted and the research project could commence thereafter as permission was granted by the University of Western Cape Senate Research Committee.
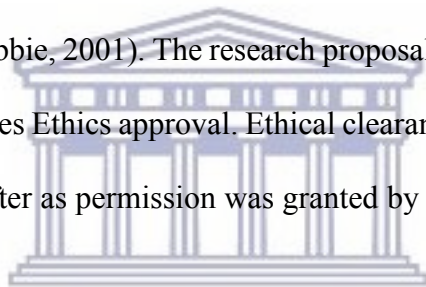
Thereafter, written consent was requested from all participants that met the research criteria and agreed to participate. Permission was requested from the Western Cape Education Department (WCED) to gain access to teachers needed for the study. Upon receiving the permission letter from the WCED, the headmasters of the respective schools were asked whether teachers could participate in the study. All participants were informed about the processes involved and the nature of the study by means of an information sheet. All relevant information and details pertaining to the study formed part of the information sheet. Letters were sent to parents, teachers and stakeholders inviting them to participate, including the information sheet with all the study details. Confidentiality was upheld throughout the research process, ensuring the participants' privacy.

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Participants were assured that information shared will only be used for the proposed research. Contact details were included in the information sheet should the participants need to make contact with the researcher at any point. Participants were informed that counselling services would be made available should they need counselling or any form of debriefing after the interview sessions. The research had funding available to compensate participants in the focus group discussions, covering their taxi fare. This way, participants did not incur any financial costs.

Participants involved in the individual interviews, focus group discussions and the workshop were informed that all sessions would be recorded and destroyed upon completion of the study. Participants were made aware that they could withdraw from the study at any time. All data were kept safe in a secure area to maintain and uphold confidentiality (Kosslyn & Rosenberg, 2005). Audio recordings were used during all the data collection processes and participants were made aware of this beforehand. Participants were assured that their privacy would be protected and that no form of identification would be attached to any of the recordings. Participants were made aware that they can withdraw at any given time and they are not obligated to participate in the study and that its voluntary. The quotations or other forms of representation of data do not have any names or identity labels attached. After this was explained in detail, participants agreed to sign the informed consent.

3.10 Trustworthiness

Establishing rigor is essential for all qualitative research studies. Principles of trustworthiness should be adhered to throughout the process. Trustworthiness is one way of ensuring rigor in a qualitative study; this adds great value to the study. This also refers to being true and accurate to the participant's information without intentionally transcribing it. When conducting the study,

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awareness of any preconceived ideas or assumptions should be a priority; this is referred to as reflexivity (Langedrige, 2007). To ensure trustworthiness is upheld, the study should have credibility, transferability, dependability and confirmability.

3.10.1 Credibility

Credibility exists when the research findings reflect the perceptions of the participants forming part of the study. The credibility of the data refers to the confidence of the data. Internal validity is important in qualitative research; researchers are able to establish the reality of the participants through detailed description of the discussion (Polit, 2004). One technique of upholding credibility is having the researcher remain in the field for a long period of time, sourcing data from a variety of sources (Brink, 2003). The benefit of qualitative research is that it aims to explore a particular matter with an in-depth approach. During this study, consultation with experts in the field that had extensive knowledge increased the credibility of the study (De Vos et al., 2011).

3.10.2 Transferability

According to Holloway and Wheeler (2010), transferability refers to the findings of the research that are relevant to a situation or participant commonality. Transferability also refers to the degree to which the research can be transferred to other contexts. A detailed description should be provided of the research setting, all participants, as well as the method of data collection used. Method transparency is important in emphasising the theoretical underpinnings for clarity at all times. Transferability also refers to the generalisability of the study in other settings, which can be problematic when conducting qualitative research (Brink, 2003). All audio recordings, transcriptions and field notes must be kept safe for evidence (De Vos et al., 2011). Therefore,

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transferability was ensured by providing a clear and detailed account of the research setting, methodology used, the analysis process and collating of the research results.

3.10.3 Dependability

According to Polit and Beck (2012), the term dependability refers to the stability of data and the research findings. This is measured by the standard to which the research is conducted, analysed and presented. According to Lincoln and Guba (1985), a dependable study should be consistent and accurate. This requires checking of data and involving another researcher or peer to validate the process and procedures involved. This is done to seek approval and establish whether the data was obtained through a thorough process (Brink, 2003). While conducting this study, consultation with senior colleagues and peers in the field was imperative. Their main task was to do checking of data collection and form part the research process to ensure dependability.
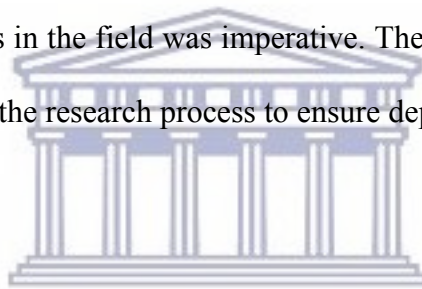
3.10.4 Confirmability

This is a process to establish authenticity and whether there was any bias during the study (Shenton, 2004). Confirmability refers to the neutrality or objectiveness of the study as well as concentrating on the characteristics of the study. Confirmability focuses on the characteristics of the data to ensure it is dependable (Holloway & Wheeler, 2010). One way to ensure conformability is to have member checking form part of the research process. This makes it easier to accept the findings, conclusions and recommendations (Brink, 2003). Therefore, an audit trial was kept to capture the steps involved that lead to the conclusions and research findings. Field notes, transcripts and a reflective log was updated throughout the research process.

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3.11 Member checking

The credibility of a study can be ensured by including member checking as part of the research process. Member checking is primarily used in qualitative research and assists with quality control. It is a process that involves the checking and verifying the analysis of data obtained from participants (Roger, 2005). According to Lincoln and Guba (1985), member checking is a process that occurs at the end of a study. The research report is handed back to participants for checking to see whether the information they provided is accurately described. They will either agree or disagree on whether the findings reflect their experience, feelings or views (Creswell, 2013). Member checking eliminates error and the misinterpretation of data provided by participants. In conjunction with this, Creswell (2013) expresses a concern that participants might decide to change their mind about a comment they made. Some participants might have forgotten what they said previously and this might become an issue. Member checking was not possible for all participants as time constraints were a major factor; however, the few that were done ensured that the data was accurate and valid in their opinion. Some participants felt the need to add some additional information, but this posed a challenge as the research emphasised that the activity was focused on the existing data they provided.

3.12 Reflexivity

When conducting the study, I could be biased and needed to be aware of any pre-conceived ideas or assumptions. Qualitative interviewing involves a continuous process of reflection. Reflexivity is the process of examining both oneself as researcher, and the research relationship (Flick, 2009). It involves making the research process a focus of inquiry, laying open preconceptions and becoming aware of situational dynamics in which the interviewer and respondent are jointly

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involved. Assessing qualitative research entails numerous readings that are considered a representation of understanding and meaning.

I ensured that journal entries were made throughout the research process in order to constantly reflect and engage actively in the process. The research was primarily focused on qualitative data and therefore I had to be reflexive throughout. The nature of the enquiry was rather sensitive to many participants and I had to be conscious of those feelings too. Participants were open to sharing but some were reluctant at times. What influenced this was not known to me but worth reflecting on. The individual interviews were rather anxiety-provoking as I had to engage with individuals that were not easily found. I felt "brushed off", especially when participants heard it was a research study being conducted. Feelings of frustration were high, and striking a balance between professionalism and lashing out was challenging at times. The frustration was purely based on the difficulty in accessing the information from particular individuals who failed to participate, knowing that there are a limited number of individuals that have access to this information. I dealt with this frustration through consultation with senior peers in the profession, who provided guidance and support at all times.
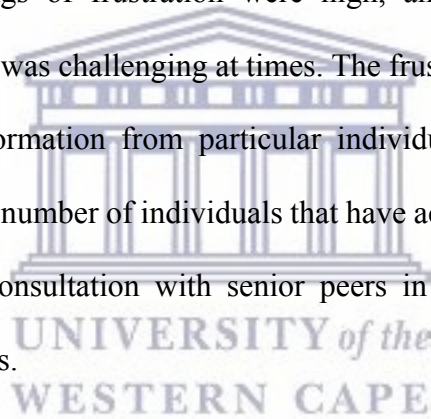
Another challenge was that of "wearing many hats", being a researcher, an academic, a therapist and a mother this made the enquiry more intense. There were times when I had to be reminded that as a researcher you have a particular role to play. Reflecting on the nature of the study made the balance a challenge; many times, I would come across as an activist rather than a researcher just doing an enquiry. Allowing participants to express themselves without you imposing your opinion on them is challenging too. I found that in some instances, the therapist hat was being worn and I had to be conscious of this happening during interview sessions. Many times, I

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experienced feelings of hopelessness at not having the answers and hoping there was something that could be done quickly.

3.13 Conclusion

This chapter described the research design used as well as the research context in which the study was conducted. It provided a full description of the population, sampling used, data collection techniques for each objective and the analysis process. Lastly, a detailed account was provided of the ethics pertaining to the study and its trustworthiness. In Chapters four to eight a detailed account of the results as well as the outcomes of each objective. These chapters are presented in a manuscript layout as they were submitted to peer-review publications.

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OVERVIEW OF THE RESULTS CHAPTERS

This serves as an introduction to the results chapters 4 to 8, which are presented in a manuscript format and have been submitted for review and possible publication. The title, aim, research question and submission details are highlighted.

1. What are the educational and developmental needs of a child with ASD?

2. What does previous research suggest on the issues related to access to schooling for children with ASD?

3. What educational programmes are available for children presenting with ASD in a low socio-economic community?

4. What frameworks or structures are currently implemented to ensure accessibility to resources for managing and educating a child with ASD?

Below is an overview of the findings chapters:

Chapter four
Title: Educating children with autism spectrum disorder: A scoping review on evidence-based practice modules used in the classroom **Aim:** To explore best practice modules used for children with autism spectrum disorder **Research question:** What interventions are used to educate a child with autism? **Submission:** This manuscript was submitted to the *Journal of Psychology in Africa*.

Chapter five

Title: Factors which enhance or hinder the educational needs of children with ASD in Western Cape Province, South Africa: Perspectives of parents

Aim: The aim of the study was to explore parents' perceptions of the factors which enhance or hinder the educational needs of children with ASD.

Research question: What are the factors that enhance or hinder the educational needs of children with ASD?

Submission: This manuscript was submitted to the *International Journal of Special Education and published 2018.*

Chapter six

Title: South African teachers' perspectives on the barriers to the educational development of learners with autism spectrum disorder

Aim: The aim of this study was to explore South African teachers' perspectives on the barriers to the educational development of learners with autism spectrum disorder

Research question: What are the barriers to the educational development of learners with ASD?

Submission: This manuscript was submitted to the *International Journal of Special Education*.

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Chapter seven

Title: Promoting an inclusive education system for children with autism spectrum disorder: Perspectives of stakeholders

Aim: To explore stakeholder's perception on the challenges and merits of promoting an inclusive education system for children with autism spectrum disorder in the Western Cape Province, South Africa.

Research question: What are stakeholders' perspectives and suggestions on inclusive education and promoting an inclusive education system for children with autism spectrum disorder?

Submission: This manuscript was submitted to the *Journal of Educational Studies*.

Chapter eight

Title: The development of a framework for parents and educators in low-income communities to enhance access to resources that educate children presenting with autism spectrum disorder

Aim: The aim of the study was to develop a framework for parents and educators in low-income communities to enhance access to resources that educate children presenting with autism spectrum disorder.

Research question: How can children with autism spectrum disorder have more access to education and resources within low income communities?

Submission: This manuscript was submitted to the *South African Journal of Psychology.*

CHAPTER FOUR

Educating children with autism spectrum disorder: A scoping review on evidence-based practice modules used in the classroom

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Abstract

A number of educational models for children with autism have been established as being effective. The scoping review searched for the evidence-based practice modules implemented in schools. Six databases were searched and the results for evidence-based practice modules were identified from the following categories: (1) behavioural interventions (discrete trial); (2) developmental interventions (milieu teaching); (3) specific technique (modeling and reinforcing); (4) technology-based interventions (video modeling); and (5) integrated interventions (LEAP) that help to shape school programmes for students with autism spectrum disorder. Recommendations for evidence-based practice modules include the need for educators to receive up-to-date training. This article emanates from a broader PhD thesis.

Keywords: Autism spectrum disorder, education, practice models, classroom, scoping review.

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4.1 Introduction

In this Chapter Four, a scoping review is outlined in detail and highlighting the purpose of the scoping review. The scoping review explored best practice modules used for children with Autism Spectrum Disorder. This chapter will elaborate on the methodology used, analysis and discuss the findings as well as the limitations and recommendations.

4.2 Background

Autism spectrum disorder (ASD) is a lifelong neurological disorder. Growing numbers of children have been diagnosed with autism over the past few years (Centers for Disease Control and Prevention (CDC), (Adams, Jajosky, Ajani, Kriseman, Sharp, Onwen, et al., 2014). Autism spectrum disorder is characterised by difficulty in communication, with a lack or delay in speech or language development; social development with a lack of establishing peer relationships; and a resistance to change (American Psychiatric Association, 2013). Research results as well as the influence of environmental factors and the effects of genetic susceptibility remain unclear (Rutter, 2005). However, most experts believe that, with early intervention, children can make extraordinary advances in their academic performance (CDC, 2014), (Adams, Jajosky, Ajani, Kriseman, Sharp, Onwen, et al., 2014). With more children being diagnosed with ASD, the schooling system and education play a crucial part in children's development. Educators are expected to accommodate learners entering the education system (Lindsay, Proulx, Thomson & Scott, 2013). The spectrum is broad and depends too on whether the child is high-functioning or not, as well as the extent to which the child's behaviour affects the learning process (Semrud-Clikeman, Fine & Bledsoe, 2014).

Education for children with ASD is imperative, especially with regard to early intervention. Given the difficulties faced by children with autism, and mainly their social and behavioural impairments, educators face a considerable number of obstacles in managing the needs of each child (Lindsay et al., 2013). Children with ASD require careful individualised planning to increase educational success. The success of a child with ASD depends on the exposure that the child receives through the process of learning (Stahmer, Collings & Palinkas, 2005). The process of learning is not one that can happen without the necessary educational support (Denne, Hastings & Hughes, 2017). Strategies and interventions for teaching and educating a child with ASD become of utmost importance as the child develops, and one cannot disregard the crucial role of such education. Intervention strategies must be accommodating and show evidence of achieving good results (Accardo, Magnusen & Capute, 2000). Existing research involving evidence-based interventions for children with ASD is limited, and close to none address the child's academic needs (Spencer, Evmenova, Boon & Hayes-Harris, 2014).

Children with ASD find it very difficult to perform academically at school owing to the nature of the disorder (Keen, Webster & Ridley, 2016). The child's academic performance is largely dependent on the interventions and programmes that the child is engaged in (Van Craeyevelt, Verschueren, Vancraeyveldt, Wouters & Colpin, 2017). A considerable amount of work needs to be done, and the classroom setting must be carefully planned. There have been significant debates concerning the appropriateness of recommending that children with ASD be placed in a general school setting (Wong, Odom, Hume, Cox, Fettig, Kucharczyk & Schultz, 2015). A few models and interventions have been put in place to accommodate these learners in mainstream/general school settings. Consequently, educators and parents are frequently faced with the daunting task

of designing inclusion programmes for learners with ASD (Simpson, de Boer-Ott & Smith-Myles, 2003).

4.3 Methods

Scoping reviews are designed to map out existing literature on a particular topic in this article the focus being on ASD. The methods are viewed as a systematic method and involve five key stages in the process. These stages are pivotal and should be followed to maintain the quality of the search (Arksey & O'Malley, 2005). The key stages are described as follows by Arksey and O'Malley: identifying the research question; identifying relevant studies; study selection; charting the data; and collating, summarising and reporting the results.

4.3.1 Data sources and search strategy

To identify relevant studies, six reference databases from the years 2006-2016 were searched; all articles were in English. The search engines used were Academic Search Complete, ERIC, Medline, PsycARTICLES, JSTOR and SAGE Journals. The search engines were academic/educational as well as pertinent to the social sciences. Thereafter, relevant articles were scanned and those selected that met the criteria of the search. The search terms used reflects in Table 4.1 (Special needs, teaching methods children with autism disorder) all terms were entered into the chose databases. The inclusion and exclusion criteria is listed in Table 4.2.

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Table 4.1 Search terms

Search terms	Terms used in databases
1. Special needs	'Special needs' AND 'autism'
2. Teaching methods	Education – 'teaching methods' OR 'teaching strategies' OR 'teaching interventions' OR 'educational practices'
3. Children with autism spectrum disorder	'Children with autism, children with special needs'

Table 4.2 Inclusion and exclusion criteria

Inclusion criteria
Criterion 1 – The studies were all published in English and no other languages were considered.
Criterion 2 – Studies for 2006-2016 were included.
Criterion 3 – Qualitative, quantitative and mixed-method studies were included.
Exclusion criteria
Criterion 1 – All scoping reviews and prevalence studies were excluded from the present study.

4.3.2 Review process

The processes of study selection and data extraction proceeded in an iterative manner (Arksey & O'Malley, 2005). A sample of seven articles were reviewed, and the author and other information about the study were extracted and recorded in Figure 4.1. The information was organised in the

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following manner: author and year, study design, participants, geographic location, instruments, interventions, programme/intervention description, and results/outcomes (Table *4*.3). The articles included were those that focused on interventions and those that had a substantial proportion of children with ASD. A total of 309 articles were identified via the database search; six duplicates were identified and removed from the search, with a remaining 303 articles. The screening process resulted in 33 articles being included after the title search was carried out. A thorough abstract search was done after the title search, which excluded 26 articles of which it was determined that only seven adhered to the inclusion criteria as being full-text articles assessed for eligibility and which met the criteria (Figure 4.1).

Key features are important when reporting interventions and outcomes, as these inform the framework for categorisation. When conducting the scoping review, the diverse types of study and the data extraction did not attempt to evaluate the quality of the studies (McKinstry, Brown, & Gustafsson, 2013).

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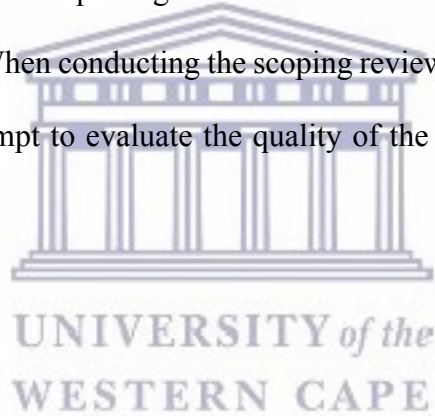
Figure 4.1 Process illustrating search and inclusion and exclusion of articles for scoping review

4.3.3 Citation management

All citations were imported into RefWorks, the web-based bibliographic manager; duplicate citations were removed manually. Citations were then imported into a Microsoft Excel spreadsheet following the title and abstract relevance screening and data characterisation of full articles.

4.3.4 Methodological quality appraisal

During the review process, no appraisal of the methodological quality was assessed, as this would pose a risk of bias. Excluding the appraisal of articles is in line and consistent with the guidance on scoping review conduct (Peters, Godfrey, Khalil, McInerney, Parker & Soares, 2015).

4.3.5 Data synthesis

The synthesis for the scoping review is more qualitative and typically not quantitative (Armstrong, Hall, Doyle & Waters, 2011). A narrative review approach was employed while conducting the study. This approach best described as the selection and ordering of primary evidence, and is less concerned with assessing evidence quality while being more focused on collating information that provides context and substance. The approach is suitable for both qualitative and quantitative studies (Dixon-Woods, 2005).

4.4 Results

4.4.1 Description of the studies

During the scoping review process, 309 articles were identified, of which seven were included in the scoping review (Figure 4.1). A full list of the included articles can be obtained from the lead

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author. Articles that were included were published between 2006 and 2016. The included studies yielded information on interventions in the USA and Turkey, although the focus had not been only on these countries. In three of the included articles, there was no mention of the country where the research was done, and this remained unclear (Christensen-Sandfort & Whinnery, 2013; Whalon & Hanline, 2008). The studies included in the scoping review had various designs employed; four of the studies by Leaf, Leaf, Taubman, McEachin & Delmolino (2014); Akmanoglu, Yanardag & Batu, (2014); Whalon & Hanline, (2008); and Christensen-Sandfort & Whinnery, (2013) included an exploratory design. The remaining two studies employed two different designs: one focused on a clustered randomised comparison design and the other on a descriptive study.

Table 4.3 also presents the instruments that were used to measure effectiveness and outcome. Many of the studies used the same instruments and overlap was noticed while compiling the listing of instruments. The childhood autism rating scale (CARS) was used in three of the studies (Strain & Bovey, 2011; Boyd, Conroy, Asmus, McKenney & Mancil, 2008; and Christensen-Sandfort & Whinnery, 2013). The articles mentioned in Table 4.3 focused on the interventions used for a child with autism and the outcome of these interventions.

The studies that were included focused on the research question: "What are the educational and developmental needs of a child with ASD?" The studies examined the strategies employed when teaching a child on the autism spectrum. All the seven studies included had some form of intervention that was implemented with a group of autistic learners. The articles were categorised according to the following headings: behavioural interventions (discrete trial); developmental interventions (milieu teaching); specific technique (modeling and reinforcing); technology-based interventions (video modeling); and integrated interventions (LEAP).

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4.4.2 Behavioural intervention

A study by Leaf, Leaf, Taubman, McEachin & Delmolino (2014) that primarily focused on discrete trial teaching (DTT) as a form of intervention for teaching learners with autism, reported positive results. The study was conducted in the USA using an experiential design with a parallel treatment design. Among the instruments used in this study was the 12 Muppet pictures. Results showed that DTT was effective, resulted in high rates of maintenance, and that participants responded accurately during most of the teaching trials. However, the study indicated that flexible prompt fading was better in terms of the total number of trials and sessions, as well as the total amount of time for participants to learn all the targeted skills.

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Table 4.3 Summary of all studies identified in scoping review

Author & Year	Study Design	Participants	Geographic Location	Instruments	Interventions	Program Description	Results/ Outcome
Leaf, Leaf, Taubman, McEachin & Delmolino, 2014.	Experimental Design Parallel treatment design	Participants all had a formal diagnosis of autistic disorder from an outside agency, ranged from 4-6 years, and an IQ score ranging from 86 to 128. Three of the four participants have a history of educational intervention that used a flexible prompt fading procedure.	United States	12 picture of Muppet	Discrete Trial Teaching (DTT); Flexible Prompt Fading (FPF); Error Correction (EC).	Researchers taught each participant how to expressively label six pictures of Muppet characters with the flexible prompt fading procedure and six pictures of Muppet characters with the error correction procedure.	Results indicated that both teaching procedures were effective, resulted in high rates of maintenance, and that participants responded correctly during the majority of teaching trials. However, flexible prompt fading was more efficient in terms of total number of trials and sessions, as well as total amount of time for participants to learn all targeted skills.

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| Strain & Bovey, 2011. | Clustered randomized comparison design | In total, 177 intervention classroom children and 117 comparison classroom children participated. | United States | Childhood Autism Rating Scale (CARS); Mullen Scales of Early Learning; Preschool Language Scale (4th ed.; PLS-4); Social Skills Rating System (SSRS); Social validity measure. | LEAP (Learning Experiences and Alternative Program for Preschoolers and Their Parents) preschool model. | LEAP is a multi-faceted program for young children on the autistic spectrum. It combined a variety of strategies such as Applied Behavior Analysis, peer-mediated instruction, incidental teaching, self-management training, prompting strategies, and systematic parent training. | Children were similar on all measures at start. After 2 years, experimental class children were found to have made significantly greater improvement than their comparison cohorts on measures of cognitive, language, social, and problem behavior, and autism symptoms. Behavior at entry did not predict outcome nor did family socioeconomic status. The outcomes were favorably viewed by intervention class teachers. |

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Akmanoglu,Yanardag & Batu, 2014.	Experimental Design Adapted alternative treatments design	Participants of the study were four children with autism.	Turkey	The materials used in the study were an in- struction VCD, a laptop for watching the VCD, a video camera for recording the data, the materials for the role plays	Video modeling Graduated guidance together Video modeling alone for teaching role playing skills to children with autism.	Graduated guidance is the process which teachers decide providing prompts when the target person needs, or decide to make manipulations in the type of prompt for teaching the target skills. Video modeling is defined as, watching the records of someone doing the target behaviors and imitating the model for learning a new skill or changing a behavior.	Both teaching methods were found to be effective in teaching target skills to children with autism. Results of the study were compared with the literature and some recommendations were addressed in the study.
Sansosti, Mizenko & Krupko, 2014.			United States		computer-based technologies	multimedia intervention	Raise awareness of those strategies that appear to be the most effective for such students, and assist service

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							providers in providing defensible education.
Boyd, Conroy, Asmus, McKenney & Mancil, 2008.	Descriptive study	Seven children, ages 3.3 through 5.1 years, participated in this study.		The Childhood Autism Rat- ing Scale (CARS; Schopler, Reichler, DeVellis, & Daly, 1980)	Sequential behavioral coding		Results based on a continuous, sequential behavioral coding system showed that for the majority of participants; small group sizes, child directed activities, and limited teacher engagement most influenced the occurrence of target children's social behaviors.
Whalon & Hanline, 2008.	Experimental Design Single-subject multiple baseline design	Three children with autism spectrum disorder and nine general education peers participated in the study.		Peabody Picture Vocabulary Test-III (PPVT-III); The Ex-pressive One-Word Picture Vocabulary	Reciprocal Questioning Intervention	Reciprocal teaching refers to an instructional activity in which students become the teacher in small group reading sessions. Teachers model, then	Following intervention, children with autism increased frequency of question generation and responding using a story map framework. Social validity data indicated

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				Test (EOWPVT); The Oral Reading Fluency (ORF); Retell Fluency (RF) subtests of the Dynamic Indicators of Basic Early Literacy (DIBELS)		help students learn to guide group discussions using four strategies: summarizing, question generating, clarifying, and predicting. Once students have learned the strategies, they take turns	children with autism spectrum disorder and their general education peers found the intervention helpful, and parents perceived a change in their child's reading and language skills.
Christensen-Sandfort & Whinnery, 2013	Experimental Design Single-subject study Multiple baseline	Three children who attended a small public charter preschool serving children from ages 2 through 5 were selected to participate in this study.		Childhood Autism Rating Scale (CARS)	Milieu teaching The strategies included: (a) modeling (b) mand-model (c) time delay (d) incidental teaching	Milieu teaching is a practice that involves manipulating or arranging stimuli in a preschool child's natural environment to create a setting that encourages the child to engage in a targeted behavior.	Results indicated that milieu strategies are an effective means of providing communication skills instruction for young children with ASD in an ECSE classroom.

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4.4.3 Developmental intervention

One study reported that the milieu teaching strategies were an effective means of providing children with communication skills needed for the classroom (Christensen-Sandfort & Whinnery, 2013. The study used an experimental design and a single-subject study with multiple baselines. CARS were used as an instrument. The results indicated that the milieu teaching strategy is effective and provided children with the desired communication skills. The strategy showed significant improvement and an increase in the use of language that enabled children to communicate more effectively. A study conducted by Boyd, Conroy, Asmus, McKenney & Mancil (2008) reported results on the sequential behavioural coding system that this intervention is better for use on smaller groups and that the activities are child-directed and the intervention influences the child's social behaviour in a positive manner. This was a descriptive study and the instruments used were CARS and the behavioural event (initiations) and duration codes (social interactions) representing target child/peer social behaviors. The results showed that smaller group size, child-directed activities and limited teacher engagement influenced the study significantly.

Specific techniques

A study that was closely related to modeling also referred to reciprocal teaching, i.e. the instructional nature of the intervention that allows the learner to role-model the teacher (Whalon & Hanline, 2008). In this way, learners are able to guide discussion groups and use various strategies in the process. This was an experimental design with a single subject, multiple baseline design. The instruments used were the Expressive One-Word Picture Vocabulary Test (EOWPVT), Retell Fluency (RF) subtests of the Dynamic Indicators of Basic Early Literacy (DIBELS), the Peabody Picture Vocabulary Test-III (PPVT-III) and the Oral Reading Fluency

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(ORF). Social validity forms a large of the study as this involves story mapping, and parents found that this method improved their child's reading and language communication skills.

4.4.4 Technology-based interventions

One study out of the seven included was aimed at video modelling as a method of teaching children with ASD. The study reported that the video calling and role playing had effective results and targeted the skills of the child. The study employed an experimental design and an adapted alternative treatment design. The instruments used were instructional video CDs, a laptop computer and a video camera. The outcome of the intervention was strongly based on the individual's target skills (challenging behaviour), and the role playing and video calling was strongly directed at the identified target skills (Akmanoglu, Yanardag & Batu, 2014). Another study reported that computer-based instruction was an effective way of teaching children with ASD. The study was conducted in the USA, and the instruments used were computers, tablets and digital devices. The study reported that learners' behaviour and social skills improved especially in learners who had behavioural repertoires (Sansosti, Mizenko & Krupko,2014).

Integrative intervention

The LEAP intervention was seen as a multifaceted intervention, and the study showed improvement in the following areas: cognitive ability was enhanced, language was more proficient, social interaction skills were improved, and problem behaviour was addressed. Applied behavioural analysis (ABA) formed part of the study and also part of the results presented for the LEAP intervention. The study used a clustered randomised comparison design; and the instruments used for the study were CARS, the Mullen Scales of Early Learning, Preschool Language Scale

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(4th ed.; PLS-4), Social Skills Rating System (SSRS) and the Social Validity Measure. The success of the intervention is largely based on the ABA approach (Strain & Bovey, 2011).

4.5 Discussion

The present scoping review indicated that that there were many interventions and frameworks being implemented at schools for educating children with ASD. These interventions were more common in the United States and other parts of the world as mentioned in table 4.3. The review identifies studies that have reported outcomes of successful interventions. Most interventions focused on the individual and aimed to build skills that would enable children with autism to improve their learning capabilities. Behavioural interventions (discrete trial), developmental interventions (milieu teaching), specific technique (modeling and reinforcing), technology-based interventions (video modeling) and integrated interventions (LEAP) contribute to the learning and teaching capacity of children with ASD. The processes of identifying various strategies and teaching methods are simple; however, not all are evidence-based practice models (Odom, Brantlinger, Gersten, Horner, Thompson, & Harris, 2005).

Behavioural interventions can include many different approaches but the scoping review suggests that discrete trials teaching (DTT) is an evidence-based practice intervention used to teach learners with ASD. DTT is a highly systematic approach to learning as the key to dividing objectives into smaller discrete components that create space for positive reinforcement. This teaching strategy can be implemented with great success both at home and in the classroom (Todd & Reid, 2006). DTT can be implemented with other ABA methods. Leaf, Leaf, Taubman, McEachin & Delmolino (2014) and Garland, Vasquez III & Pearl (2012) strongly suggest that DTT is an effective method for teaching learners with ASD; their behavioural strategies comprise a substantial amount of

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research that indicates the effectiveness of the intervention. Researchers have reported favourable results implementing DTT programmes (Birnbrauer & Leach, 1993; Sheinkopf & Siegel, 1998; Smith, Groen, & Wynn, 2000). DTT was viewed as a positive intervention for improving communication for children with ASD, and mainly children under the age of eight benefits enormously, being able to use single words without any effort after they have engaged in this intervention (Goldstein, 2002).

Developmental interventions such as the milieu teaching strategy that are also identified as a naturalistic approach to teaching as discussed in a study by Chistensen-Sandfort and Whinnery (2013). This behaviourally based strategy targets the communication deficits among children with disabilities including ASD, and includes modeling, mand-modeling, time delay and incidental teaching. A study by Chistensen-Sandfort and Whinnery (2013) reported an increase in speech by using the milieu intervention with children diagnosed as having ASD. Similar results were reported in other studies, and significant results by using this strategy with children diagnosed with various disabilities (Alpert & Kaiser, 1992; Hemmeter & Kaiser, 1994) and especially helpful for children with ASD (Hancock & Kaiser, 2002). Milieu is seen as a feasible intervention that teachers can implement in the classroom with the support of teachers and, with proper implantation, the intervention can be successful (Mancil, Conroy & Haydon, 2009). This approach is a cost-effective way of teaching children with communication deficits owing to ASD (Chistensen-Sandfort & Whinnery, 2013). The descriptive study conducted by Boyd, Conroy, Asmus, McKenney & Mancil (2008) focused mainly on the naturalistic approach of how social behaviour influences the classroom behavior and learning of children with ASD. The results indicated that learners with ASD managed better with small group interaction and child-directed activities, and with less teacher involvement. The finding indicated that in the naturally occurring classroom setting, events

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occurred more often with small groups and increased the likelihood of social initiations and social interactions.

Specific techniques such as reciprocal teaching is designed to specifically promote the child's communication skills. A reciprocal approach is very closely related to the milieu approach; both approaches focus on the communication of a child with ASD. Potter and Whittaker (2001) emphasise the importance of focusing on the child's abilities in areas such as communication and social development, including the child's ability to read and acquire language skills. Research indicates that creating and establishing a programme and environment that focuses prominently on communication skills will be of great benefit to children with ASD (Chistensen-Sandfort & Whinnery, 2013). The approach allows for verbal prompting, modeling and corrective feedback – a process that can be identified as scaffolding (Whalon & Hanline, 2008). Children exposed to this intervention and way of teaching show excellent results in the context for storybook reading with their peers. Whalon and Hanline's (2008) study showed that reciprocal questioning and question generation and responding facilitated learners with ASD to learn by using a story mapping framework, which also increased their social validity as children with ASD, and their peers enjoyed the intervention. Parents could see the difference in their child's progress and improved reading and language skills (Cooper, Vally, Cooper, Radford, Sharples, Tomlinson & Murray, 2014).

Today's generation of children are technology orientated and spends hours using tablets and computers etc. which can be used for learning purposes in general and for children with autism, who are stimulated by visual imagery (Couse & Chen, 2010). Two studies were identified in technology-based interventions while conducting the scoping review, and both showed effective results. One study focused primarily on comparing video modeling for teaching role playing skills

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to children with autism (Akmanoglu, Yanardag & Batu, 2014). The study focused on four kinds of data collection: effectiveness, efficiency, social validity and reliability. The study reported that both video modeling and graduate guidance were effective in teaching target skills to learners with autism. Video modeling was an effective tool to use in the classroom in teaching discrete and chained skills including social communication skills, especially for learners with autism (Palechka & MacDonald, 2010). A study conducted by Sansosti, Mizenko and Krupko (2014) reported that the use of computer-based technologies increases the academic performance of a learner with autism as well as improving their behavior, and results in improved social outcomes. Researchers suggest that individuals with ASD demonstrate significant skill acquisition when using computers and show a high level of interest in using such devices for learning (Shane & Albert, 2008). The effectiveness of using technology as an educational intervention for children with ASD is shown not only by the level of interest that the learners might develop, but even more in the broadening of educator skills (Sansosti, Mizenko & Krupko,2014).

An integrative approach had favourable results and also significant improvement at various levels. Children with ASD cannot rely on only one approach that fits all (Jordan, 2005). A study that formed part of the scoping review focused on the LEAP programme and how this intervention was carried out in the classroom. The LEAP programme showed a significant improvement in the cognitive functioning of the child as well as improvement in language. Problem behaviour and social skills were also addressed by implementing this intervention (Strain & Bovey, 2011). Children exposed to the programme generally showed a reduction in autistic symptoms after two years of the intervention. Parents and teachers also benefit from this programme as it is an effective teaching method, even in schools with limited resources (Strain & Bovey, 2011).

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4.6 Limitations

The present review study has a few limitations. Firstly, the studies included were from two countries – mainly from the USA, with one study in Turkey. Secondly, some studies had no geographical indication in the text, which thus excludes interventions used in other cultural and educational settings. Thirdly, the scoping review included only English articles and excluded other languages, which limits the present study. The search strategy might have inadvertently excluded some studies of relevance.

4.7 Recommendations

4.7.1 Quality of teaching

The articles that formed part of the scoping review discussed the importance of special needs educators and their contribution towards the development of children with ASD. The interventions identified are ideally suited for classroom settings, and require teachers to be present as facilitators. It is recommended that educators must be adequately trained in these interventions before implementing them in the classroom. Educator training is of vital importance as the success of a child with ASD is not solely dependent on their interest in the intervention but also that of the educator. Regular training sessions, workshops and conference attendance should be part of the curriculum for all educators.

4.7.2 Awareness

Furthermore, another important recommendation is that educators be made aware of the various interventions available for learners with ASD and have knowledge of the desirable outcomes

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attached if these interventions are implemented accurately; this will promote the child's individualism, and in this way their individual needs can be addressed. A one-size-fits-all approach is not viable for any learner as all learners have their own unique needs.

4.7.3 Recommendations for future studies

Many of the interventions were strongly focused and aimed at children with communication deficits and at addressing behavioural problems, and focused on social interaction. The interventions did not include other aspects of a child diagnosed with ASD. Children with ASD have many challenges, and it would be productive for future research to explore holistic approaches that focus not only on one or two aspects. Another recommendation is to hold more randomised controlled trial studies that are classroom-based; many studies are of a small number of participants and not in a classroom environment. It would be useful to see the results and the effectiveness of these interventions by means of randomised controlled trials.

4.8 Conclusion

The present scoping review searched the existing literature on interventions for educating children with ASD. There were numerous interventions, some of which were similar in the way that they had been conducted and implemented. All of the interventions indicated favourable results that enabled children with ASD to improve their learning foundations in various ways. The interventions were categorised and presented clear outcomes and areas of focus. The success of these interventions was centered on the educators' experience and training in the various interventions. The scoping review provided evidence-based practice modules used in the classroom to assist learners with ASD with the needed foundations to learn and develop. In South Africa, there is a shift and this involves a number of stakeholders and organisations. Apart from

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the WCED both private and non-profit organisations are rendering services to support children with ASD; this support involves psycho-education.

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CHAPTER FIVE

Factors which enhance or hinder the educational needs of children with autism spectrum disorder in Western Cape Province, South Africa: Perspectives of parents

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Abstract
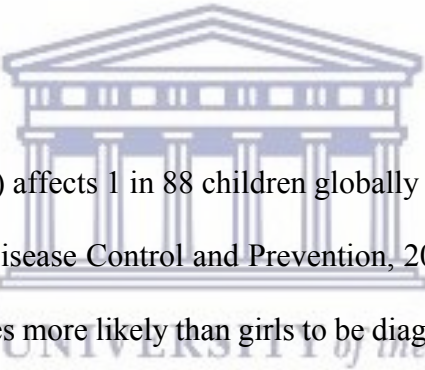
There is growing interest in autism spectrum disorder (ASD) as a result of the increasing prevalence rates, and because children with ASD find it particularly challenging to enter the educational system. The present study explored the perceptions of parents of children with ASD by identifying the factors which enhanced or hindered their children in receiving quality education. Four focus group discussions (FGDs) were conducted with 10 purposively selected participants per discussion group. A semi-structured interview guide was used to collect data. Data were analysed using ATLAS.ti. The key themes which evolved were: developmental and educational awareness and support (enhancement); the education system (hindrance); developing the capacities of teachers with specialised training (hindrance); and financial needs (hindrance). The present study recognises that there are enhancements and hindrances that affect children with ASD and their educational development.

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5.1 Introduction

This article primarily focused on gathering qualitative data, the participants were parents that have been raising a child diagnosed with the Autism Spectrum Disorder. The study aimed to identify the factors that hinder or enhance the learning of children on the autistic spectrum. This article elaborates on the methodology used, the type of analysis, reporting of findings and present a discussion based on findings. The limitations have been highlighted as well as the recommendations.

5.2 Background

Autism spectrum disorder (ASD) affects 1 in 88 children globally and is 4 times more common in boys than in girls (Centers for Disease Control and Prevention, 2014). A similar finding by Baio (2012) was that boys were 5 times more likely than girls to be diagnosed with ASD. The aetiology of ASD is still unknown and the present increase in the number of diagnoses is concerning (Cannell, 2017). In addition, South Africa's prevalence of ASD is unknown due to a lack of research conducted in the country and Africa in general (Ametepee & Chitiyo, 2009). However, Autism South Africa (2012) has predicted that 933 new cases of children with ASD would be diagnosed each month, i.e. 216 cases per week and 31 cases per day (Autism South Africa, 2012). Meanwhile, in Western Cape Province, South Africa, there are currently 1 684 children diagnosed with ASD (Pillay, Duncan & de Vries, 2017).

Given the global statistics, it is evident that many parents will be faced with challenges related to their children's educational development. Therefore, parents should aim to teach their child from

an early age and start by teaching them the basics. However, many parents are challenged and find it difficult to teach a child diagnosed with ASD. Teaching basic skills such as communication to a child with ASD is not easy for parents to do and can be rather stressful (Altiere & von Kluge, 2009). Therefore, it is best that children with ASD should be in a schooling environment and taught by an appropriately trained teacher. Parents are faced with various issues surrounding education, and experience many challenges in enrolling their child in the most suitable school. Parents face the reality of knowing that their child is 'different' and that meeting their needs will not be easy compared to a child with no special needs (Carlsson, Miniscalco, Kadesjö & Laakso, 2016). As a result, in South Africa, special needs education and inclusion has been made a priority, with the education department guided by the White Paper 6 policy developed published in 2001 which promotes children's basic right to education and allows them to exercise this right. Countries such as Australia, and many European countries, have identified the need to accommodate all learners with special needs and consequently they have implemented inclusion within the classroom. This approach indicates that South Africa is not the only country striving for an inclusive education system. South Africa is working towards providing education in the least restrictive manner, the right to access public education. This expectation is intended to meet the international standards set by many countries the United States and the United Kingdom for achieving the inclusion criteria (Srivastava, de Boer & Pijl, 2015).

However, in South Africa, special needs education, disadvantage children from low-income communities. South Africa's history of apartheid had an influence on the accessibility of special needs education. According to the apartheid policy, white learners with special needs had access to schools that were well-resourced, whereas black learners with special needs were systematically under-resourced. Therefore, it became imperative for the South African education system to

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change this situation – especially post-apartheid – as equal opportunities should be available to all children with and without special needs. The White Paper 6 addresses the need for more inclusive education, with the lack of schooling and resources having been identified (Lomofsky & Lazarus, 2001). The implementation of the White Paper 6 was put in place 20 years ago, but the landscape of special needs has not changed much (Engelbrecht, 2006). In the Western Cape Province, many schools suitable for special needs learners have been identified, but a study by Mthimunye and Mwaba (2014) found that not all schools accommodate learners with ASD. Furthermore, parents are weighed down by many factors such as not having the resources and limited access to the resources that are available; this then affects their children's educational needs.

5.3 Aim of the study

The aim of the study was to explore parents' perceptions of the factors which enhance or hinder the educational needs of children with ASD.
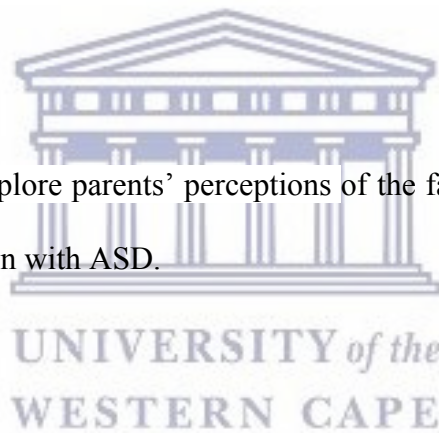
5.4 Research question

What are the factors that enhance or hinder the educational needs of children with ASD?

5.6 Methodology

5.6.1 Participants

The study was conducted in Cape Town, in the Western Cape Province of South Africa. Those who participated in the study came from both low and middle socio-economic conditions. Four focus group discussions (FGDs) were conducted, with 10 purposively selected participants per discussion group. Participants were either the mother, father or guardian of a child of school-going

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age who had been diagnosed with ASD. Purposive sampling allowed for participants to be recruited who were knowledgeable and able to contribute meaningfully toward the area of interest (Bernard, Wutich & Ryan, 2016). This was a heterogeneous sample, with the majority being of black, coloured and white ethnicity. Focus group discussions continued until data saturation was reached, which was indicated when repetitive themes kept emerging (Turner III, 2010). Participants were recruited through special needs schools within the four Cape Town Metropolitan Districts, as illustrated in Figure 5.1 (Metro North, Metro Central, Metro South and Metro East).

(Source: Western Cape Education Department, 2007)
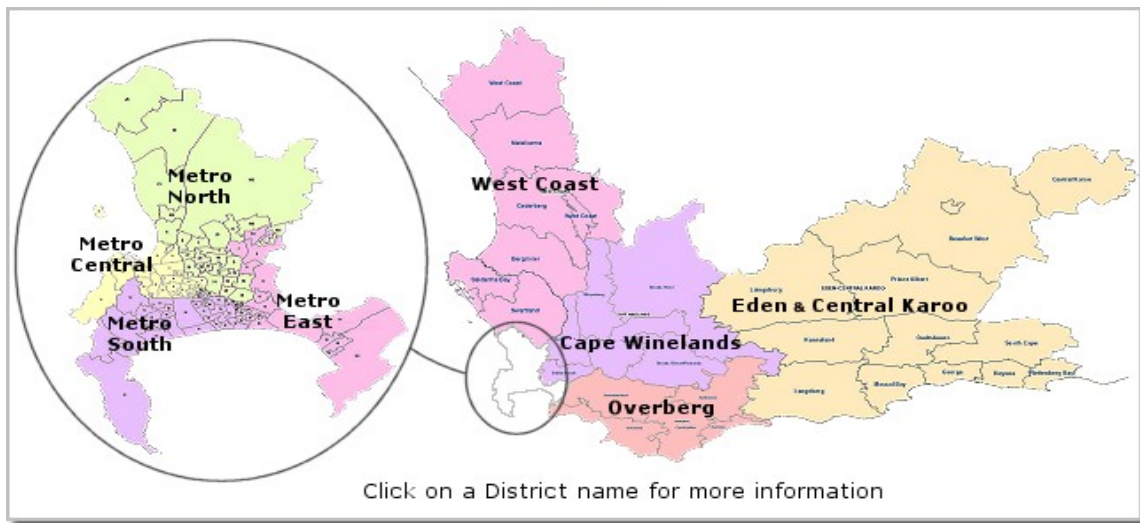
Figure 5.1 Map of the four urban districts in the Western Cape

Source: (Western Cape Education Department, 2012)

5.6.2 Data collection

Permission was requested from, and granted by, the University of the Western Cape to conduct the study. Approval was then received upon request from the Western Cape Education Department

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(WCED) to access parents through various special needs schools. Letters were sent out, inviting parents to participate in the study. Information sheets were provided and participants had a choice as to whether they would like to participate in the research study. An information session was held prior to conducting the focus groups to discuss the purpose of the research study. Focus group interviews were scheduled for parents who agreed to participate in the study. Upon meeting with the participants, they were handed a consent form for completion. The focus group interviews ranged from 45 minutes to 60 minutes in length. Table 5.1 comprises the focus group interview guide. Probing questions were asked throughout the FGDs to gain more insight, as the interview questions served as guide.

Table 5.1 Focus group interview guide

No.	Question
1	What would you say was the **biggest challenge** after the diagnosis?
2	How did you **deal** with the diagnosis? Were their **key role players** within Society?
3	What was your experience **finding school** placement for your child diagnosed with autism?
4	Is the school addressing your **child's needs** and do you see improvement?
5	What are your **current challenges**?
6	Have your **challenges been addressed**? How?
7	Are there **resources and services** in the community that serve as a support to both you and your child? **Accessibility** to these services?
8	What would you like to see **implemented/changed**? To benefit your child?

5.6.3 Data analysis

Focus group interviews were transcribed verbatim and analysed using thematic analysis, following the six steps outlined by Braun and Clarke (2013): (1) familiarising oneself with the data and transcribing, (2) codes were generated; (3) search for themes by collating codes into themes; (4) review the themes in relation to the codes extracted; (5) define and name the themes as part of the ongoing analysis; and lastly (6) generate the final report. ATLAS.ti. was used following the analysis steps. ATLAS.ti. Mac Version 1.6. software was useful for organising the text and coding the data (Creswell, 2013).

5.7 Trustworthiness

According to Lincoln and Guba (1985) trustworthiness is pivotal when conducting research to maintain rigor. Trustworthiness was ensured by maintaining credibility, confirmability, dependability and transferability of the study. Credibility was ensured by using purposive sampling and this eliminates the bias factor in the selection process. Participants were informed that they could exist the process at any time should they feel they no longer want to participate in the study, leaving participants that are wanting to add value to participate. Transferability was maintained by ensuring full understanding of the research setting and context in which the research was conducted, thus the study included multiple districts. Dependability and credibility has close ties, the study is presented in a detailed manner, all details pertaining to the study was closely examined and documented. Confirmability in this study was maintained throughout conducting and keeping audit trails of and revisiting the audio tapes and transcriptions ensuring the participants views are being uttered in the most accurate way possible.

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5.8 Ethics

Ethical clearance was obtained by the University Faculty Committee and approval was granted. Thereafter, the University Senate Higher Degrees Committee approved the study and was ready for commencement.

5.9 Results

Four main themes emerged from the analysis: developmental and educational awareness and support; the education system; developing the capacities of teachers by means of specialised training; and financial needs. Table 5.2 presents the themes including the categories.

Table 5.2 Themes and sub-themes
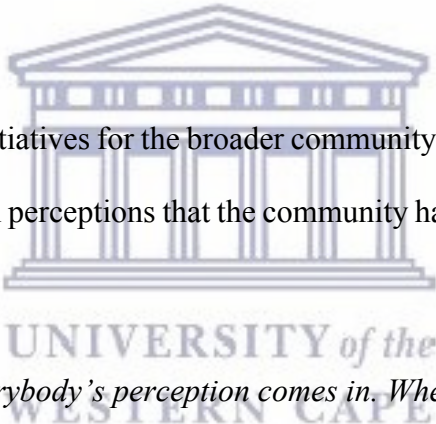
Themes	Sub-themes
1. **Developmental and educational awareness and support**	▪ Lack of community awareness ▪ Lack of parental knowledge and support ▪ Family and community support
2. **The education system**	▪ Accessibility to schooling ▪ Alternative schooling ▪ Waiting list for school placement ▪ The need for more schooling facilities
3. **Capabilities of teachers with specialised training**	▪ Adequate teacher training ▪ Teachers' negative approach
4. **Financial needs**	▪ Finding it difficult to cope financially ▪ Private schooling/interventions/special crèches are expensive ▪ Reducing the cost of schooling for children with ASD ▪ Financial sacrifices

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5.9.1 Developmental and educational awareness and support

Parents maintain that the development of their child is imperative and their educational needs must be met. However, there are factors that concern parents that serve as a hindrance. These include lack of community awareness, and lack of parental knowledge and support and family and community support. The lack of autism awareness among parents, family members and the community as a whole is imperative to be turned around, to allow development of the autistic child and to prevent labelling and stigmatising. Community support and educational initiatives can make a difference in the development of the affected children.

Lack of community awareness

The need for more awareness initiatives for the broader community will minimise stigmatising and labelling. Parents commented on perceptions that the community have of children with autism. For instance, one parent said:

'*I think that's where everybody's perception comes in. When a child is autistic, it is Down syndrome. That is what everybody thinks.*' (FG2 participant 3).

Furthermore, parents expressed their concerns about the lack of community awareness:

'*Then most people couldn't understand the child again. You go to church, he is running up and down. People are, like, is this child naughty? Is the child crazy? What's wrong?*' (FG4 participant 2)

'*So, when I initially told my whole family, they just told me, say Down syndrome, not autistic. The child is not Down syndrome, but I didn't say it was Down syndrome.*' (FG3 participant 6)

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'And even if you are walking in the mall, at church or anywhere, other people will know about it. Then they're not judging misbehaviour but that they have autism, something like that.' (FG1 participant 2)

Lack of parental knowledge and support

Parents are in need of more knowledge, insight and skills to assist their child at home, thus letting parents feel more empowered. One parent had the following to share:

'There is of course this assistance should help us how to help our children, at the school also, it is important. The school also, because it is important for the parents to know how to be with the child at home.' (FG3 participant 8)

There is a lack of information for parents regarding the options available to them for educational and development support:

'Another thing is information. I think if you want to look for information on the internet, it is so limited.' (FG3 participant 1).

Participants commented and voiced their desire for more training and development to assist their children with their various needs. Participants agreed that they were not adequately equipped with the skills needed to ensure successful interventions:

'Yes, we really need support, we need to have somebody to talk with, maybe first on phone and maybe sometimes we have a physical assistance. Maybe come home. Maybe talk with us. Because for example, as I was saying, we have to self-organise. That means we must know from morning to night this will be our plan.' (FG3 participant 6)

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'A lot of parents are not as clued up as we are. What about parents that don't have the resources available to them? That just rely on a system; that cannot challenge; that cannot make the efforts that we can because we are in a more privileged situation to have access to information? Or try things or speak or drive to different schools? What about the parents that don't have access to all of that stuff?' (FG1 participant 7)

'I mean when I find out, at that time I was clueless about autism, I knew about special needs, but it was a first for me and how do I deal with it. I actually went to go and do an autism course so I can be clued up with signs and symptoms.' (FG3 participant 1)

Family and community support

Parents are in need of family and community support as this has a positive impact on parents who need such help and support. The support identified by participants was provided by family members:
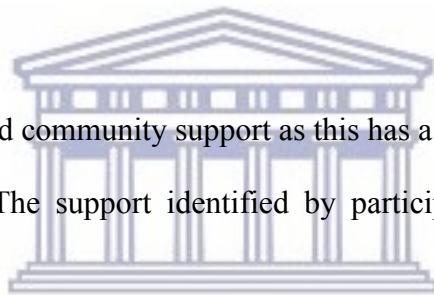
'Like my sister them, once a month my son goes for haircuts with my brother and daddy is not involved in the picture. So, then my brother takes him once a month for a haircut. He spends the day. He sleeps over.' (FG4 participant 6).

The contributions and support from various organisations (hospitals and support groups) keeps parents encouraged and up to date with matters pertaining to their child and the larger community services available:

'For me, at the moment, I go to the public nurse. I go to the clinics and everything and get the therapy, we went to House of Hope. So, it is not affecting me so much. All the tablets are all included, I am very happy with this service.' (FG4 participant 1).

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Participants reported that this support has a positive impact on the development of the child and ultimately promotes learning and educational development:

> *'I got my leave day every month. There were no hassles at all. The boss I had back then was also autistic so he was very, how can I say, understanding. I could see he's got a touch of autism because you just know it. [laughter] And then they were very understanding. When it is Autism Day there is a few people there that also have autism, so Autism Day, if you're at work the theme is blue.'* (FG2 participant 2)

> *'Everything is here. So, all the OT is done at school. The speech therapy is done here as well, this is helpful and convenient.'* (FG4 participant 3)

> *'We have hope that they can do better because for us we at least can go to the Western Cape because here we get a lot of assistance here for early intervention and like I personally I can say Autism Western Cape helped me a lot.'* (FG3 participant 2)

5.9.2 The education system

Under this theme, parents identified various barriers they experienced related to the current education system. The need for more inclusive schooling and learner support in mainstream schooling will allow more learners to access education and address the waiting period, which will minimise the need for alternative schooling arrangements. Parents mentioned barriers to accessibility to schooling, having to make alternative schooling arrangements, waiting lists for school placement, and the need for more schooling facilities.

Accessibility to schooling

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Parents are concerned about many children who struggle to gain access, which ultimately affects the children's development. One parent mentioned:

'*So, it wasn't very difficult but I think it was some kind of chance because to find a school because we see now that it is a problem for Max to find a school which we didn't have in Pretoria without knowing anybody just like that.*' (FG2 participant 5).

Children are expected to fit particular criteria before gaining access to schooling:

'*It took me a while to find an actual placement for him at a school.*' (FG4 participant 3)

'*But if your child is diagnosed at age four, if you're lucky they will get in at age seven/eight and the reality is if they're 12 and they're not in school then you are not going to get them in school anymore. They're deemed too old.*' (FG2 participant 7)

'*So, parents and some kids are getting to the school-going age and some kids are getting to the top of the waiting list finally to be told that they don't have the skills to be in school.*' (FG2 participant 5)

Parents indicated that the area where they lived had no special needs schools, and they had to search for schools in other communities far away from where they were living:

'*Just to add on the school the first question you asked, like on our side in Muizenberg there are no special schools like the one that was there now moved to Durbanville.*' (FG4 participant 7).

'*Like I said, my son is still on the waiting list at the WCED and I was also given only one school; not [xyz] school, and therefore I took it upon myself to go around to these different*

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special needs schools only to find out that he needed to be at a certain IQ or it was and that really is frustrating.' (FG1 participant 5)

Alternative schooling

Making alternative schooling arrangements is becoming a normal practice for parents as they cannot find a school placement for their child. Learner support in mainstream education will reduce the need for alternative schooling. Participants raised a high level of concern, as they are forced to seek alternative schooling to ensure their child receives the necessary education and meets the developmental and educational milestones.

> *'So, parents are going the private route because they're desperate to get those skills in place.'* (FG3 participant 8)

> *'It is not that they can't do the mainstream curriculums, it is just that they cannot learn in a mainstream educational setting without learning support.'* (FG1 participant 6)

> *'I managed to stand alone and just took my chance by myself to home school him.'* (FG1 participant 2)

Placed on a waiting list for schooling

Children are being placed on waiting lists for school placement, and the waiting periods tend to become lengthy.

> *'He was on the waiting list two, three, four years – I don't know. They spent a long time like this at home waiting.'* (FG4 participant 10).

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Participants added that the wait equates to years and, in some instances, they had to make other provisions to ensure no further developmental delays:

> *'We waited three to six years for a school.'* (FG4 participant 10)

> *'On the waiting list, nothing has happened, had to apply for another place. I was actually told wouldn't it be best for him to be placed in a Montessori School but had no choice.'* (FG2 participant 7)

Need for more schooling facilities

Parents need more facilities that can accommodate learners with special needs, and particularly for children with ASD. Parents are frustrated with the lack of schooling facilities and resources within their communities. A child not having access to schooling or who has to wait for a prolonged period could suffer developmental delays, and the educational needs of the child will not be met.

> *'There's not enough schools. The fact that generally speaking, if we look at autism that's on the rise, one out of three kids now lately, one out of eight kids are on the spectrum, how can it possibly be that the Department of Education is not making provision within mainstream schools for kids who are differently abled?'* (FG1 participant 2)

> *'Like I was saying, we were not going to leave it or remain silent or private. We just want that awareness that at least the society will see a need for those schools.'* (FG3 participant 7)

> *'And I think because there's a limited number of schools, it is also a strain as well. It is difficult to get a school as well. It is a challenge out there but there is no immediate solution that you can help your child.'* (FG4 participant 4)

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5.9.3 Developing the capacities of teachers by means of specialised training

The importance of training specialised teachers to educate and support learners with ASD is pivotal for the development of every child. Teachers who are trained adequately will know how to deal with the various challenges. A teacher should create a safe and supportive environment and eliminate any negative responses towards learners. Parents identified a lack of adequate teacher training and also teachers' negative behaviour.

Adequate teacher training

Parents mentioned that there is a need for teacher support to equip teachers with classroom skills to ensure quality education. Parents reported that there are teachers who do not know what they are doing, as the following quotes suggest:

> *'And also, more training to the so-called teachers who are keen to play with these children. Because these children, remember these children are difficult with their own parent..'* (F2 participant 6)

> *'The other school again they didn't know how to handle him. It was like nobody knew how to handle the child.'* (FG2 participant 1)

> *'And also, I think that with saying all of this, that special needs should actually be a priority subject when studying education.'* (FG2 participant 7)

Teachers' negative approach

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Parents in the present study indicated that some teachers displayed neglectful, maltreating and aggressive behaviour towards children in the classroom. Parents felt that this was due to a lack of training and skills within the profession:

'So, the teacher who replaced her, we don't know if she was really a teacher. She was a bit aggressive and the situation is worse since. So the situation goes these very last months.' (FG4 participant 1)

'The one school actually also ill-treated him in a way, so to speak. Because Ethan kept coming home to say, Mommy, please ask teacher to stop hitting me.' (FG5 participant 7)

'So obviously, if the teacher is going to neglect my child because I mean I went to confront them. We had issues, me myself and my mother. They were very rude.' (FG3 participant 1)

5.9.4 Financial needs

Raising a child with ASD can be very costly, and parents are constantly challenged financially owing to the cost of schools and private schooling and medical consultations. Parents are forced to make sacrifices to ensure the development of their child's education. The obstacles experienced by parents, and the difficulties in coping financially, are because private schooling/interventions and special crèches are expensive; there is a need to reduce the cost of schooling for children with ASD.

Finding it difficult to cope financially

Parents have had to relocate to a different community or country to seek schooling for their ASD child. Professional healthcare help is needed for guidance and support in meeting the needs of their child:

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'Remember, if you have a child with autism, it also puts strain on your finances because you have to be selective on where you stay. There was a time we stayed in a flat. It was upstairs. But the person who was staying downstairs was not happy because of our son's noise and was complaining every day. It ended up getting to you, like you don't want to be in such kind of environment. Then we had to move to a place that is more expensive because we want our son to be safe. We also want him to be happy.' (FG1 participant 5).

'Like for me, he doesn't speak right. He struggles with his speech. I want to take him to the speech therapist, but there's no money.' (FG1 participant 8)

'My pocket says no. My mind, my heart says take him there but the pocket says no.' (FG4 participant 4)

Private and government schooling/interventions/special needs crèches are expensive

The high cost of children with special needs allows only those who can afford it to benefit from these services. Parents are aware of the importance of schooling but feel that they are simply unable to provide this for their child. Participants raised great concern regarding the costs involved, as schooling is an important part of a child's development but the cost is a barrier:

'For us, we were used to it but it is not that easy to get in a special crèche, pre-school. It is really expensive, especially private schooling and interventions. So, it is not that easy, it is so expensive. It is more like out of budget.' (FG5 participant 8)
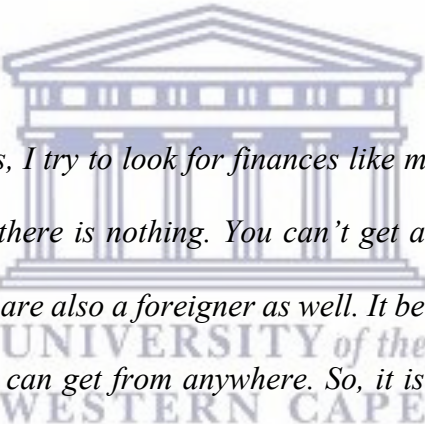
'The least that they charge is three point six, if I can say that. Per month. So, let's say R3 600 per month for fees. Then there's extra lessons per hour at R30. So, per month we're

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talking about R8 000. You need R10 000, anything from about R7 000 to about R22 000

per month. That is very expensive.' (FG5 participant 2)

'Schooling is very expensive. Because I remember when we were going to kick start so you

pay like about R5 000 just like your normal school fees. And now you have for him it is just

R5 000 for him to be there and not having any lessons or anything.' (FG3 participant 7)

Reducing the cost of schooling

The cost of schooling is beyond many parents' budgets and they are unable to afford it. For children with ASD, bursaries could be made available for schooling or subsidising its cost. One parent stated:

'Like in terms of finances, I try to look for finances like maybe bursaries or some kind of

assistance. But it seems there is nothing. You can't get any financial assistance. And to

make matters worse, you are also a foreigner as well. It becomes worse because you don't

get any support that you can get from anywhere. So, it is just out of your own pocket of

which it is difficult as well.' (FG3 participant 1).

Bursaries could give many children with ASD the opportunity to gain from the education system.

'Or reduce the prices. If the prices are subsidised, then we don't need cash to take care of

our children. But we need a reasonable payment. Just a reasonable payment like for a

normal child.' (FG2 participant 5)

'Even if they can do like bursaries, then you just go straight to the school.' (FG5 participant

1)

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Financial sacrifice

Parents are forced to make financial sacrifices to ensure their children receive some form of education. Some parents reported having to quit their full-time employment so as to put their own needs aside to ensure that the needs of their child are met.

> *'It was tough, we just have to sacrifice. We just have to say okay, this is what we have so let's do it. The first priority is our child. We give our child the priority. Then we live without. That is all we do.'* (FG4 participant 5)

> *'You are in debt but that's what we do because it is your child.'* (FG2 participant 1)

> *'Then I couldn't stay at home anymore. I had to go and work. I stayed at home for a year.'* (FG1 participant 9)

> *'That's why I say three different schools and it was up till this point I thought, you know what, I'm going to stay at home and that is what I did last year.'* (FG3 participant 5)

5.10 Discussion

This study explored the factors which enhance or hinder the educational needs of children with ASD. The findings of the study identified the education system, enhancing teachers' skills by means of specialised training, and financial needs as factors that hindered the educational development of children with ASD. Among the four themes that emerged, developmental and educational awareness and support was identified as an enhancement.

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5.10.1 Developmental and educational awareness and support

According to Zuckerman, Sinche, Mejia, Cobian, Becker & Nicolaidis (2014), lack of knowledge is a concern raised globally as parents and the broader community are not well-informed about ASD. Parents were concerned about the limited level of knowledge that they have acquired, as well as the community and indeed teachers. Parents expressed their appreciation for the support provided by the community and, even though there is a lack of knowledge and awareness, family and friends strive to support the ASD-affected family. A study conducted by Dillenburger, McKerr, Jordan, Devine & Keenan (2015) revealed that educating society would reduce the likelihood of misdiagnosis and stigmatisation, and improve the quality of life for the ASD child, thus promoting social inclusion. Parents reported on the support groups available and the affect these have on their well-being by providing coping strategies. Furthermore, Jones, Hastings, Totsika, Keane & Rhule (2014) found that parental support assists with the psychological processing and coping on a day-to-day basis. Support groups provide general emotional support and validate their feelings, thus providing them with a support network so that they feel they are not alone.

5.10.2 The education system

The results of the study reveal that parents found the education system to be inadequate and flawed. Access to schooling is an enormous hurdle, as there are insufficient schools in nearby areas and children have to be placed on extensive waiting lists; this is a global phenomenon (Naicker, 2005). According to Pillay, Duncan and de Vries (2017), there are 1 684 children diagnosed with ASD of whom only 940 have been placed in schools, whereas 744 children are currently still on waiting lists in Western Cape Province, South Africa. Parents expressed the need for more schools, as

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many children are at home and unable to find placement. According to the study by Pillay, Duncan and de Vries (2017), there are not sufficient schools available for children with ASD, and many children are placed on waiting lists. There is 90% of children are placed in special needs schools and the remaining 10% in mainstream schools. Many parents are forced to seek private schooling or make alternative arrangements for their children to receive educational intervention, such as home facilitation (McMenamin, 2017). However, private schooling and home facilitation is very costly and parents invariably find it difficult to sustain.

5.10.3 Developing the capacities of teachers by means of specialised training

In addition to the above difficulties, parents suggest that teachers are not adequately trained to instruct children with ASD, and that the need for suitable specialised training is essential. The lack of knowledge and training ultimately affects the ASD child's ability to develop and learn. Developing countries such as Uganda and Zambia are faced with a similar challenge of teachers not receiving adequate training (Silupya, 2003). In South Africa, have various routes they can follow in perusing their teaching status such as completing their Bachelor's Degree in Education (4year degree) that grants the student permission to teach the degree involves teaching practicums. However even with the qualification teachers are still required to attend additional training workshops, conferences, seminars and talks that are related professional development. In doing so they can acquire the skills and knowledge pertaining to special needs education. Currently in South Africa many teachers are required to teach within both mainstream and special needs schools. The quality of education is compromised as children with ASD require special attention, and training is needed to up-skill teachers so that effective teaching may be implemented. Furthermore, the literature suggests that teacher training has a direct influence on the way they teach and also influences their beliefs and intentions in relation to teaching children with special needs

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(MacFarlane & Woolfson, 2013). Parents reported on the negative approach that teachers had towards the children they were teaching: neglecting and ill-treating and displaying aggressive behaviour towards them in class. Parents associated this negative behaviour with a lack of training and that teachers are not passionate about what they are doing.

5.10.4 Financial needs

The study results indicated that parents face financial problems and find it difficult to cope with the costs involved, such as for private schooling/interventions and health care. The cost of private schooling for learners with ASD is expensive, and countries such as the United States, Europe and India view the costs as a challenge (Leigh & Du, 2015; Johansson, 2016). The high costs are prohibitive and discourage parents as they may feel coerced to make sacrifices that will make it possible for their child to receive and achieve their educational needs. Research indicates that the costs involved are wide-ranging and high, and include social care, healthcare, education, leisure and housing (Knapp, Romeo & Beecham, 2009). Children with ASD attract higher costs than those of a child with other disorders, because they incur additional costs for behavioural and communication difficulties (Bebbington & Beecham, 2007). The expenses associated with schooling are a hindrance and burden that parents have to bear.

Furthermore, Bronfenbrenner's (2006) ecological model of human development proposes that modification in a child has an influence on other individuals. The lack of ASD knowledge ranging from the parents to the broader community, the flawed education system, the lack of finances and inadequate teacher training have a direct impact on the child as a whole. The child's development is compromised, and these findings suggest that the child is affected by the influence of the microsystem, mesosystem, exosystem and the macrosystem, as described in Bronfenbrenner's

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systems theory (Bush, Eisenhower, Cohen & Blacher, 2017). Parents have identified their barriers and they involve all systems identified by Bronfenbrenner, and one cannot address only one system but all of them as they have a direct impact on one another. Therefore, for a child with ASD who wants to excel and achieve the goals set out for them, one would have to employ a holistic approach involving all systems that have an effect on the child's development.

5.11 Limitations

This study had the following limitations:

The study conducted focus group discussions, and these might have led to participants not sharing their thoughts and not feeling comfortable about speaking in a group (Rabiee, 2004). The study was conducted in Western Cape Province, which is only one of nine provinces in SA, and therefore the generalisability might be limited to the study context.
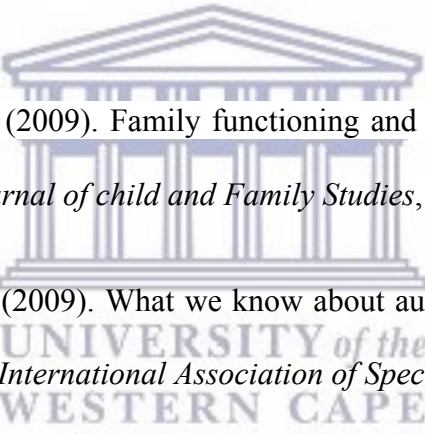
5.12 Conclusion

The study clearly demonstrates the barriers to education for children with ASD. The need for more awareness and community engagement on matters pertaining to ASD is pivotal. Meeting the need for more schools to address the large number of learners placed on waiting lists will improve the child/learner's opportunity for growth and development and, financially, this will relieve many parents of the excessive costs of private schooling and extra interventions. Teacher training is essential, with up-to-date workshops for both teachers and parents. The insights gained from conducting this study can be applied to the development of intervention strategies to enhance the implementation of inclusive education and address current barriers that are faced in the education system.

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5.13 Recommendations for future studies

Future studies should focus on the quality of training that teachers receive while undertaking their undergraduate teaching qualification. Special needs education is a growing area in the field of education, and the training of teachers should be comprehensive. The study included four urban districts in the Western Cape Metropole; future studies should include rural districts that form part of the Western Cape Metropole for a more generalisable population group.

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CHAPTER SIX

South African teachers' perspectives on the barriers to the educational development of learners with autism spectrum disorder
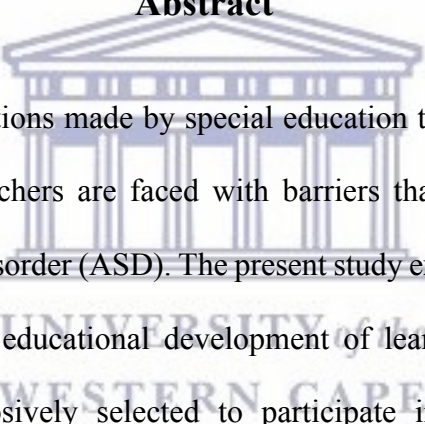
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Abstract

Despite the efforts and contributions made by special education teachers to implement inclusive education in the classroom, teachers are faced with barriers that obstruct the development of learners with autism spectrum disorder (ASD). The present study explored South African teachers' perspectives on the barriers to educational development of learners with ASD. Eight special education teachers were purposively selected to participate in face-to-face semi-structured interviews. An interview guide and digital voice recorder were used to collect the data. The recorded interviews were transcribed verbatim and thematically analysed using ATLAS.ti. The study identified key themes: Infrastructure and the physical learning environment, curriculum alignment for children with ASD, lack of collaborative partnerships, training and development of teachers, and resources to facilitate the teaching process. These findings indicate that both the teachers in special education and the learners face barriers across the entire ecological system of education, which may infringe on the rights of learners with ASD to inclusive education. A recommendation made for providing adequate training for teachers entering the education system

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and having to teach learners with ASD and being in a classroom with various special needs. This article emanates from a broader PhD thesis.

6.1 Introduction

This chapter focuses on the perspectives of teachers in relation to the barriers being presented. These barriers have been identified through interviewing teachers that have been teaching children with the Autism Spectrum Disorder. The findings are discussed in this chapter and will elaborate on the methods used, the analysis and a discussion on the findings.

6.2 Background

Inclusive education (IE) has been a global topic for the past two decades as many countries strive for inclusiveness within their schooling system (Anderson, Boyle & Deppeler, 2014). Many countries have policies in place to ensure that clear guidelines exist for creating an inclusive environment for learners with special needs. The notion of allowing equal opportunity and rights to an education derives strongly from a social justice perspective (Artiles, Harris-Murri & Rostenberg, 2006). According to Adams, Bell, and Griffin (2007), society should be designed in such a way that every person, whether with or without physical, intellectual and psychological challenges, should have an equal distribution of resources.

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6.2.1 Inclusive education

During the apartheid era in South Africa (SA), learners were denied the right to equal schooling opportunities, as learners were separated according to race; this practice was not in line with international trends (Motala, 2011). The post-apartheid era allowed for opportunities to re-examine the education structure and consider policies that needed to be reviewed and changed to ensure equal and non-discriminatory access to education (Philpott & Dagenais, 2012). Education White Paper 6 (EWP6) was accordingly developed and it serves as a framework for implementation of IE in South African government schools (Department of Education, 2011). Thus, protecting the rights of learners, and ensuring that each learner is treated with fairness, and allowing all learners the opportunity to participate and contribute in the learning environment despite their race or special need (van Jaarsveldt & Ndeya-Ndereya, 2015). Many African countries, such as Nigeria, Ethiopia, Uganda and Zimbabwe, are striving for inclusivity within their schools (Weldeab, Chernet Tekle & Liv Randi Opdal, 2007). Moreover, policies have been developed to ensure and promote IE in schools globally.
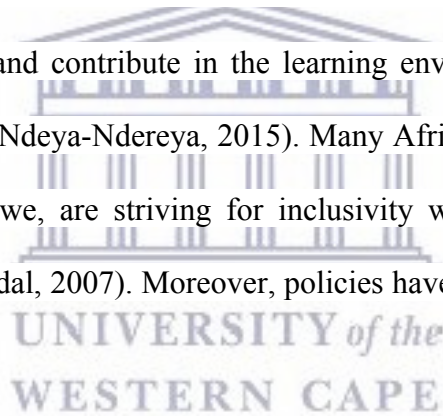
6.2.2 Inclusive education for learners with ASD

The EWP6 was designed for learners with any special needs, including learners with barriers to learning. Learners with ASD demonstrate significant deficits in the following areas: social interaction, communication, learning, and challenging behaviour towards teachers and parents/caregivers. Learners with ASD will typically present the following behaviours in the classroom: (1) difficulty engaging with others, (2) a wide range of speech and language difficulties that affect their communication to a greater or lesser degree, (3) difficulty in succeeding academically and in grasping the set curriculum (especially learners who are low-functioning), (4)

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an obsession with routine and environmental 'sameness', and (5) problematic behaviour such as repetitive behaviour (American Psychiatric Association, 2013). Learners with ASD often have different cognitive and education skills and knowledge that is unique to their capabilities. The educational success and progress of a learner with ASD is dependent on their functioning and ability to cope. Coping in an IE environment requires individualised planning for ASD learners. An increasing number of learners are being diagnosed with ASD and, as a result, such learners must be accommodated in mainstream schooling (Roberts & Simpson, 2016).

6.2.3 Meaning of inclusion for special education teachers

According to Amr, Al-Natour, Al-Abdallat, and Alkhamra (2016), teachers face many barriers and find it difficult to cope and be effective in their work. Liu, Li, Zheng, Zaroff, Hall, Li, and Hao (2016) proposed that these issues could be due to lack of understanding and knowledge of ASD. According to Magare, Kitching, and Roos (2010), teachers must be adequately trained and have the necessary skills to create a learning environment suitable for learners with ASD. Likewise, mainstream education should be designed for learners with ASD so as to respond to their needs and strengths, and not allow them to become lost and overlooked. In SA, teachers are not all trained for learners with ASD within a classroom setting, and thus experience barriers (Mahlo, 2011). A study by Busby, Ingram, Bowron, Oliver, and Lyons (2012) revealed that teachers are not prepared to teach learners with ASD.

6.3 Problem statement

Special education teachers have the responsibility to ensure that learners with ASD are taught and accommodated within the classroom environment. Ensuring success and development is key to implementing IE throughout their practices in the classroom via their teaching and interaction with

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learners. According to According to Donohue and Bornman (2015) many countries have found implementing IE for all learners with ASD to be challenging, due to current policy not being clear and imprecise guidelines; furthermore, it has been emphasised that IE teacher training is pivotal to its success as well as availability of resources (Donohue & Bornman, 2014). SA is amongst the countries that is finding it difficult to have embed IE in schools because of lack of resources (Donohue & Bornman, 2014). The EWP6 placed a large degree of responsibility on special education teachers, which was challenging for their current practices and existing cognitive schemas (Oswald & Swart, 2011). Special education teachers are presented with the EWP6 but its implementation is blurred. Special education teachers are faced with various challenges to the implementation of the EWP6, which could be due to interactions between the ecological levels of the microsystem, mesosystem, exosystem, macrosystem and chronosystem (Geldenhuys & Wevers, 2013). Bronfenbrenner (1979) emphasised the importance of having a good relationship between the various systems to improve and enhance society as a whole. In the event where systems fail to synergise, the individual and larger society will be affected by the poor relationships between the micro-, meso-, exo- and macrosystems.

6.4 Aim of the study

The aim of this study was to explore South African teachers' perspectives on the barriers to the educational development of learners with Autism Spectrum Disorder.

6.4.1 Research question:

What are the barriers to the educational development of learners with ASD?

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6.6 Methodology

6.6.1 Participants

The study was conducted in the city of (withheld for blind review purposes). A total of eight special education teachers participated in the study. Participants were invited from four urban school districts in the (withheld for blind review purposes). Participants' demographics are presented in Table 6.1. The various school headmasters were contacted via email, inviting participants for the study. The teachers who participated were those recommended by school headmasters and those who were eager to be interviewed for the study. The teachers who participated were purposively selected on the basis that they were special education teachers involved with ASD learners. This group was selected as they would add rich and valuable data on the matter being researched (Leedy & Ormrod, 2010). The ethnic classification was a result of apartheid-era policies on segregation. The SA ethnic classification of population groups differs from the general groups used globally. For example, the term 'coloured' in a South African context indicates a mixed-race population (Moultrie & Timæus, 2003). In SA, the main racial categories are coloured, black, Indian and white.
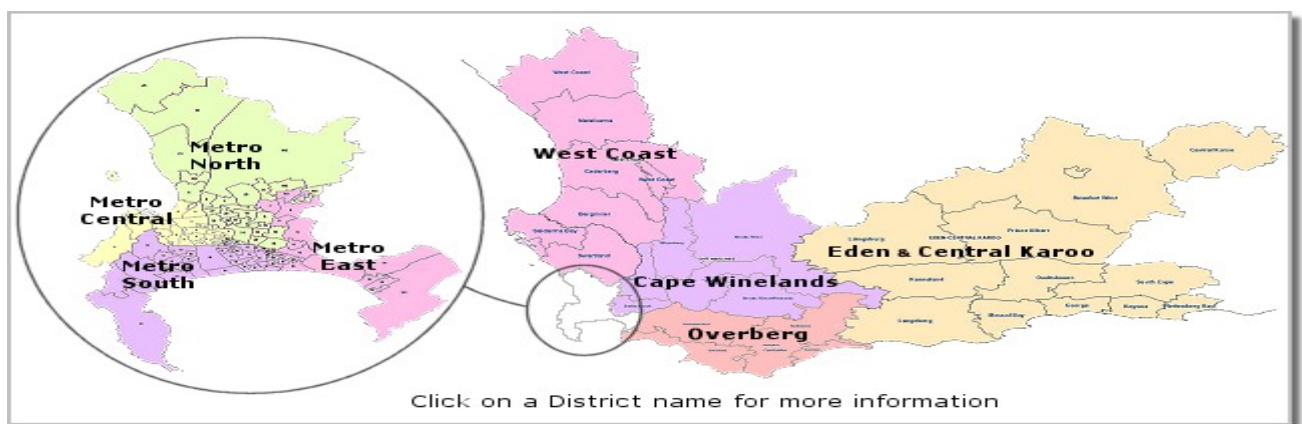
Figure 6.1 Map of the four urban districts in the Western Cape.

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Table 6.1 Demographics of participants

Names	Gender	[1]Ethnicity	Home Language	Experience
Participant 1	female	coloured	English	3 years
Participant 2	female	coloured	English	2 years
Participant 3	female	white	Afrikaans	35 years
Participant 4	female	coloured	Afrikaans	2 years
Participant 5	female	white	Afrikaans	2 years
Participant 6	female	white	Afrikaans	35 years
Participant 7	female	coloured	English	3 years
Participant 8	female	coloured	English	23 years

(Source: Western Cape Education Department, 2007)

6.6.2 Data collection

Participants were provided with information sheets prior to signing consent forms. Participants had a choice as to whether they would like to participate in the research study. Individual interviews were arranged for teachers who agreed to participate and consent was signed upon agreement. Face-to-face interviews were conducted with special education teachers who voluntarily agreed to participate in the research study. The study used a qualitative research approach, conducting in-depth interviews guided by semi-structured questions to ensure that similar data were collected (Leedy & Ormrod, 2010). The individual interviews were held at the

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[1]Statistics South Africa classifies people into population groups, subsequent to the pre-1994 apartheid era. This categorisation uses a population group-based system that is no longer based on a legal definition, but rather on self-classification (Statistics South Africa 2016).

respective schools where the teachers were situated. Interviews ranged from 45 minutes to 60 minutes and were audio recorded and subsequently transcribed verbatim for analysis. This approach allowed rich data to surface while investigating the current educational programmes in schools for children with ASD. An interview schedule (see Appendix E) was used to ensure that objectives were met, and probing questions were asked where necessary which allowed more in-depth input from participants.

6.7 Data analysis

Individual interviews were transcribed verbatim and analysed. The study used thematic analysis and the steps outlined by Braun and Clark (2013): familiarising oneself with the data, generating codes, searching for possible themes, reviewing the selected themes, and producing a report; the latter used ATLAS.ti Mac version 1.6 software was utilised for coding the data as part of the analysis process (Creswell, 2013).

6.8 Trustworthiness of the study

Trustworthiness was ensured through credibility, dependability, transferability and confirmability. According to Lincoln and Guba (1985), credibility is one of the most significant influences when establishing trustworthiness. Credibility was achieved by conducting the research in a manner that safeguards the findings and demonstrates credibility in the research paper (Helen & Smith, 2015). Summarising the information provided from the transcription notes and by listening to the audio recordings; this was done to assess the accuracy of the information provided by participants and to confirm that the information was interpreted appropriately (Pietkiewicz & Smith, 2014). Transferability was demonstrated by purposively selecting participants for the study and conducting in-depth interviews with a small group of participants. According to Quick and Hall

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(2015) qualitative outcomes are generally specific to smaller participant groups in a particular setting. Therefore, the results of this study cannot be relevant to any other population group or setting. Added to this, detailed information was provided about the research setting, data collection and analysis throughout the research paper. Dependability was guaranteed by conducting in-depth interviews that permitted probing questions where necessary. The same method was used for all participants and from a similar context (Quick & Hall, 2015). Peer reviews were pivotal in ensuring confirmability, and the study supervisors were involved in all stages leading up to the analysis.

6.9 Ethical clearance

The study was approved and permission was granted by the Research Ethics Committee that forms part of the University, the registration number is as follows: 15/7/244. The Education Department was approached, requesting permission to access schools within the various districts in the Metropolitan area. Permission was granted to collect data in the respective schools and the headmasters and the teachers that participated in the study agreed by signing the consent forms (Appendix B). Participants were informed about the study and that they can withdraw at any stage should they no longer feel they are wanting to participate. Participants were informed that the participation is voluntary and not compulsory.

6.10 Results

The results of this study had 33 codes identified and 193 quotations in total for all eight individual interviews. Furthermore, after using thematic analysis by Braun and Clarke (2013) the data was categorised according to the themes and the findings of this study were presented according to Bronfenbrenner's ecological model. The following five themes with nine sub-themes were identified. Table 6.2 presents the themes and sub-themes:

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Table 6.2 Themes and sub-themes identified

Themes	Sub-themes
1. Infrastructure and the physical learning environment	▪ Classroom capacity ▪ Lack of resources to create a conducive learning environment
2. Curriculum alignment for children with ASD	▪ Learners not coping with the curriculum ▪ Diverse group of special needs in the classroom
3. Lack of collaborative partnerships	▪ Parental involvement ▪ Parental financial implications
4. Training and development of teachers	▪ Inadequate training for teachers ▪ Affordability and accessibility of training
5. Resources to facilitate the teaching process	▪ Teaching aids needed to facilitate the teaching and learning process

6.10.1 Theme 1: Infrastructure and the physical learning environment (Microsystem)

Teachers had many concerns related to the infrastructure and set up at schools. Ranging from classroom capacity, lack of resources available at the school to create a learning environment that is conducive and the need for more special needs schools.

Classroom capacity is important as teachers described having many learners in class makes it very difficult for them to supervise. Small classes are better to keep a close eye on every child and ensuring their needs are met. The teachers had the following to say:

"*This class is built for eight learners. And we have already 14*" (Participant 8)

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"35 is just too much. The classes are too crowded. They need their space. They need silence. Yes, 35/30... that's way too much" (Participant 6)

"But I've realised that having seven kids in the class is easier to supervise" (Participant 2)

"At the moment, I only have five. I am so blessed but I have a tiny, tiny class and you actually can't have more children" (Participant 1)

Lack of resources to create a conducive learning environment should be prioritised. Teachers are particularly concerned about the conditions in the classroom for example classes are not warm during winter and the use of mobile classrooms are not conducive. There is not enough space to move around in the classroom not allowing learners the space they need especially for learners with ASD experiencing meltdowns and need a moment to calm down and compose. The question posed to the participants, "What is the learning environment like, conducive and accommodating?" they responded:
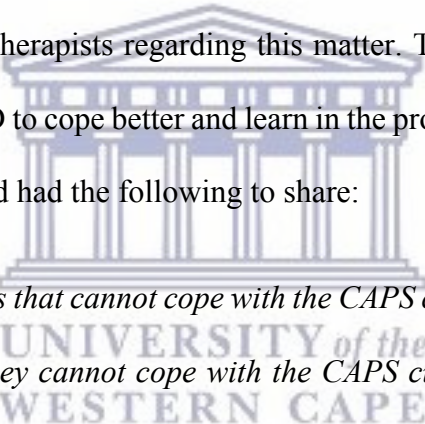
"We've now got mobile classrooms but it is freezing in there. How can you expect autistic kids to go there in winter when it is freezing and learn? So, we need heaters or when it is summer and it is very hot, how do you expect them ... because the environment is a stimulus. So, we need to provide them with heaters and aircons" (Participant 2)

"More movement, more space around them. You can say they're a little train down here and a little train) down there but that doesn't work... But I would like more space to make the classroom environment more comfortable..." (Participant 8)

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6.10.2 Theme 2: Curriculum alignment for children with ASD (Microsystem & Macrosystem)

The curriculum forms a large part of any child's education and for children with ASD this becomes crucial. Teachers identified the curriculum/programmes followed, however not many learners are coping with the curriculum set out for them, this raised concerns whether the learner's needs are met. Teachers mentioned that there is a diverse group of learners with special needs in the classroom and one way of teaching will not suit the needs of all (no one size fits all approach).

Learners are not coping with the curriculum is of great concern to teachers. Teachers are constantly in consultation with therapists regarding this matter. There's a need for a curriculum that will allow learners with ASD to cope better and learn in the process. Participants had concerns over the curriculum followed and had the following to share:

> "*also, the learners that cannot cope with the CAPS curriculum and there's no place else to go……. they cannot cope with the CAPS curriculum. So, my biggest wish and my prayer every single day is for a special curriculum for our school especially, for those learners*" (Participant 2)

> "*At the moment, the children that's struggling to cope with the curriculum that is the biggest barrier. How to accommodate those children and it takes a lot of your time because you need to basically develop new ways to teach them and how to improvise on the CAPS but still teaching them the CAPS. So that at the moment is the biggest challenge*" (Participant 4)

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"ideal place or a different, we need a different curriculum for them. We can accommodate them here but we need a different... the outcomes of CAPS are just too high for..." (Participant 6)

Diverse group of learners with special needs in the classroom makes the teachers task of teaching a challenge. The diverse nature of having an inclusive class with learners presenting various needs, which teaching style or method do teachers use. Participants are not only teaching a class with autistic learners but many other special needs and this makes the task of teaching tough. This is what participants had to say:

"So, there is a much bigger variety in our classes these days and yes, it is a big, big challenge." (Participant 8)

"*Yes, I mean, most of my kids in my class they don't just suffer from autism. I've got a child who is Down syndrome and who is on the spectrum. I've got two kids who are ADD on the spectrum. They've also been diagnosed with autism and ADD and also ADHD with autism"* (Participant 3)

"The Education Department won't allow us that only does this... so we have to follow the CAPS curriculum and we have to accommodate learners with a variety of conditions" (Participant 1)

6.10.3 Theme 3: Lack of collaborative partnerships (Mesosystem)

The lack of partnership between the parents and teachers was raised as a huge barrier. Teachers try to involve parents but they are not always keen to do so. This is a concern because the parents'

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input is valuable and key in the learner's success and progress. There are factors that impact this such as financial and domestic implications faced at home.

Parental Involvement

Teachers have noted the lack of interest such as parents not attending their child's school meetings and showing no interest in the development of the child by working alongside the teacher. The parent's involvement will encourage a learner to strive for more with that needed support at home. These barriers place stress on both the teacher and learner.

> *"I'll say the biggest thing for me is that parents aren't always on board with the teacher. So, when you try to implement something at school, like I'm trying to say they need to listen to me, they go home where they spend most of their time and it is not expected"* (Participant 2)

> *"ask the parents to do some of the exercises at home with the children just to get them focus……. I think communication between parents and children are all ... I talk about the triangle – me, the learner and the parent……. don't always get the support from the parents"* (Participant 7)

Parents financial and social barriers

Teachers recognize the challenges parents are faced with and they are aware of the social situation such as not having the finances to attend meetings or attend to the needs of the learner. The teachers had the following to say that affects them too:

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"*And I mean a lot of these parents can't afford school fees. So, we need... not all schools are funded they don't attend meetings and show little interest*" (Participant 3)

"*Some of them come from abusive homes and some of them come from impoverished areas which in itself just makes it difficult for them to adapt. So, they're coming from ... they've got bad circumstances at home and parents have financial problems*" (Participant 1)

6.10.4 Theme 4: Lack of training and development of teachers (Exosystem)

Teachers shared their thoughts and experiences related to IE, their role as a special education teacher and the importance of training and development.

Inadequate training for teachers, this is needed and teachers are concerned about the lack of training provided to both existing and new teachers entering the education system. Teachers have identified the need for more training however they are aware of the costs involved. Participants were asked whether they felt competent and adequately trained? Responses were as follows:

"*As a teacher, you need, I believe that this is a huge, huge lack. Teachers, educators need training about autism. I'm going to be specific, I was talking very generally of inclusion. But now specifically for autism*" (Participant 2)

"*There is not enough training. We are busy with IQMS, it is personal development for teachers. There is not enough training that can teach you how to handle every situation and every child*" (Participant 3)

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"The IEDP individualised educational development programme for each child and that is why it is so critical that people are trained because before you can really ... that up and see with children, you need to know about autism" (Participant 5)

"Years ago, teachers who were appointed at our school all had remedial with certificates or training. Now teachers come out of the training of universities and they did a little module on inclusive education..." (Participant 8)

Affordability and accessibility of training for teachers

Courses are expensive and not sufficient. Teachers are expected to teach with a certificate and with no or little knowledge obtained regarding ASD. Even experienced teachers are needing training and refresher courses. Supporting them financially to allow them to attend courses pertaining to ASD and how they can build on their existing skills and knowledge.

"*Support from the government. More supportive courses. More support in understanding that they can't just get like a budget. I mean, our budget is totally different to the mainstream budgets. I don't know if it makes any sense*" (Participant 3)

"..... so also, it would be nice if there was more like counselling support for teachers like if teachers could phone like I can't talk to my friends because they don't understand it" (Participant 5)

"Or provide assistance for teachers or to just share ideas or anything like that and you're always welcome ..." (Participant 6)

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6.10.5 Theme 5: Resources to facilitate the teaching process (Exosystem)

Resources become essential to facilitate the teaching and learning process. Teachers depend on teaching aids and technology that promotes learning especially for children with ASD. Learners with ASD learn better by seeing. Teachers find great value in technology and using such resources to engage learners with the teaching process.

Teaching aids needed to facilitate the teaching and learning process - teachers cannot teach without the needed teaching materials. Having books will not mean anything if learners are not able to use them effectively. Therefore, teachers believe that learners are stimulated in a particular way such as using iPads, tablets, laptops and computers. Schools are not equipped and resourced enough. Participants were asked were whether they have the needed resources to teach effectively? They had the following responses:

"And I think autistic take to tablets and computers so well. So, more computers and tablets and basically resources" (Participant 4)

"we cannot do inclusion and serve the needs educationally of all learners if you do not have the appropriate resources, both in material and human resources and if you don't have the financial resources" (Participant 7)

"and we have high stress levels because we are neglecting the child's sheer necessity because of lack of resources" (Participant 2)

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6.11 Discussion

Participants of this study raised common concerns faced on a daily basis while they are striving to teach effectively. The findings are discussed according to Bronfenbrenner's ecological model the microsystem, mesosystem, exosystem, macrosystem and chronosystem. which provides a summary of the findings and how these effects the development of a learner with ASD.

Figure 6.2 demonstrates the themes that emerged:

6.11.1 Bronfenbrenner's ecological model

Special education teachers are faced with various challenges pertaining to the implementation of the EWP6; these challenges could be due to the interactions and links between the various ecological levels (microsystem, mesosystem, exosystem, macrosystem and chronosystem) (Geldenhuys & Wevers, 2013). The ecological systems clearly indicate the effect that these barriers have on learners with ASD and their educational development.
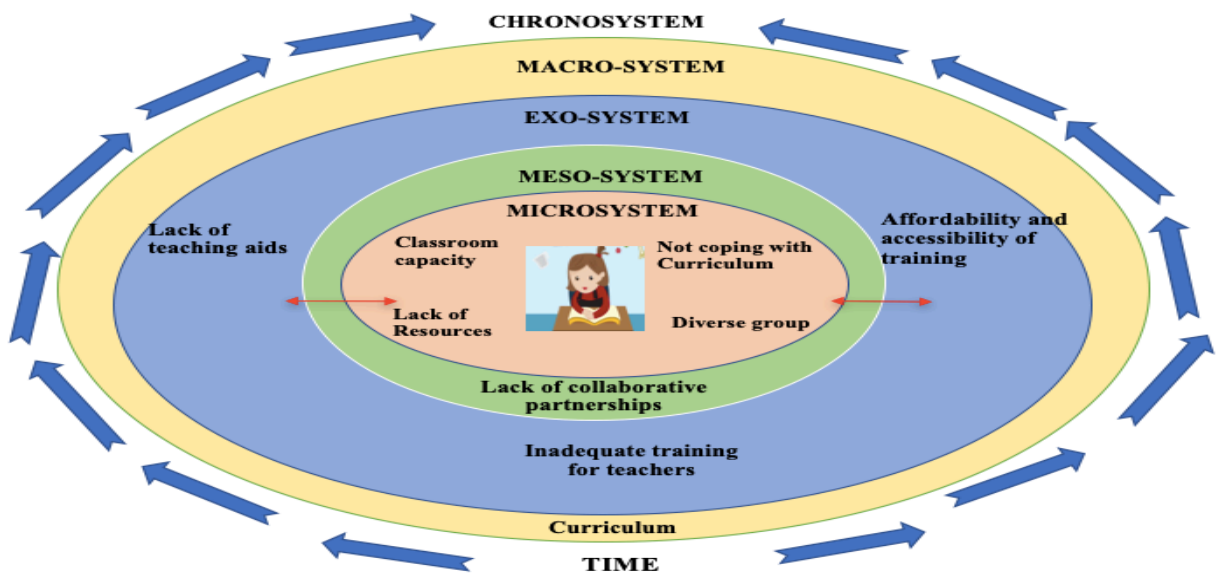
Figure 6.2 Bronfenbrenner's ecological model

6.11.2 Microsystem

The microsystem directly affects the learner and contains aspects that exist within the learner's immediate environment where the learner experiences learning both formally and informally. This level includes teachers, peers in the classroom, physical learning/classroom spaces, and the related resources (Bronfenbrenner, 1979; Walker & Pattison, 2016). Therefore, the following themes form part of the microsystem:

Infrastructure and the physical learning environment

On the microsystem level, learners are directly affected by their peers in class, by teachers and all other factors that might influence the learner's ability to function in class. Participants agreed that infrastructure and setting are crucial. According to a study conducted by Mahlo (2011), the physical environment in South African schools is still greatly deficient, and many learners are affected by this barrier. The lack of infrastructure and a conducive learning environment is a challenge faced internationally; similar studies revealed that this is a global challenge even in developed countries such as the United States and the United Kingdom (Polat, 2011). Learners with ASD need their own space, and an overcrowded classroom will not allow adequate learning to take place (Scott, 2009). The learning environment should not only have space for learners to move freely but should also be comfortable and warm. The lack of resources to create a conducive learning environment is a stressor for educators as they cannot entirely fulfil their role as teachers (Ahmad, Shaari, Hashim & Kariminia, 2015). While teachers find it challenging in not having a conducive environment, they are also concerned about the lack of schooling facilities, as a result of which many children receive no formal education. Lack of schooling for children with ASD is

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a global challenge faced in many countries (Starr & Foy, 2012). Teachers are happy, however, that they are able to accommodate learners in their classroom despite overcrowding and lack of space and comfort.

Curriculum alignment for children with ASD

Participants in the study shared their concerns regarding the curriculum used in schools. The curriculum is enforced by the education department and learners should align with the curriculum, even if they are not capable of doing so. According to Anderson, Boyle and Deppeler (2014) learners must be taught in a meaningful way and with the relevant curriculum. Learners do not all function in the same way, and the content that is taught may challenge learners not only cognitively but also emotionally (Ruppar, Allcock & Gonsier-Gerdin, 2017). According to Boyle, Topping, Jindal-Snape and Norwich (2012), teachers are challenged with having to use various teaching pedagogies and teaching strategies to accommodate learners with different needs. Participants view the curriculum as a barrier if the teacher finds it difficult to teach and adapt the curriculum to the learners' needs. Participants are aware of the of the curriculum but maintain that it was not designed for learners with ASD. This is evident, given the comment made by a participant:

... ideally a place or a different place, we need a different curriculum for them. We can accommodate them here but we need a different... the outcomes of CAPS are just too high.

The outcomes are set and high, which is not beneficial to learners, and this makes progress a challenge for both teachers and learners with ASD.

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6.11.3 Mesosystem

The mesosystems' main aim is to maintain the relationship between the microsystem and other systems. Relationships between systems are important for the learner's development, isolation can only bring harm to the learner and affect the educational development and stagger the growth. This system and the relationships should be dynamic and influence the learner positively having the learner at the centre and goals set to benefit the learner (Bronfenbrenner, 1979). The following themes will be discussed that form part of the mesosystem:

Lack of collaborative partnerships

The mesosystem focuses on creating and maintaining its relationship to ensure communication and collaboration among learners, parents and teachers. According to Wilcox and Angelis (2009) equal partnership between parents and teachers is imperative for learners to improve. A positive partnership between teachers and parents is of utmost importance to ensure learner development and progress. Lack of constructive collaboration does not promote and encourage a learner to excel academically. Participants identified this as a barrier, as their task is not only to ensure that learning takes place in the classroom but also that it continues at home. As a result, learners cannot make the connection between their parents and teachers, but see them as separate entities (Geldenhuys & Wevers, 2013). Parents find it very difficult to be actively involved as they are faced with many challenges themselves, including financial stressors that lead to little attention given to the learner. According to Pillay (2004), these stressors make it difficult for learners to learn, and teachers find it difficult to cope with this issue in the classroom.

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6.11.4 Exosystem

The exosystem does not influence the learner directly but has an influence on the learner's schooling experience. However, this system has a significant influence on the learner's educational development (Bronfenbrenner, 1979; Singh, Sylvia & Ridzi, 2015); this includes the teaching provided to learners and the resources available. The following two themes emerged and are discussed below:

Training and development of teachers

According to Koegel, Matos-Freden, Lang and Koegel (2012), training of special education teachers is essential and key to the development of all learners. Teachers must have the desire for continuous training and development in the profession to teach effectively. Participants were mindful of this as they reflected on the training they had obtained and shared similar views. Participants have mentioned that, decades ago, teachers working in the field of special needs were adequately trained and that it was essential for teachers to have remedial training (Symeonidou & Phtiaka, 2014). Participants who had been longer in the field of special needs education had more knowledge and experience to draw from, which is in line with the literature (Symeonidou & Phtiaka, 2014). A study conducted by Sherwood (2010) mentioned the need for teachers in Jamaica to be empowered and were doing so by equipping themselves with professional training so that quality education could be delivered in the classroom. In Australia, the teachers of learners with ASD need the practical skills and knowledge that can only be provided by experienced professionals in the field (Kadar, McDonald & Lentin, 2012). In order for inclusion to be seen in the classroom, teachers need the skills to create an environment that will allow learners with ASD to grow and develop. The European Agency for the Development of Special Needs Education

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(EADSNE) conducted a review that was done on teacher education for inclusion in Europe found that teachers lack the "knowledge, understanding, experience and commitment" to teach in the classroom under the term IE. Teachers are not receiving any induction and they require different skills for the inclusive classroom environment. According to Forlin (2010) it is unrealistic to have the expectation that teachers should know how to use innovative approaches when they have not been exposed nor had any preparation. Teacher training is vital however the formal qualifications is only a percentage of what is needed to be an effective teacher in the classroom. The practical experience and exposure is too mentioned and viewed at important (UNESCO, 2001). However, Forlin (2012) raised an important point stating that teachers are not awarded the opportunity to relevant practice placement especially difficult in inclusive schools. Forlin (2012) expressed his concern about schools not having the time and feeling overwhelmed by the system with placement and visits. A debate raised by Forlin (2012) alluding to the practicum pre-service teachers or exposed either to mainstream or special schools depending on the availability and whether the school can accommodate them. The negative effect of this is that pre-service teachers then automatically separate the learners by 'special' and mainstream. The inclusive practicing in the classroom is not that easily found for pre-service teachers starting their teaching career.

Resources to facilitate the teaching process

Participants shared their views on creating a learning environment that is effective and conducive for all learners in the classroom. However, many felt that, due to the lack of resources, they were unable to improvise and teach effectively. The lack of adequate resources makes it impossible for teachers to practice inclusion, as learners present with various needs that need attention. Resources needed include teachers, therapists and teaching assistants. Learners with ASD learn better with visual aids such as laptops, tablets and computer-based interventions in the classroom (Hedges,

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Odom, Hume & Sam, 2017). According to Spriggs, Knight and Sherrow (2015), learners with ASD exhibit high success rates when using visual activities in the classroom.

6.11.5 Macrosystem

Curriculum and inclusive education

The schooling system, curriculum and policies are guided by the macrosystem. The policies serve as a blueprint for the schooling system that essentially affects learners, teachers and parents (Bronfenbrenner, 1979; Hackett, Hudson, West & Brown, 2016). The implementation of these policies will have an effect that will impact on the learners' educational development. Participants mentioned that IE and how the barriers which they have identified, make inclusion a challenge. Many of these barriers are linked to government, who create policies that demand inclusion in the classroom, and the various barriers that teachers face in having to implement these policies. The EWP6 introduced the term 'inclusive education' for learners with special needs (DoE, 2001) and, while this is stated in policy documents, teachers are finding it difficult to apply, given the curriculum. Curriculum and Assessment Policy Statements (CAPS) do not support the EWP6. The CAPS programmes are not designed and structured in a manner that accommodates learners with ASD; but teachers are expected to implement the curriculum. Participants had the following to say: "*also the learners that cannot cope with the CAPS curriculum and there's no place else to go. That is for me a very, it actually makes me so sad because you need to teach them something. There's no other school for them. They cannot cope with the CAPS curriculum. So, my biggest wish and my prayer every single day is for a special curriculum for our school especially, for those learners. So, if we can maybe follow two curriculums. That is my biggest frustration, sadness, everything because in every class there are two/three learners that cannot cope with CAPS but*

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you have to accommodate them in some way". This has been identified as a huge barrier and teachers cannot promote learning if they are unable to adapt the current curriculum; to suit the needed of learners in the classroom this ultimately affects the learner's educational development.

6.11.6 Chronosystem

The chronosystem includes the timeframe across the various interactions between systems and the influence this has on the individual. The development of a child with ASD is largely influenced by various systems, and ultimately the chronosystem will indicate the level of influence on the child's development. Thus, it is important to include the chronosystem as it will indicate the rate of development and show the improvement in learners and even delays over time. Due to the apartheid regime in South Africa, children with disabilities were disadvantaged and not prioritised. Many learners are still affected by this as the schooling system is still not fully inclusive and learners' educational development is being delayed (Van Jaarsveldt & Ndeya-Ndereya, 2015).
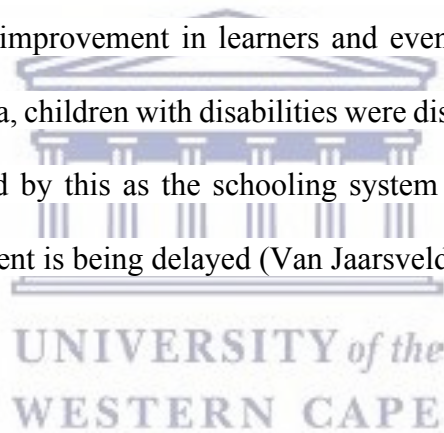
6.12 Limitations

Participants for the study were all from the Western Cape Metropole therefore the results cannot be generalized. The participants were teaching in communities from different socio-economic backgrounds. The schools were not all located in the same district or area, teachers were teaching in communities that ranged from low-income to middle-income communities. A limitation identified during this study is not having the qualifications documented. This would have served as important information given the nature of the study.

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6.13 Conclusion

The current study explored the perspectives of special education teachers on inclusive education and the barriers that impact the educational development of learners with Autism Spectrum Disorder. The results of this study indicated that special education teachers are finding it difficult to implement IE given the barriers they experience in the classroom on a daily basis. Teaching learners with ASD within an inclusive setting teachers require training to provide them with the skills and confidence to teach and implement the EWP6 effectively, the resources and infrastructure to have an effective learning environment for all. One of the more significant findings that emerged from the study is that curriculum alignment is a challenge as teachers lack the skills and knowledge. Therefore, if teachers are trained and equipped and given the resources learners will have the ability to perform within an inclusive environment. The barriers identified does not allow for affective teaching and thus learners with ASD are not obtaining the benefits of the EWP6 the purpose for which it's been intended. The current findings add significantly to the body of knowledge and understanding providing insight pertaining to the barriers special education teachers face whilst trying to implement IE for learners with ASD.

6.14 Recommendation for future studies

Future studies should explore the level of knowledge teachers obtain during their education training at University or College level. Taking a closer look at the curriculum that teachers follow prior to qualifying as a teacher. Whether the training provided is adequate for teaching learning with special needs such as ASD. In addition, a study on male special education teachers and the barriers they encounter having to teacher learners with ASD in an inclusive environment.

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6.15 Recommendations for IE in the classroom

The findings of this study identified the barriers and the following is recommended for creating an inclusive environment and implementing the EWP6 and addressing the barriers teachers are facing.

Providing adequate training for teachers entering the education system and having to teach learners with ASD and being in a classroom with various special needs. This will provide teachers with the needed skills and knowledge to cope better and teach effectively. This way learners will benefit from the skills that the teacher has acquired and learners will be taught in the best way possible ensuring development and progress. Practicing inclusion in the classroom will be prioritised and teachers will have the skills to create an inclusive education environment given the training.

Providing teachers with the resources for teaching (technology and teaching assistants) as well as space and appropriate infrastructure that allows for learning in a safe and comfortable environment that promotes learning.
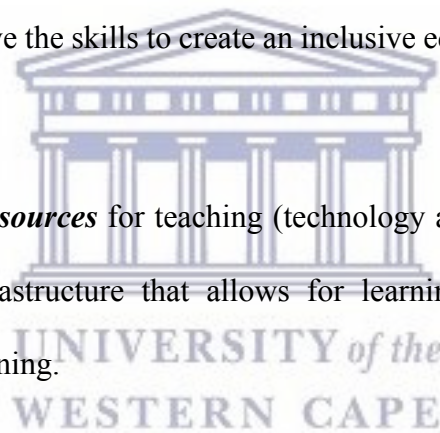
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CHAPTER SEVEN

Promoting an inclusive education system for children with autism spectrum disorder:

Perspectives of stakeholders

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Abstract

Inclusive education is discussed from a global perspective and its implementation is crucial for the development of children with special needs. Many children in South Africa with autism spectrum disorder are not being mainstreamed therefore the focus of this study is on inclusive education for children with autism spectrum disorder. An explorative qualitative approach was implemented with eight stakeholders from various organisations who were purposively selected. Data were collected using an in-depth interview schedule of individual interviews which lasted no longer than 60 minutes each. From the analysis of the data, the following five themes emerged: (1) prioritising the needs of learners with special educational needs; (2) the need for inclusive education to move from policy to implementation; (3) inadequate resources; (4) lack of teacher training and development programmes; and (5) striving for an inclusive education system in the Western Cape. A highlight of this study was identifying stakeholders' perspectives and their suggestions on the implementation of having a more inclusive education system; concluding that with adequate

resources, specialised teacher training and the prioritisation of IE (promoting policy and practice implementation), the current system has the potential to flourish. This article stems from a broader doctoral thesis.

Keywords: autism spectrum disorder, inclusive education, educational stakeholders, education system.

7.1 Introduction

This chapter is aimed at identifying stakeholders' perspectives regarding the challenges and merits encountered in the current inclusive education system. It also highlights the key findings and describes the research process that was undertaken while conducting the study. The analysis, findings and discussion are found in this chapter and the study limitations and recommendations are discussed.
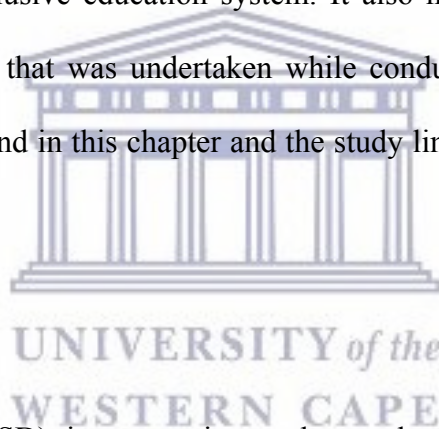
7.2 Background

Autism spectrum disorder (ASD) is a growing and complex neurological disorder that is characterised by impairments in social communication and interaction, including repetitive behaviour and interest in a particular object or activity (American Psychiatric Association, 2013).

Global statistics indicate that ASD is on the rise and has been ranked among the twenty leading disabilities in the world (Erskine et al., 2017). ASD has no identified leading cause, but many believe it is due to genetics and the environment with first symptoms usually presenting around the age of three. Furthermore, research in the field of ASD and the causes related to this disorder has advanced during the past decade. Potential risk factors have been identified such as parental age and preterm birth (Lyall et al., 2007). ASD affects 1 in 100 people with a 4 to 1 ratio for boys

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to girls (Werling & Geschwind, 2013). In South Africa, very little data is available on the statistics related to ASD and related disorders.

Learners with ASD learn differently to children that are not on the spectrum (Willis, 2015). Due to the nature of ASD, many children are faced with a social communication barrier and social interaction aspect, which influence their learning (Foti, De Crescenzo, Vivanti, Menghini & Vicari, 2015). Learners with ASD are perceived as perplexed and mystifying individuals by many professionals such as teachers and therapists. Professionals cannot have a one size fits all approach as each case is different in nature (Simpson, de Boer-Ott & Smith-Myles, 2003). As a result of the complexity of ASD, teaching a learner with ASD becomes more demanding, knowing that the needs of the learner must be met. Considering learners needs and the developmental impact these have on learners with ASD, professionals in the field cannot ignore how these needs should be met. The concept of inclusion and inclusive education developed specifically to address the issues pertaining to meeting the educational needs of a learner with ASD (Uditsky, 2017). Professionals and various stakeholders are advocating for learners with ASD to be seen in a society where disorders such as ASD are still gone unnoticed (Majoko, 2016; Roberts & Simpson, 2016). An inclusive education system is a goal set by countries globally and some countries are more successful than others with the implementation of policy and procedure (O'Hanlon, 2017). In South Africa, an inclusive system has been the goal since the start of the post-apartheid era. The South African apartheid regime enforced segregation among various racial groups, placing the black majority at a disadvantage (Donohue & Bornman, 2014). Children today still face the effects of the South African apartheid regime. In order to address this, the Education White Paper 6 (EWP6) was designed to provide a more inclusive society for children with barriers to learning. South Africa has been facing challenges meeting the needs of children with special needs including ASD.

This is not uncommon as many African, European and Asian countries are faced with similar challenges (Kaur, Noman & Awang-Hashim, 2016; Ametepee & Anastasiou, 2015; O'Hanlon, 2017).

7.3 Problem Statement

The increase in statistics is one of many alarming concerns identified in the field of ASD (Hill, Zuckerman & Fombonne, 2015). Therefore, countries such as South Africa, China, India, Malaysia and Sweden have embarked on the journey to inclusive schooling systems to accommodate all learners and ensure that no one is excluded (Engstrand & Roll-Pettersson, 2014; Shah, Das, Desai & Tiwari, 2016). Given the barriers to learning from a diagnostic view, based on the symptoms presented, learners with ASD have special needs that have to be met. These needs can only be met by professional and trained individuals (Donaldson, 2015). According to Able, Sreckovic, Schultz, Garwood and Sherman (2015), teachers have the responsibility to provide an education foundation and parents learn through this process as well. However, given the challenges in the education system, many learners are disadvantaged and do not benefit from the inclusive education system. Many factors contribute towards this unfortunate phenomenon, yet among the challenges one should also consider the merits. South Africa has a history of segregation and oppression and two decades later, the education system should explore ways to promote an inclusive education system (van Schalkwyk, Beyers & de Vries, 2016). Learners and parents/guardians should have a sense that the education department, education stakeholders and schooling system as a whole are advocating for inclusiveness within the education system. Many parents feel oppressed by the current education system and trapped by the barriers and lack of information and resources (Parks, 2017). Therefore, it is imperative to explore the challenges and merits from the stakeholder's perspective in order to promote inclusiveness within the schooling system.

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7.4 Aim of the study

To explore stakeholders' perceptions on the challenges and merits of promoting an inclusive education system for children with autism spectrum disorder in the Western Cape Province, South Africa.

7.5 Research question

Stakeholders' perceptions on the challenges and merits of promoting an inclusive education system for children with autism spectrum disorder?

7.6 Methodology

7.6.1 Research design

This study used an exploratory qualitative research design that allows for in-depth understanding of the stakeholders input and attitudes towards the nature of the study.

7.6.2 Participants

Participants were purposively selected based on their knowledge and added significant value, given their experience in the field (Bernard, Wutich & Ryan, 2016). Participants were from Cape Town, a city in the Western Cape Province, South Africa. Eight participants formed part of the study and were stakeholders in the field of special needs education. Participants were from non-profit organisations (NGO), school governing bodies (SGB), and the Western Cape Education Department (WCED). Table 7.1 below demonstrates the participants demographics.

Table 7.1 Participant demographics

Participant	Gender	Capacity	Ethnicity[2]
1	Female	NGO	white
2	Female	NGO	white
3	Female	NGO	coloured
4	Female	WCED	white
5	Male	SGB	coloured
6	Male	WCED	coloured
7	Male	WCED	white
8	Male	WCED	coloured

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[2] Statistics South Africa classify people into population groups, since the pre-1994 apartheid era. This categorization uses a population group-based system that is no longer based on a legal definition, but rather on self-classification (Statistics South Africa 2016).

7.6.3 Data collection

Prior to conducting the study and the recruitment of participants, permission was granted by the University of the Western Cape and the Western Cape Education Department to conduct the study. Participants were then approached to participate in the study voluntarily. Electronic mails (email) were sent out to all participants inviting them to participate in the study and an information sheet explaining the focus and aim of the research study as well as their role was attached . Upon agreeing to participate, all participants were required to peruse and complete the consent form which required their signature. Participants were informed that they could withdraw from the study at any time should they feel the need to do so. Interviews were then scheduled and participants were interviewed individually. The interviews were between 45 and 60 minutes in length. An interview guide was used and probing was done throughout the interview. Individual interviews were recorded with the permission of participants. Participants were given the assurance that all data will be kept safe on a computer that is locked with a password for protection and their privacy.
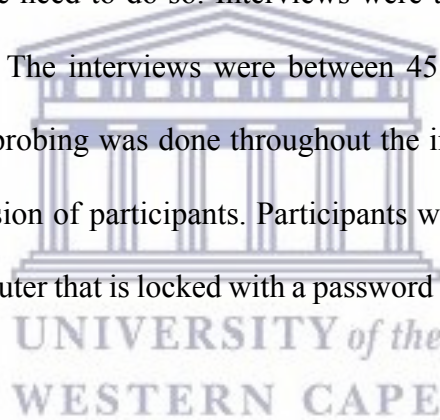
7.6.4 Data analysis

Data was analysed using thematic analysis following the steps proposed by Braun and Clarke (2013). The process was as follows: (1) familiarisation with the data is pivotal; (2) identifying and generating codes; (3) searching for themes by grouping the codes that were generated; (4) themes are then reviewed and checked by looking at the codes that were extracted; (5) themes were then named; and lastly, (6) a report was generated using ATLAS.ti for Mac, version 1.6. This software is helpful for the organising of the data and coding process (Creswell, 2013).

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Table 7.2 Summary table of the themes and sub-themes

THEMES	SUB-THEMES
MICROSYSTEM	
Prioritising the needs of learners with special educational needs	▪ *Learners being misplaced* ▪ *Strengthening mainstream schools to be more inclusive* ▪ *Eliminating an exclusive education system* ▪ *Prioritising funding to promote inclusive education*
MESOSYSTEM	
The need for inclusive education to move from policy to implementation.	▪ *Ensuring and prioritising inclusive education* ▪ *Existing policies need to be reviewed* ▪ *Lack of communication between policy makers and education providers* ▪ *Poor implementation and monitoring*
EXOSYSTEM	
Inadequate resources.	▪ *Lack of classroom resources* ▪ *Lack of schooling facilities* ▪ *Lack of human resources* ▪ *Alternative arrangements made for the lack of resources* ▪ *Creating a poverty cycle*
Lack of teacher training and development programmes.	▪ *Lack of teacher training, skills and knowledge* ▪ *Challenged by the implementation of the curriculum* ▪ *Training and consultation provided by experts/professionals in the field.* ▪ *Equipping mainstream teachers*

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MACROSYSTEM	
Striving for an inclusive education system in the Western Cape.	▪ *Working towards an improved education system* ▪ *Merit in the current system*

Table 7.3 Detailed summary table of the themes and sub-themes

	THEMES	SUB-THEMES
M I C R O S Y S T E M	**1. Prioritising the needs of learners with special educational needs** Meeting the needs of the learners should be top priority. Learners being misplaced does not allow the learner to grow and develop optimally. Creating a more inclusive environment within mainstream schools and eliminating exclusivity by allocating the needed funds to establish a better inclusive system.	*Learners being misplaced* in the schooling system is of great concern to the stakeholders. Learners enter the education system without proper screening. Many learners battle to adjust and settle in due to the difficulties they experience in the classroom. Misplacing learners with special needs results in them getting "lost" in the system. This impacts the growth and development of the learner due to the lack of oversight and poor assessment and placement.
		Strengthening mainstream schools to be more inclusive is one of the goals set out by the Education Department. Creating a learning environment for all learners within a mainstream setting would be ideal as this way, both learners with special needs and those without any barriers may learn together. Many learners with ASD are able to cope in a mainstream environment but are not given the opportunity. Inclusivity will eliminate or minimise the stigma attached to ASD and other special needs learners. Teachers in mainstream schools need to be provided with training to incorporate inclusiveness in the classroom environment.

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		Eliminating an exclusive education system is what the inclusive education policy is trying to achieve. It will allow learners with special needs the opportunity to engage and learn on various platforms without being disadvantaged or excluded from society. The impact this might have on the learner both now and long term is concerning. The DoE is battling with finding placement within mainstream schools for children with barriers to learning. These challenges are not only unique to low-income communities. Stakeholders believe that the focus should not be on building more buildings, but rather on the use of mainstream schools and making them more inclusive. This will alleviate the long waiting lists crisis. Learners are being home schooled and excluded from society because of ASD.
		Prioritising funding to promote inclusive education should be regarded as a high priority. Funding is needed to improve and work on new and existing systems. The general consensus is that the budget for inclusive education is not sufficient given the level of need in communities. Funding is essential for training and upskilling teachers, schooling resources and infrastructure needed for more facilities. Schools structured for learners with ASD need funds for various materials to ensure successful teaching.
M E S O S Y S T	**2. The need for inclusive education to move from policy to implementation.** Inclusive education needs to be prioritised. The goals and objectives set for achieving a more inclusive education system must be reviewed. The effectiveness and implementation of policies must	*Ensuring and prioritising inclusive education* is not a high priority for the DoE despite the waiting lists and statistics of learners with ASD that have not been placed in schools. The statistics are alarming and stakeholders have raised concern about the lack of intervention to address these matters. Inclusive education systems are put in place, but the success thereof affects only a few learners.
		Existing policies need to be reviewed. The White Paper 6 has been in circulation for a decade and the policy is seen as a failed endeavour. The paper has many flaws and does not cater for all learners with special needs. The policy needs to be reviewed by various experts in the different sectors

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E **M**	be evaluated. The lack of communication between policy makers and education providers should be prioritised. This will address poor implementation and monitoring.	of education, particularly teachers, therapist etc. and claims have been made that the policy is outdated. The implementation of this policy is behind schedule and thus requires reviewing. The effectiveness of this policy has failed and is not working.
		Lack of communication between policy makers and education providers. This is disconcerting as communication between various members and role players are important. To ensure the successful implementation of policy, the communication channels should not be blurred. Education providers must be well informed and included in the planning as inadequate communication creates confusion and resistance. Education providers might show a level of resistance as a result of the lack of communication and engagement pertaining to the policies put in place. Many of these polices are designed and developed by a different team to the team that will execute the policy. Teachers and schools are not adequately informed of policies and barriers must be eradicated.
		Poor implementation and monitoring are due to the lack of engagement. The policies exist and serve as a framework for education providers, however, the implementation of policies is not successful. The policy is embedded in the DoE's belief in inclusive education. Implementation is important as the policy cannot have any effect on the learner if the steps and implementation plans are not clearly stipulated. Much of the policy remains theoretical and government is not monitoring the implementation process closely.
E **X** **O**	**3.Inadequate resources.** Inadequate resources for children with ASD and the implications thereof affect the child, parents and teachers.	*Lack of classroom resources* seems to remain a challenge within the education system. Schools are equipped with resources, but these are insufficient. Resources for all schools including mainstream and special needs schools are prioritised, however, they are not enough to sustain schools throughout the year. The level of stress experienced by teachers due to the lack of resources leads to frustration and negative attitudes.

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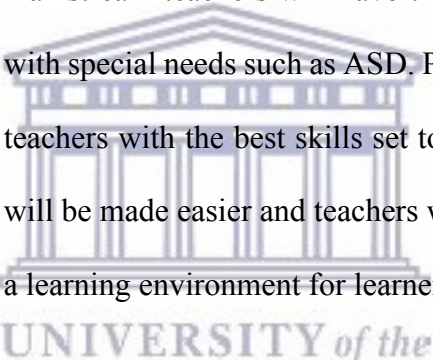
S Y S T E M		*Lack of schooling facilities* has become a critical topic and concern for parents, stakeholders and education providers. There are not enough schools for learners with special needs including children with ASD consequently they stay at home. Only a few schools are dedicated to special needs and many learners who cannot be accommodated are battling. The space allocated in special needs schools is limited and therefore the crisis is on the increase. Cognisance is not taken of the ratio of learners with special needs to the number of schools available.
		Lack of human resources and limited manpower means that schools are battling to accommodate learners. There is a need for more teachers to work in special needs education as well as more therapists to assist and facilitate the learning process. The lack of teachers and therapists make learning a challenge and many learners are refused access due to limited resources available. The number of learners needing therapy is just not realistic in relation to the resources available at special needs schools.
		Alternative arrangements made for the lack of resources. The lack of resources has major repercussions and parents are faced with having to home school their child or place them in a centre that can accommodate them. Parents are left with having to make their own arrangements because schools have denied the child access. Learners are placed on waiting lists, but only some of them receive a response.
		Creating a poverty cycle. Some parents are compelled to stay at home due to the lack of resources available to them. Not having access to schooling for their child means that they need to stay at home and educate the child the best they can. This has financial implications for the parents/guardian/caregiver. It places great strain on the parent and can raise further concerns pertaining to the development of a child with ASD. Parents living in the low-income bracket and those who are unemployed suffer most

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		as they are living in poverty and are now faced with the challenge of meeting the educational needs and development of their child.
E X O S Y S T E M	**4.Lack of teacher training and development programmes.** Teacher training and awareness of current policies in inclusive education is vital. Government needs to provide training opportunities for both special education teachers and mainstream teachers to increase their knowledge and awareness of autism and policies that need to be implemented.	*Lack of teacher training, skills and knowledge.* Teachers are not aware of the signs and symptoms of ASD and find it difficult to identify the needs of a learners on the autism spectrum. The lack of knowledge affects the way the teacher engages with the learner. Understanding the meaning of ASD, how learners with ASD function and the best way to deal with learners will allow for growth. Thus, there is the need for training and development in this area. Special education teachers need specialised training in the field to equip them with the necessary skills to teach.
		Challenged with the implementation of the curriculum. Teachers are challenged with the task of fulfilling their role and responsibilities in the classroom. Special education teachers including mainstream teachers find it difficult to follow the curriculum as they are not adequately trained. Therefore, the implementation of inclusive education along with the recommended curriculum is believed to place teachers in an awkward position.
		Training and consultation provided by experts/professionals in the field is essential to the quality of training teachers and education providers receive. It is most important that teachers and education providers are trained and equipped by experienced professionals in the field of special

		needs. Special needs education is a specialised field and individuals providing training should have the experience and exposure in the field to offer sound advice and expertise. Understanding the challenges and classroom situations will add value to the training offered and given to special education teachers about mainstream teachers.
		Equipping mainstream teachers has been raised and stakeholders feel strongly that mainstream teachers must be trained and equipped with the essential skills to deal with special needs learners. Once this is achieved, mainstream teachers will have the confidence and skills to teach learners with special needs such as ASD. Practical skills must be provided to enable teachers with the best skills set to teach in an effective manner. Teaching will be made easier and teachers will have the skills to create and maintain a learning environment for learners with ASD.
M A C R	**5.Striving for an inclusive education system in the Western Cape.** Striving for an inclusive education system. Inclusive education has a long way to go,	*Working towards an improved education system* is what many countries aspire to. Their hope is for the successful implementation of policies and procedures in order to create an inclusion school culture. The ongoing effort in ensuring that plans are put in place is imperative for the future of inclusion in schools. The DoE is putting measures in place to alleviate some of the difficulties experienced.

O S Y S T E M	however, there has been some improvement and successes.	***Merit in the current system.*** There has been some success attached to the introduction and implementation of the White Paper 6. Stakeholders were of the view that the Western Cape has progressed with the plan for inclusive education while other provinces are still battling to put systems in place. The system in the Western Cape has its flaws, but there has been progress. There are structures in place to facilitate the placement of learners and a team has been appointed to dedicate time to this.

7.7 Trustworthiness of the Study

To ensure and uphold trustworthiness, the interviews were transcribed verbatim and regular consultation and input were given. The process of analysis has been checked numerous times to ensure that what participants had mentioned is indeed correct. Credibility, dependability, conformability and transferability were applied (Patton, 2005). A substantial amount of engagement was established with all participants to ensure credibility (Creswell, 2013). To ensure transferability, the participants were purposively selected, and in-depth interviews were conducted that strengthens the study. Dependability was ensured by stating clearly how the information for this study was obtained, explaining step by step and remaining transparent. This way, should the same study be conducted by another researcher, the results will be similar (Shenton, 2004). An audit trail was kept to documenting the processes followed, ATLAS.ti played a crucial role in ensuring confirmability and keeping everything organised. Therefore, the findings are justifiable in relation to the research material gathered (Bless, Higson-Smith & Kagee, 2006).

7.8 Results

The results of this study comprised 118 quotations and 34 codes. Furthermore, the data were analysed using thematic analysis by Braun and Clarke (2013). The following themes and sub-themes emerged and are discussed below:

7.8.1 Prioritising the needs of learners with special educational needs

Meeting the needs of learners should be a top priority. Learners being misplaced does not allow them to grow and develop optimally. Creating a more inclusive environment within mainstream schools and eliminating exclusivity by allocating the needed funds appropriately will ensure a more inclusive system.

Learners being misplaced

The schooling system is of great concern to stakeholders Learners enter the education system without proper screening. Many learners battle to adjust and settle in due to the difficulties they experience in the classroom. Misplacing learners with special needs results in them getting "lost" in the system. This impacts the growth and development of the learner due to the lack of oversight and poor assessment and placement.

> '…… *kids who are sitting sheltered in private education because their parents can't find anywhere or sitting at home or being dumped in special care centres should be going into the autism specific schools.*' [Participant 1]

> '*I don't think special care centres are ever appropriate for autistic kids because people who are often involved in feeding and changing diapers because they're predominantly*

occupied by kids with cerebral palsy. It is not an appropriate placement for autistic children...' [Participants 2]

'*This is unacceptable and stems from the poor use of resources within mainstream schools, and the insistence of mainstream schools to dump children with special needs into special schools with little thought on ensuring that such placements are suitable'.* [Participants 4]

Strengthening mainstream schools to be more inclusive

The goals set out by the WCED to create a learning environment for all learners within a mainstream setting would be ideal. This way both learners with special needs and those without any challenges may learn together. Many learners with ASD are able to cope in a mainstream environment but are not given the opportunity. Inclusivity will eliminate or minimise the stigma attached to ASD and other special needs learners. Mainstream schools need to be provided with training in order to incorporate inclusiveness in the classroom environment.

'*but I'd just want to see our kids being in schools, in mainstream schools and being supported. Having more support staff automatically at mainstream. I think a speech therapist is a priority at every single school. We've got enough professionals in the field.'* [Participants 1]
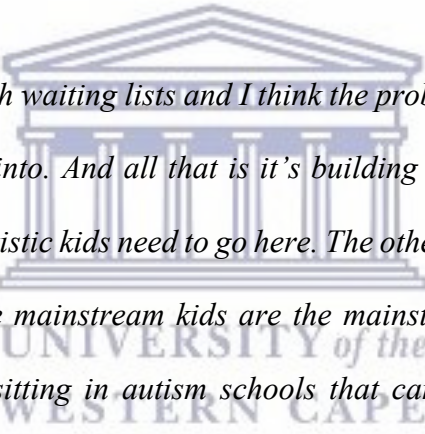
'*Many ASD children do cope within mainstream settings where the correct support for that child is put in place. Many more could be accommodated were this support put in place.'* [Participants 2]

'*Having better trained teams within more mainstreamed schools, better use of support and facilitators within mainstream schools.'* [Participants 2]

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Eliminating an exclusive education system

The EPW6 aims to afford learners with special needs the opportunity to engage and learn on various platforms without being disadvantaged or excluded from society. Stakeholders shared their views and concerns of having mainstream schools and special needs schools. The DoE is battling to find placements for learners with special needs. Stakeholders believe that the focus should not be on building more buildings, but rather to use mainstream schools and make them more inclusive. This will alleviate the long waiting lists crisis. Learners are being home schooled and excluded from society because of ASD. The current education system is creating a culture of exclusion rather than inclusion.

> '*So, we're still sitting with waiting lists and I think the problem is that they are waiting for buildings for kids to go into. And all that is it's building an exclusive education system. Because we're saying autistic kids need to go here. The other kids with learning disabilities need to go there and the mainstream kids are the mainstream kids. What we should be doing is what kids are sitting in autism schools that can actually be accommodated*?' [Participants 3]

> '*We still focus too much on building specialised schools. We're never going to build enough. We're never going to have enough trained teachers. And what's all it is we're creating again, and I said in an interview, is we're creating a generation who is not used to seeing a generation of special needs.*' [Participants 4]

Prioritising funding to promote inclusive education

Allocation of funding for inclusive education should be regarded as a high priority. Funding is needed to improve existing systems and create new systems. The general consensus is that the

budget for inclusive education is not sufficient to address the level of need in the community. Funding is essential for training and upskilling teachers, schooling resources and infrastructure required for more facilities. Schools structured for learners with ASD need funds for various materials to provide successful teaching.

> '*But again, a massive marquee that they had to drill into the ground for and huge displays. And I'm like how much money have you spent that could have gone to get another teacher into the school? Just your budgets are whacked. I just don't understand it.*' [Participants 2]

> '*I would hope for committed financial resources ring fenced for IE and monitored to hold Provinces accountable.*' [Participants 1]

> '*….. additional funding needs to be made available for teacher training to enrol into all these special needs classes.*' [Participants 5]

7.8.2 The need for inclusive education to move from policy to implementation

Inclusive education needs to be prioritised. Therefore, the goals and objectives set for achieving a more inclusive education system must be reviewed. The effectiveness and implementation of policies must be evaluated. The lack of communication between policy makers and education providers should be prioritised as this will address poor implementation and monitoring.

Ensuring and prioritising inclusive education

Inclusion is not a top priority for the DoE given the waiting lists and statistic of learners with ASD that have not been placed in a school. The statistics are alarming, and stakeholders have raised concern about the lack of intervention to address these matters. Inclusive education systems have

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been put in place, but the success thereof affects only a few learners. It is clear that stakeholders agree that IE is not being prioritised and should be taken more seriously. Stakeholders had the following views on the matter:

'..... *inclusive education is currently not top priority*.' [Participants 7]

'*And when you're sitting on 65 000 learners out of school versus let's say there's 5/10 000 special needs learners out of school where is your priority? So, I'd really loved to think that the Education authority is prioritising that, I don't think they are.*' [Participants 1]

IE can be achieved if the following is considered and implemented:

'*Teachers should be capacitated and trained in the policy documents*' [Participants 3]

'*A focus on strengthening ordinary schools as inclusive schools.*' [Participants 1]

If IE is not achieved and the system fails to establish a policy and programmes that work, many children will continue to be disadvantaged:

'*If things carry on the way they are, more and more special needs children will be home-schooled or abandoned and lost.*' [Participants 5]

Existing policies need to be reviewed

The EWP6 has been in circulation for a decade and the policy is seen as a failed endeavour. The EWP6 has many flaws and does not accommodate all learners with special needs. The policy needs to be reviewed as claims have been made that it is outdated and its implementation is behind schedule. The effectiveness of this policy has been questioned. The reviewing process must be

done by accredited individuals that have experience in the field and knowledge to add value to the existing documents/policies. These experts should be educational experts in the field.

'*We've got the White Paper 6 that everyone knows about and then following the White Paper 6 there's the SIAs Protocol, the Screening and Identification, Assessment and Support – really nice policies but what has become very clear is that they're written by people who never step foot in a classroom.*' [Participants 1]

'*I personally feel that current policies fail to take diverse needs into account.*' [Participants 3]

'*WP 6 is outdated and urgently requires review*' [Participants 2]

Lack of communication between policy makers and education providers

This is concerning as communication between various members and role players is important. In order to ensure the successful implementation of policy, communication channels should not be blurred. Education providers must be well informed and participate in the planning. The lack of communication creates confusion and resistance. Education providers might show a level of resistance as a result of the lack of communication and engagement pertaining to the implementation of policies. Many of these polices are designed and developed by a team other than the team that will execute the policy. Teachers and schools are not adequately informed of policies and barriers that must be eradicated. The role players would add significant value will be the education departments specialised team that deals with the placement, screening and matters pertaining to special needs education, policies and implementation thereof.

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'Removing much of the red tape that currently blocks these discussions between policy makers, parents and providers is key.' [Participants 3]

'There is some discussion with the Department, but I feel more consultation outside the Department and with parties with experience of how SEN is supported around the world is key. Removing much of the red tape that currently blocks these discussions is key.' ' [Participants 1]

Poor implementation and monitoring

Policies that serve as a framework for education providers exist but their implementation has been unsuccessful due to the lack of engagement, Implementation is important as a policy cannot have any effect on the learner if the steps and implementation plans are not clearly stipulated. Much of the policy remains theoretical and government is not monitoring the implementation process closely.

'They're great policies and the rights that they open up for the learners with special needs across the spectrum; not only just autism are fantastic. And they really, in theory creates parts towards inclusion. But there's nothing being done in the implementation of them.' [Participants 1]

'So, policies in theory are lovely. Like as a theoretical framework –fantastic. But their implementation is severely, severely lacking.' [Participants 2]

'I think is what we do it we over-theorise about it and I mean we put so much policies in place that you can't actually get to the protocol. That is where the problems come in.' [Participants 5]

7.8.3 Inadequate resources

Inadequate resources for children with ASD and the implications thereof affects the child, parents and teachers.

Lack of classroom resources

The lack of classroom resources remains a challenge within the education system. Schools are equipped with resources, but they are not sufficient and there is a need for more resources. Resources for all schools including mainstream and special needs schools are prioritised, however, they are not enough to sustain schools throughout the year. The level of stress experienced by teachers' due to lack of resources leads to frustration and negative attitudes.

> '*Sufficient resources are a challenge but bearing in mind the need in schools are so big resources will always be a challenge.*' [Participants 6]

> '*All schools in our district (Metropole East Education District) have access to resources to support learners, but the as previously mentioned the resources is totally insufficient.*' [Participants 7]

> '*But too many are abandoned by the education system due to poor teacher training, lack of resources and negative attitude.*' [Participants 4]

> '*So, the resources that are made available when teachers are actually trained are not enough.*' [Participants 1]

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Lack of schooling facilities

This is a critical topic and concern for parents, stakeholders and education providers. There are not enough schools for learners with special needs and thus children with ASD are left at home. The space allocated in special needs schools is limited and therefore the crisis is on the increase. The ratio of learners with special needs to the number of schools available is not taken into consideration.

'So, having an inclusive environment in a mainstream school is going to be difficult. And therefore, the need for special needs schools. So, I am aware that the WCED does have a lot of pressure on itself to create more special needs schools because their waiting lists on the current special needs schools are so long.' [Participants 4]

'I do think that there are still not enough special needs schools. The ratio of mainstream vs special needs schools is not high enough because of the waiting list.' [Participants 7]

'They're just not doing it. So, we're still sitting with waiting lists and I think the problem is that they are waiting for buildings for kids to go into.' [Participants 5]

Lack of human resources

Manpower is limited and schools are battling to accommodate learners. There is a need for more teachers to work in special needs education as well as more therapists even classroom assistants to assist and facilitate the learning process. The lack of both make learning a challenge and many learners are refused access to schools' due to the limited resources available. The number of learners needing therapists exceeds the resources available at special needs schools.

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'The human resource in the mentioned structure are not sufficient and therefor limited services to schools.' [Participants 8]

'Too little human and physical resources to accommodate the needs of the learners.'

'They have two outreach teams now rather than one. But those are still two teams who are meant to be seeing a 1000 learners.' [Participants 1]

'But just on manpower, I think one of the things we're lacking together with facilities, I think we can build, in fact, we shouldn't be building.' [Participants 3]

Stakeholders raised the concern that there are not enough therapists to assist both the teachers and the learners. The role of therapists is crucial in the assessment and placement process and this contributes to the long waiting list crisis. Stakeholders had the following to say:

'*So, they do no individualised... I mean I think they've got like two or three speech therapists in a school of almost 200 kids of which a third has speech problems there is absolutely no way that those individuals, those therapists would get around and be able to do and work with all those kids.'* [Participants 1]

'They actually don't have enough speech therapists.' [Participants 7]

'That's a two-week period. How many kids are you actually going to get through in the Western Cape realistically? So that just falls completely flat. And in that way, I think in terms of placement it is not working because kids are not being placed effectively. With that, just not having enough resources for children.' [Participants 2]

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Alternative arrangements made for the lack of resources

The lack of resources has major repercussions and parents are faced with having to home school their child or place their child in a centre that can accommodate the child. Parents are left with having to make their own arrangements because schools have denied the child access. Parents are placed on waiting lists but only some of them receive a response.

> *'And no-one will take him because they are at school-going age. So, they're too old for crèches. Mainstream schools are still, as I said, turning their backs.'* [Participants 8]

> *'Parents have to make their own arrangements for care until place is found, the WCED helps with home programmes'* [Participants 2]

> *'But where do these kids go? But also, the DSD doesn't have facilities for them, they don't have educare facilities for them.'* [Participants 6]

Creating a poverty cycle

Some parents are compelled to stay home due to the lack of resources available to them. Not having access to schooling for their child means that they would need to stay at home and educate the child the best they can. This has financial implications for the parents/guardian/caregiver. It places great strain on the parent and can raise further concern pertaining to the development of a child with ASD.

> *'So, these parents are sitting at home or they're sitting with their grandparents. But most of the time with their parents – sitting at home and then what we're doing is that we're exacerbating that cycle of poverty.'* [Participants 2]

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'Because that means the mother cannot go out and get a job which means that she cannot afford any of the therapies her child actually needs in order to be better equipped to actually handle that placement. It is all just affecting the poverty cycle that the parents are in.' [Participants 1]

'And it often means that one of the parents or caregivers have to stay at home to manage this child. So, it places a strain on the supporting circle around that child because there's not enough facilities for that child to be housed during office hours.' [Participants 3]

7.8.4 Lack of teacher training and development programmes

Teacher training and their awareness of current policies in inclusive education is vital. Government needs to provide training opportunities for both special education teachers and mainstream teachers to increase their knowledge and awareness of autism and policies that need to be implemented.
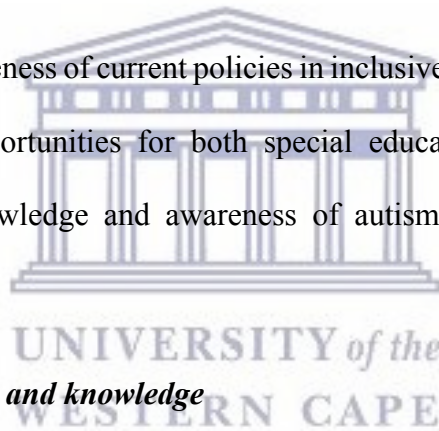
Lack of teacher training, skills and knowledge

Teachers are not aware of the signs and symptoms of ASD and find it difficult to identify the needs of learners on the spectrum. The lack of knowledge affects the way the teacher engages with the learner. Understanding the meaning of ASD and the best ways to deal with learners will allow for growth. Thus, the need for training and development in this area. Special education teachers need specialised training in the field to equip them with the necessary skills to teach.

'In my experience, teachers within the special schools were ill trained in the diverse special needs they are now expected to deal with.' [Participants 1]

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'But too many are abandoned by the education system due to poor teacher training.'
[Participants 6]

'Teacher's first of all - not a lot of, teachers don't get trained, well, as far as I know, teachers are not trained to... or older teachers like 10 years or so old in the past now are not trained in the teacher training colleges or wherever to deal with special needs.'
[Participants 8]

Challenged with the implementation of the curriculum

Teachers are challenged with this task of fulfilling their role and responsibilities in the classroom. Special education teachers find it difficult to follow the curriculum as they are not adequately trained. Therefore, the implementation of inclusive education with a recommended curriculum could place teachers in an awkward position. Some teachers lack the ability to adapt the curriculum for learners with ASD.

'Teachers struggling with implementation of curriculum (NCS and CAPS) – inclusive education is currently not top priority.' [Participants 7]

'lack of suitably adaptable curriculum resources exacerbates the problem.' [Participants 4]

'The expectation that special schools follow CAPS nullifies the point of these schools and does little to support these learners.' [Participants 1]

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Training and consultation provided by experts/professionals in the field

It is most important that teachers and education providers are trained and equipped by experienced professionals in the field of special needs. Special needs education is a specialised field and individuals providing training should have the experience, expertise and exposure in this field to offer sound advice. Understanding the challenges and classroom situations will add value to the training offered to special education teachers.

> *'I know a lot of teachers that are good, when we do our trainings, one of the big things, for example, that has made our training successful is teachers, I'm just thinking this is what the Education Department could draw on, is when teachers are saying this, ag, you're saying, but what do you know about autism.'* [Participants 1]

> *'That's the kind of training teachers need from professionals because they're not going to respect you if they feel that you have no idea what they are going through. So, having people who are doing those trainings being people who actually understand what teaching is like; a day in the life of a teacher.'* [Participants 3]

Equipping mainstream teachers

Stakeholders feel strongly that mainstream teachers must be trained and equipped with the essential skills. Once this is achieved, teachers in mainstream schools will have the confidence and skills to teach learners with special needs such as ASD. The practical skills must be provided to enable teachers with the necessary skills set to teach in an effective manner. Teaching will be made easier and the teacher will have the skills to create and maintain a learning environment for learners with ASD.

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'There's no support and if you ask them about it they're completely overwhelmed. They have no idea what to do with the kids.' [Participants 2]

'A mainstream school does not have the resources. The teachers don't know enough about special needs in order to handle kids with special needs.' [Participants 1]

'It also takes a different kind of temperament in a teacher to manage a child with special needs and the environment is totally different environment than your mainstream schools.' [Participants 4]

7.8 5 Striving for an inclusive education system in the Western Cape

Although inclusive education has a long way to go, there have been some improvements and successes. In the Western Cape, various organisations such as Autism Western Cape are making resources available to the public, arranging various workshops and taking providing training in communities that are low resources. The DoE is in support of the training teachers by offering talks, workshops and short courses to educate the community. The WCED has a district support specialist to assist schools to meet the requirements of children with special learning needs or any learners experiencing barriers to learning. This support is available to learners in mainstream schools, a school psychologist, learning support advisors and social workers are all involved to support learners.

Working towards an improved education system

Many countries are working towards successfully implementing policies and procedures that will achieve inclusion. The continued effort in ensuring that plans are put in place is imperative for the

future of inclusion in schools. The DoE is putting measures in place to alleviate some of the difficulties experienced.

> *'Specialised IE teams are required to offer support to these learners. The WCED is establishing satellite sites for learners with ASD. These sites are supported by the provincial ASD outreach teams.'* [Participants 7]

> *'We at least have a system when it does work. It doesn't always work. Granted it's got its fault but that's just systematical stuff. But we've got a system. I think we're likely to rollout resources to this system... and the Education Department is getting it – they're trying.'* [Participants 1]

> *'What they are doing is separate curricula. The Department of Basic Education is also talking about doing a functional curriculum. So literally it is a functional curriculum for severe and profound intellectual disability. So, they've included autism in that category.'.* [Participants 8]
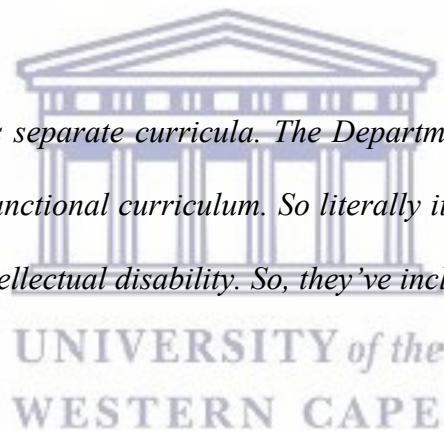
Merit in the current system

The introduction and implementation of the EWP6 has met with some success. Stakeholders were of the view that the Western Cape has progressed with the plan for inclusive education while other provinces are still battling to put systems in place. The system in the Western Cape has its flaws, but there has been progress. There are structures in place to facilitate the placement of learners and a team has been appointed to dedicate time to this.

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'The past 3 years the WCED expand the facilities to support ASD learners. Few years ago, there were only 2 schools for ASD learners. Currently WCED do have 13 facilities for ASD learners and opening more units annually.' [Participants 8]

'I think the Western Cape has a better system than anywhere else. I think given our... I'll give the WCED its dues.' [Participants 1]

'The WC is doing considerably better than most provinces implementing innovative models' [Participants 3]

'The same can be said of ordinary public schools supporting learners with disabilities. Again, the WC is better than most.' [Participants 5]

7.9 Discussion

Participants in this study shared their perceptions on IE for children with ASD and the implementation of policy in the Western Cape, South Africa. The views shared were based on each participant's experience in the field of special needs and inclusivity within our schooling system. The discussion of this study is guided by the themes that emerged to address the challenges and merits identified.

7.9.1 Prioritising the needs of learners with special educational needs

The needs of learners with special educational needs vary based on the severity of the diagnosis. According to O'Brien and Daggett (2006), the diagnosis will guide both the parent and the educational providers. The needs of learners with ASD are clearly stated by Tomlinson (2014) who reiterates the importance of meeting the needs of learners with various special needs.

Prioritising learners with special needs in a more inclusive schooling system will eliminate the barriers learners are faced with and allow them equal opportunities to develop. Learners with ASD may differ in that their behaviour and cognitive functioning might present itself differently to that of other learners on the spectrum. Therefore, a "one size fits all" approach is questioned when dealing with children and special needs. Learners with special needs should be seen as individuals and a one size fits all approach is not recommended (Carnie, 2017). In a study by Fuchs and Fuchs (2006), the importance of a learner profile has been raised to ensure that the learners' needs are met. This way the appropriate intervention can be implemented based on the learners needs. The misplacement of learners in inappropriate settings can be addressed if the proper learner profiles are put together for the greater good of the learner (Kurth, Morningstar & Kozleski, 2014).

7.9.2 The need for inclusive education to move from policy to implementation

Globally, countries are striving for an inclusive education system and policies have been developed to address the matter (Hardy & Woodcock, 2015). Participants in this study identified the need to prioritise IE and review existing policies on a regular basis to eliminate poor implementation. According to the participants of this study, policies have been designed for a specific purpose, however, these policies are not being monitored. According to Naicker (2007), policy and practice in South Africa has many challenges and possibilities for inclusive education. Researchers believe there are many reasons for poor policy implementation. Engelbrecht (2006), ascribes this to the lack of resources and trained teachers. According to the DoE (2005) teachers should have the ability to identify learners with special educational needs in order to effectively implement interventions for inclusion. The lack of knowledge pertaining to policies is a hindrance and has a direct influence on the implementation process. Another contributory factor that does not allow for implementation is the negative attitudes of teachers towards IE as a result of the lack of

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knowledge and teacher training. This has been reported in research studies conducted in South Africa, India, USA and Nigeria (De Boer, Pijl & Minnaert, 2011; Dupoux, Wolman & Estrada, 2005; Fakolade, Adeniyi & Tella, 2017; Donohue & Bornman, 2014). The reality is that much of the success regarding the implementation of policies is dependent on the attitude of teachers (Sutherland & Teacher, 2004). According to Chafouleas and Riley-Tillman (2005), the lack of collaboration and communication between education providers, teachers and policy makers also affects the implementation of policy. Policy provides a framework for teachers and educational providers, therefore it is imperative that polices should be reviewed on an ongoing basis.

7.9.3 Inadequate resources

The need for resources is essential when providing a service to learners with special educational needs. Learners with special needs such as ASD require an environment that is conducive to learning, organised space and adequate resources to facilitate the learning process (Ashman & Conway, 2017). The sad reality confronting many children is not having a space in a classroom environment due to the lack of schooling facilitates (Smith & Dale, 2016). Participants in this study emphasised the need for more schooling facilities and classroom resources, including more human resources. This includes employing trained teachers who are passionate and dedicated to working in the field of special needs. South Africa is one of the many countries (both developed and developing) experiencing difficulties in placing learners in a school setting that is equipped for teaching and learning to take place (Fakolade, Adeniyi & Tella, 2017). As a result, many parents are left with no other option but to home school their child with ASD and other special needs (Berger & Lorenz, 2016). These parents may face an additional challenge of having to resign from their work and stay at home full-time to take care of their child. The lack of resources has a

ripple affect not only for the child/learner, but the parents as well. Stakeholders shared their concern as they have engaged with many parents fighting this battle for many years.

7.9.4 Lack of teacher training and development programmes

Children with special needs present a variety of needs that need to be addressed within an education environment. Children with ASD might present difficulty with social interaction, language impairment and repetitive behaviour, which require specialised attention (Wijnhoven, Creemers, Engels & Granic, 2015). In order for teachers to accommodate and create an environment that is conductive for a learner with ASD, they would need special training. A study presented by Polyak, Kubina and Girirajan (2015) reported that children with ASD could develop other disorders such as attention deficit hyperactivity disorder, dyspraxia or generalised anxiety disorder. Therefore, it is imperative that teachers are adequately trained and have the knowledge to deal with learners presenting the signs and symptoms in class. Specialised teacher training is what many countries are striving for to encourage schools to be more inclusive and accommodate learners with special needs (Bryant, Bryant & Smith, 2015). In Canada, teachers receive little training in IE at university and are not exposed to adequate material to prepare them for special needs education and inclusion (McCrimmon, 2015). A study done in Finland indicated that the importance of specialised training is strongly related to teachers' beliefs about inclusive education and self-confidence to teach learners with special needs (Paju, Räty, Pirttimaa & Kontu, 2016). A study conducted by Boujut, Dean, Grouselle & Cappe, (2016) highlighted that teachers adjust better if they are adequately trained and have experience together with a conducive learning environment. A conducive learning environment has been defined by Ahmad, Shaari, Hashim and Kariminia (2015) and emphasises that teachers are expected to create this environment, which becomes particularly challenging without training. This involves creating an environment with human comfort, physical spatial

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planning needs, and quality furnishing and finishing. In South Africa, teachers still feel that they are not adequately trained for the classroom and special education (Nel, Engelbrecht, Nel & Tlale, 2014).

7.9.5 Striving for an inclusive education system in the Western Cape

Globally, countries are striving for an inclusive society where schools can accept and accommodate learners with special needs (Srivastava, de Boer & Pijl, 2015). In South Africa, all nine provinces should strive for IE. This study revealed that stakeholders believe that the Western Cape is doing well in obtaining and working towards IE. Systems are in place that seem to be working optimally albeit not as effective as they should. Furthermore, stakeholders reported that while this system is being implemented in the Western Cape, it is absent in many other provinces in South Africa. However, there is a need for improvement to ensure that this system works more effectively and reaches more learners in a positive way. Learners are being identified and placed in schools whether mainstream with support, full service school or school for learners with barriers to learning. This is to ensure their developmental and educational needs are met. This has been successful in the Western Cape due to the work of specialised teams and screening of learners for school placement. Few studies report on the successful implementation of policies promoting IE. However, studies report on the challenges and that creating an IE system is far from easy as there is limited evidence on the progress in most countries (Ainscow & César, 2006).

7.10 Limitations

For the purpose of this study, only stakeholders from the Western Cape Province were included, limiting the study to one province in South Africa. The objective of this study is mainly focused on ASD and does not include other special needs/learning needs.

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7.11 Conclusion

Promoting an inclusive education system for children with ASD remains a challenge due to various factors identified by stakeholders. This study identifies the challenges and merits of the current system working towards inclusion within our schools. The challenges outweighed the positives as IE is a goal that is still a work in progress. The highlight of this study was recognising that the system currently in place is working optimally and with adequate resources, specialised teacher training and the prioritisation of IE (promoting policy and practice implementation), the current system will flourish.

7.12 Recommendation for Future Studies

It is recommended that for future studies, stakeholders from other provinces be included in the study to broaden the body of knowledge and input. Future studies could explore other learning difficulties and whether the system is promoting inclusive education for learners with other developmental and neurological disorders.

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CHAPTER EIGHT

The development of a framework for parents and educators to enhance access to resources that educate children presenting with autism spectrum disorder

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Abstract
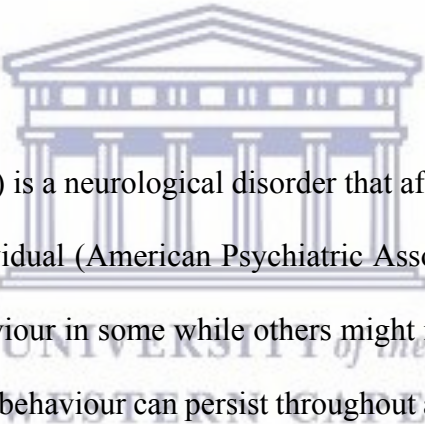
The aim of this study was to develop a framework for parents and teachers to enhance access to resources that learners with autism spectrum disorder need. Various educational stakeholders, parents and teachers participated in the study and their contributions added significant value and allowed for greater depth and rich data. The study included a workshop to reach agreement on the proposed framework where experts and community members had the opportunity to contribute and refine the framework developed. The framework has four main aims: (1) to increase the resources for promoting inclusion; (2) to focus on collaboration and communication among the Department of Education, parents, teachers and educational stakeholders; (3) to have knowledgeable and skilled teachers; and (4) curriculum adaptation for learners with barriers to learning. Following these findings, the framework was presented to participants and they had the opportunity to share their descriptive thoughts on the content of the framework and raise any concerns, this was a participative process. This study emanates from a doctoral thesis; stems from one of the objectives.

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Keywords: autism spectrum disorder; framework development; logic model; expert validation workshop.

8.1 Introduction

This chapter elaborates on the design and development of the framework, the framework is based on the findings that were discussed and contributed towards the development. This chapter aims to describe the process and input provided during a workshop that was conducted with various educational specialists, community members, parents and other professionals that have an interest in inclusion.

8.2 Background

Autism spectrum disorder (ASD) is a neurological disorder that affects social communication and the social interaction of an individual (American Psychiatric Association, 2013). The disorder is characterised by repetitive behaviour in some while others might not experience it to this degree. These symptoms and patterns of behaviour can persist throughout a person's life. However, others might find that symptoms improve slightly due to coping mechanisms and interventions (Semrud-Clikeman, Fine & Bledsoe, 2014). The number of diagnosed cases is growing globally, with international prevalence rising each year. Previous studies indicated that 1 in 68 children are affected by ASD (Adams et al., 2014). In Africa, little is known about ASD as most research and statistics are based in Western literature, mostly reflecting high income communities and countries. Autism Spectrum Disorder is not specific to context but research has shown that prevalence rates do increase in areas with low socio-economic status. Communities with a low socio-economic status have higher statistics which is a concern. Communities that are challenged have a dire need for basic community privileges and rights. This includes schools, healthcare facilities and

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community support to assist with any social issues being raised (De Vries, 2006). Due to the lack of resources in these communities, many children are prevented from gaining access to basic education, leaving many children excluded from mainstream schooling (Naicker, 2000). This raises concern for children that have specific educational needs wanting to access schools.

The term inclusion refers to the equal opportunities that should be available to all children allowing them to form part of a community, schooling system and society as a whole. Children with special needs, in particular ASD, find it challenging to seek the same approval as children that are considered mainstream. Globally, schools are striving for an inclusive education system. The World Conference on Special Needs Education, Salamanca, Spain in June 1994 held discussions regarding a more inclusive society and implementing inclusive education systems throughout the world (Miles & Singal, 2010). In South Africa, the education system is also striving for inclusive education and policies have been designed for implementation according to the EWP6 (DoE, 2001). However, it has been more than a decade since these policies were put in place. Schools are finding the implementation stressful and challenging. As a result, more children are being excluded and not allowed to exercise their basic right to education (Sloth-Nielsen, 2016). More than 70% of school-going age children with disabilities are at home without any education (Donohue & Bornman, 2014).

8.3 Problem Statement

Children with special needs such as ASD should have the same level of access to resources as mainstream children. Access to an education system should be every child's legal right (Sloth-Nielsen, 2016). Unfortunately, this is not the reality for many children with disabilities and special needs such as ASD. Even though schools are striving for an inclusive education system, the

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struggles outweigh the successes (Donohue & Bornman, 2014). This poses a challenge for parents

and many children are left unattended due to the long current waiting lists in every province in

South Africa. In the Western Cape, there are alarming statistics of children with ASD who are not

attending school. According to a study conducted by Pillay, Duncan and de Vries (2017), in the

Western Cape Province, South Africa, there are 338 children of legal school going age that have

not been placed in a schooling environment. A total of 744 children have ASD or suspected ASD

in this province. This is a clear indication that urgent action is needed.

8.4 Aim of the Study

The aim of the study was to develop a framework for parents and educators in low-income

communities to enhance access to resources that educate children presenting with autism spectrum

disorder.

8.4.1 Research question

What frameworks or structures are currently implemented to ensure accessibility to resources for

managing and educating a child with ASD?

8.5 Methodology

8.5.1 Research design

This study used a workshop design. A workshop is designed to strengthen the framework that has

been presented to participants and where participants become part of the participatory research

design. According to Kumar, Yammiyava and Nielsen (2007), workshops involve a particular

stimulus or a document related to primary data; in this instance, primary data allows for

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methodological transparency. Methodological transparency during the workshop process supports the primary data being presented and its quality. Workshops used as a research design are aimed at producing reliable and valid data about the matter in question, such as the organisation, change and design/framework (Ørngreen & Levinsen, 2017).

8.5.2 Data collection

Multiple data collection techniques were used during previous studies which informed this study; the development of the framework. Using multiple data collection methods for the same phenomena allowed for rich data to be obtained. Table 8.1 is a summary table referring to the previous phases and studies that were conducted. The final part of the broader study, developing the framework, will form a large part of this article. To reach the objective of the broader study, this study used a workshop method to reach consensus on the proposed framework. The results of the previous studies are provided in Table 8.2 below detailing the themes that emerged both horizontally and vertically across all the sample groups. The themes have been organised according to Bronfenbrenner's ecological systems theory.

Table 8.1 Summary of phases and studies

PHASE ONE **Understanding the problem**	PHASE TWO **Framework development**
SCOPING REVIEW **Aim:** The aim of the scoping review is to search for the evidence-based practice modules implemented within school settings **Output:** List of potential best practices models for teaching children with ASD.	**ACTIVITY 1** Findings from Phase one informed Phase two.
STUDY 1 **Aim:** The aim of the study was to explore parents' perceptions of the factors which enhance or hinder the educational needs of children with ASD. **Data collection:** Focus Group **Participants:** Parents **Sampling:** Purposive Sampling (40)	**WORKSHOP** **Aim:** The aim of the workshop is to reach consensus and conformity among all stakeholders to enhance access and resources for all parents and teachers. **Data collection:** Collaborative Workshop **Participants:** Educational Experts such as educational stakeholders, private and government sector, teachers, psychologist and counsellors.
STUDY 2 **Aim:** The aim of this study was to explore the perspectives of special education teachers on inclusive education and the barriers that hinder the educational development of learners with autism spectrum disorder. **Data collection:** Individual Interviews **Participants:** Special Education Teachers **Sampling:** Purposive Sampling (8)	

STUDY 3

Aim: To explore stakeholder's perceptions on inclusive education and resources for children with autism.

Data collection: Individual Interviews

Participants: Stakeholders

Sampling: Purposive Sampling (8)

Table 8.2 Triangulation of Data Sources					
MICROSYSTEM					
Scoping review	**Parents**	**Teachers**	**Stakeholders**	**Horizontal themes**	**Concluding statements**
Finding 1: Behavioral interventions are proven to be a useful and effective strategy just costly; involving 1 hour per week of parent training can be effective in reducing behavior problems and building social communication in children with ASD. **Finding 4: Technology-based interventions** This method is proven to be effective and the success rates are excellent just a costly method. For this method of teaching the use of resources becomes vital, without the resources this method of teaching will be a challenge.	**Theme 4: Financial implications due to lack of resources** Parents are constantly challenged financially; schools, particularly private schools, and medical consultations are expensive. Parents are forced to make sacrifices to ensure the development of their child's educational needs.	**Theme 1: Infrastructure and the physical learning environment** Teachers had many concerns related to the infrastructure and set up at schools. These included classroom capacities and the lack of resources available at the school to create a learning environment that conducive and the need for more special needs schools. **Theme 3: Inadequate resources** Inadequate resources for children with ASD and the implications thereof affect the child, parents and teachers.	**Theme 3: Inadequate resources** Inadequate resources for children with ASD and the implications thereof affecting the child, parents and teachers.	**Theme 1: Inadequate resources available in the community and schools**, lack of suitable infrastructure for learners, insufficient teaching equipment that allow for an inclusive learning environment. Due to the lack of resources, children with ASD receive limited support and parents are affected financially.	**Statement 1:** The lack of resources affects both the child with ASD and the parent. The lack of resources in communities and access to schooling is a challenge and there is clearly a need for more schools. Therefore, the barrier identified is a lack of community resources.

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MESOSYSTEM					
Scoping review	**Parents**	**Teachers**	**Stakeholders**	**Horizontal themes**	**Concluding statements**
Finding 3: Specific technique (modelling and reinforcement) Seen as an effective method to use in both the classroom and at home for learners with ASD. If no collaboration between teachers and parents the level of continuity will affect the outcome of successful results. Modelling and reinforcement should continue at home for favourable outcomes.	**Theme 1: Developmental and educational awareness and support** ASD awareness for parents, family members and the community as a whole is imperative for the development of an autistic child to prevent labelling and stigmatisation. Community support and educational initiatives can make a difference in the development of the child.	**Theme 3: Lack of collaborative partnership** The lack of partnership between parents and teachers was raised as a major barrier. Teachers try to involve parents, but they are not always keen to do so. This is a concern because the parents' input is valuable and key in the learners' success and progress. There are factors that impact this such as financial and domestic issues faced at home.	**Theme 2: The need for inclusive education to move from policy to implementation** Inclusive education must be prioritised. The goals and objectives set for achieving a more inclusive education system must be reviewed. The effectiveness and implementation of policies must be evaluated. The lack of communication between policy makers and education providers should be prioritised. This will address poor implementation and monitoring.	**Theme 2: Lack of collaboration** among teachers, parents and stakeholders including the WCED officials Communication is key to the success and implementation of inclusive education and allowing all learners the right to education.	**Statement 2:** The breakdown in communication from the top down serves as a barrier and therefore the successful implementation of inclusive education is deterred. Effective communication lines and collaboration will result in parents being more informed, teachers and education providers gaining the knowledge for effective teaching and implementation of policy and procedure. WCED officials will be well informed of parents' and educational stakeholders' concerns.

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EXOSYSTEM					
Scoping review	**Parents**	**Teachers**	**Stakeholders**	**Horizontal themes**	**Concluding statements**
Findings 2: Developmental interventions are effective in practice if parents, teachers and practioners understand the complexities attached to ASD. Training and knowledge is key to implement effecting evidence based practice.	**Theme 3: Equipping teachers with specialised training** The importance of training specialised teachers to educate and support learners with ASD is pivotal for the development of every child. Teachers that are trained adequately will know how to deal with various challenges. A safe and supportive environment should be created by a teacher to eliminate any negative response towards learners.	**Theme 4: Lack of training and development of teachers** Teachers shared their thoughts and experiences related to inclusion education, their role as a special needs teacher and the importance of training and development.	**Theme 4: Lack of teacher training and development programmes** Teacher training and awareness of current policies in inclusive education is vital. Government needs to provide training opportunities for both special education teachers and mainstream teachers to increase their knowledge and awareness of autism and policies that need to be implemented.	**Theme 3: Teachers' lack of knowledge and skills is a deterrent to the educational development of a child with ASD** Teachers have the responsibility to create a safe environment that is conducive for learning. The lack of training received both while studying and post studies place the learner, teacher, and parents under enormous stress.	**Statement 3:** Specialised training for teachers working with learners diagnosed with ASD must be imperative as the development of a learner is dependent on the teacher's level of experience, skills and knowledge. Training opportunities are necessary for both special education teachers and mainstream teachers to gain the knowledge for effective inclusion that will allow more learners access to education.

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MACROSYSTEM					
Scoping review	**Parents**	**Teachers**	**Stakeholders**	**Horizontal themes**	**Concluding statements**
Findings 5: Integrated interventions such as LEAP assists with stream lining the curriculum objectives as well as the learner's objective. This method is seen as being effective if implemented correctly. This approach is effective in mainstream and can benefit the learner with the aim of an inclusive approach.	**Theme 2: The Education system** Inclusive schooling and learner support in mainstream schooling will allow for more learners to access education and address the waiting period. This will minimise the need for alternative schooling arrangements.	**Theme 2: Curriculum alignment for children with ASD** The curriculum forms a large part of any child's education and for children with ASD, this becomes crucial. Teachers identified issues with the curriculum followed as not many learners are coping with the curriculum set out for them. This raised concerns whether the learner's needs are met. Teachers mentioned that there is a diverse group of special needs learners in the classroom and one method of teaching will not suit the needs of all (no one size fits all approach).	**Theme 1: Prioritising the needs of learners with special educational needs** Meeting the needs of the learners should be a top priority. Learners being misplaced does not allow the learner to grow and develop optimally. Creating a more inclusive environment within mainstream schools and eliminating exclusivity by allocating the needed funds to establish a better inclusive system is required.	**Theme 4: An inclusive education for all learners with ASD aligned to the curriculum** Children with ASD and special needs must be prioritised by the WCED. Learners needs much be considered, the curriculum being taught must be inclusive and accommodate all learners in the classroom. Curriculum alignment and considering the child's individual needs is essential.	**Statement 4:** Children with ASD face exclusion from the education system and class environment. By aligning the curriculum to be more inclusive learners with ASD will have a place in the classroom, allowing them more access.

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8.5.3 Consensus workshop participants

Participants were invited to participate in the workshop and willingly added their contributions. Participants that formed part of the framework review workshop were from Cape Town in the Western Cape Province, South Africa. The participants came from the Western Cape District that is divided into four districts (Metro North, Metro Central, Metro East and Metro South). The review of the framework was conducted by external expert participants that represented different disciplines in the field. The experts involved had a psychology background as well as education teachers from both mainstream and special needs, including education officials from the government department. Participants brought along their expert knowledge and experiences in the field of special needs education and child development. The first draft of the framework was presented to a panel of researchers and academics in the field of Child and Family Studies and Psychology at the University of the Western Cape. This draft was presented along with the summary of the findings of all previous stages of the broader study. The second draft of the study was presented to a group of experts in the field of special needs and education as well as community members (parents/guardian) who were invited to participate. The finalisation of the framework was done after the workshop, where the recommendations and amendments were added to the framework. The participant demographics of the experts are contained in Table 8.3 below:

Table 8.3 Demographics of the participants

Participants	Gender	Profession/Capacity
Participant 1	Female	Educator (mainstream)
Participant 2	Female	Psychologist
Participant 3	Female	Educator (special needs)
Participant 4	Female	Parent
Participant 5	Female	Guardian
Participant 6	Female	Educator (mainstream)
Participant 7	Female	Government official
Participant 8	Male	Parent
Participant 9	Female	Educator (special needs)
Participant 10	Male	Registered Counsellor
Participant 11	Female	Government official
Participant 12	Female	Parent

8.5.4 Round one (Pilot)

A pilot run was conducted; a workshop was arranged with experts in the field where they had an opportunity to review the framework and provide feedback accordingly. The framework was emailed to all experts who are researchers in the field of education and childhood development. The reviewers looked at the following: (1) whether the framework addresses the objectives; (2) if appropriate terms are used; (3) appropriateness of the design; and (4) viability of framework. The

feedback was given after the presentation and mainly focused on strengthening the emphasis on the child and prioritising the framework accordingly.

8.5.6 Round two (Programme for reaching consensus)

The workshop was conducted over a period of 4 hours with a 30-minute break, during which the participants had the opportunity to network and share their experiences and views in the field and on a personal level. The workshop was divided into sessions as follows:

Session 1: Introduction to the broader study and the previous studies that formed part of this final study. Background was shared by using a PowerPoint presentation that's available upon request to illustrate the findings and the proposed framework for enhancing access to resources for children with ASD.

Session 2: Focused on inclusion within mainstream schools and special needs schools. Participants had the opportunity to reflect on the current system in the Western Cape and to respond to the proposed framework and measures that could be put in place to promote better opportunities for more access to schooling. They addressed the following questions in groups: What barriers are encountered in the current education system? Who is responsible? Who is affected? Each of the areas identified were examined in depth and ways to bridge this gap in the education system were discussed.

Session 3: Participants were given the opportunity to highlight practical ways to address the current challenges faced by learners, parents and teachers within the current education system. The proposed framework was reviewed and discussed, addressing the barriers and reviewing the practical suggestions. Participants added further value by adding more practical suggestions that

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they felt would enhance access for learners with autism spectrum disorder. The suggestions given focused on both the learners in school and those still needing access to education/schooling.

Session 4: Participants' input was summarised and they were provided the opportunity to ask any questions and provide any feedback to the presenter verbally.

8.6 Data Analysis

In the analysis, a method called 'MindTape' using primary data documentation as a means of reference was used. MindTape is the use of any stimulated technique such as voice notes or any form of verbal data and allows for data transparency that can support the primary data presented during a workshop (Kumar, Yammlyavar & Nielsen, 2007). The data obtained from the workshop was produced through written information and collaboration among participants. The use of event recall and audio recordings as well as note taking to support the inference of data pertaining to the development of the framework were employed.

8.7 Results

The study was guided by the logic model and Bronfenbrenner's (2005) ecological systems theory, gathering data to create and assemble a framework based on their principles. The framework information was converted from concluding statements to prescriptive statements (Table 8.2). The designing and development of the framework was based on three important criteria, namely completeness, compatibility and relatedness of the various themes identified. During the framework review workshop, the following key components identified by the previous studies were presented: (1) resources for promoting inclusion; (2) collaboration and communication; (3) knowledgeable and skilled teachers; and (4) inclusive practice and curriculum adaptation. These

key components were identified as critical areas of focus to improve the current education system to ensure greater access to educational resources for learners with ASD. The development of the framework was reviewed by all study participants who formed part of the workshop. The input given by the community members and the field experts was based on the evidence provided by the previous studies and the findings that were highlighted. The framework was designed with the Education White Paper 6 (EWP6) in mind.

The logic model is constructed in five stages:

Stage 1—collecting the relevant information
Stage 2—describing the problem the program will solve and its context
Stage 3—defining the elements of the model in a table
Stage 4—drawing the logic model
Stage 5—verifying the model

Figure 8.1 Stages in building the logic model (McLaughlin & Jordan, 2004).

8.7.1 Outcome of the workshop

During the workshop, small group discussions were conducted, and participant responses were noted. In session two, groups of 4 were asked to respond to the following statement: Identify barriers within the education system pertaining to access for learners with ASD, reflecting on their own experiences and suggest ways in which these barriers can be addressed. While this was discussed, participants were asked to identify who is responsible for the various barriers identified and who is affected? (Table 8.3). During session three participants were asked to think of practical recommendations and interventions that could assist with the identified barriers. In groups of three,

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they discussed the barriers and came up with possible solutions or recommendations. The following recommendations as reflected in table 8.4 were made for both the learner in school and at home (Table 8.4). Finally, results of the entire workshop were reviewed by participants and they had the opportunity to make additional comments to enhance the framework. Participants shared their views on the appropriateness of the framework and whether the framework was understood. Furthermore, participants indicated that they were satisfied with the framework and minor additional comments were made to strengthen the framework. Participants had a better understanding of the framework after the entire study was presented to them including how the framework was developed based on the findings of the previous studies.

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Table 8.4 Session two and three group responses

Group	Barriers	Who is responsible and affected?	Recommendations
1	Lack of schools Lack of teachers Lack of teacher support	- Education department both provincial and national - Teachers, Parents and the child/learner	- Fundraising initiatives to build more schools. - Teachers must attend compulsory training on an ongoing basis. Send a few teachers and let them train the rest at the school train the trainer.
2	Lack of qualified teachers Lack of resources Lack of communication	- Training institutions and the education department INSET. - The learner/child and parents including teachers who are not well informed	- Training available for teachers that are paid by the DoE. - Training institutions must incorporate modules that provide graduates with the skills to deal with special needs. - Seeking donations and sponsorship. - Education officials should hold regular meetings with parents and teachers.
3	Lack of equipped schools Lack of skills and training	- Government, education department and teachers - Teachers, parents and the learner/child (entire community)	- The DoE increase the budget and prioritise teaching equipment.

Additional recommendations were made during the last session of the workshop. Participants added that remedial learner support classes should be made available for those learners that do not have access to education and are on the autism spectrum. Remedial classes should not only aim to serve learners in school but also those at home that are faced with not having any form of schooling. Participants added that teachers should be obligated to complete courses for continuous professional development. This way teachers are up to date with new teaching strategies and acquire additional skills needed for the classroom. INSET days would be an advantage time set aside for teachers engage in professional development activities. The results from the workshop were incorporated into the proposed framework and as participants filled the gaps the framework became clearer and more appropriate. The comments made were added and the framework was then reviewed through the process of member checking and reflexivity participants at the workshop could comment. Once participants were satisfied with the results and that the aims were clear and well presented the framework was developed (Table 8.5).
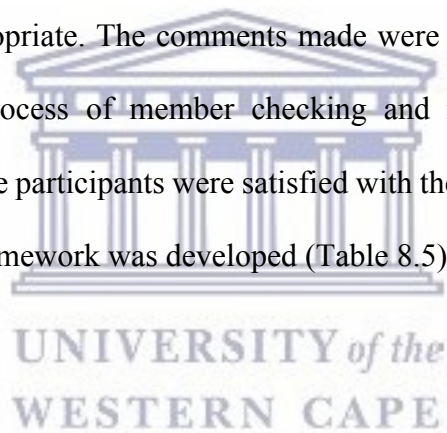
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Table 8.5 Framework for parents and educators in low-income communities to enhance access to resources that educate children with autism spectrum disorder.

Framework for parents and educators in low-income communities to enhance access to resources that educate children presenting with autism spectrum disorder.				
INPUTS OR RESOURCES: Funding, government prioritising special needs education, entrepreneur funding and sponsorship **CONSTRAINTS OR BARRIERS:** 1) Inadequate resources available in the community and schools Responsible: *Government & WCED* Affected:	**ACTIVITIES:** **(INTERVENTION COMPONENTS):** 1) Infrastructure improvement and development of new school facilities. 2) Community outreach workshops and engagements to share information and provide clarification on the education system. 3) Provide training to teachers on an ongoing basis, both newly qualified	**ACTIVITIES:** **(SPECIFIC INTERVENTION ELEMENTS):** 1) Improve schools to create a learning environment that is inclusive for learners with ASD. Building more schools and improving current schools can address the waiting list crisis. 2) Educating community members, parents and education providers about the implementation plan for inclusion (White Paper 6). Keeping the communication	**OUTPUTS:** **(EVIDENCE OF HAVING PERFORMED ACTITIVIES):** 1) Learners with ASD will have access to school. Increased school placement for learners with ASD. The number of learners at home will have a place in school and in an environment, that is conductive and inclusive. 2) Parents, teachers and educational providers will be educated about policies that need implementation and the knowledge will ensure better	**EFFECTS:** Children with ASD will have access to education and resources that will enhance their educational development. **SELECTED OUTCOMES:** **Short-term:** Knowledge and awareness will increase, teachers will be more aware of inclusive policy and implementation

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Child/Learner	and current teachers in practice, to upskill them.	lines open for information to be freely and readily available.	implementation and greater success of an inclusive environment.	and parents will be better informed. The broader community will be more aware of ASD and the educational opportunities available.

Child/Learner

2) Lack of collaboration among teachers, parents and stakeholders including the WCED officials.

<u>Responsible</u>: *WCED*

<u>Affected</u>: *Parents, Teachers & educational providers (stakeholders)*

3) Teachers' lack of knowledge and skills is a deterrent to the educational development of a child with ASD.

<u>Responsible</u>: *WCED*

<u>Affected</u>: *Child/Learner & Teacher*

4) An inclusive education system for all learners

and current teachers in practice, to upskill them.

4) Aligning the curriculum, the current policy should be clearer and provide guidelines to education providers, workshops and seminars. Reviewing of the current curriculum and considering all learners with special needs.

lines open for information to be freely and readily available.

3) Have training sessions and courses on the various symptoms learners with special might present. Provide a platform where both mainstream and special education teachers can engage to share practical skills and best practice methods for teaching.

4) Have seminars available on inclusion and the implementation of the curriculum. Provide teachers with the support to accommodate learners rather than excluding them from the learning process.

implementation and greater success of an inclusive environment.

3) Learners will perform better and the learning process will enhance further development.

4) Addressing the learners needs and eliminating the exclusion of learners and learners being misplaced. The curriculum will be aligned for all to benefit learners with ASD and other special educational needs.

and parents will be better informed. The broader community will be more aware of ASD and the educational opportunities available.

Long-term:

- Children with special educational needs will have more access to educational resources.

-Teachers will have the necessary skills to teach effectively and to create an inclusive learning environment.

with ASD aligning the curriculum.

Responsible: *Government and WCED*

Affected: *Child/Learner & Teacher*

Short term intervention

- Raising awareness and engaging the Education Department for involvement.
- Parents to attend workshops and educate themselves on ASD by seeking resources from the local library, hospitals and clinics.
- Community engagement (workshops, talks and presentations) and inviting organisations to address matters pertaining to ASD.
- Seek financial sponsorship for educational activities to promote inclusion.
- Parents should explore and seek advice regarding the state funding available to parents raising a child with ASD.

Long term intervention

- Having more inclusive schools that can support learners with ASD.
- Buliding and developing more full service schools that are inclusive.
- Curriculum that is flexible and accommodating a Universal Design for Learning.
- Offer specialised training for all teachers to deal with special needs in the classroom creating an inclusive environment.

8.8 Discussion

The current crisis with learners not having access to educational resources has been a burden on many parents, teachers and children with ASD. Parents, teachers and various stakeholders are faced with enormous challenges in the current education system with regards to inclusion (Engelbrecht, 2006). The concept of inclusion and having an inclusive education system works in principle, but in practice it is not as effective as it was intended to be. Many children of school going age are still being deprived and denied access to educational resources for various reasons (Pillay, Duncan & de Vries, 2017). If these challenges are addressed in South Africa, the education system has the potential to have a fully inclusive education system on a national and provincial level. This does, however, require collaboration between parents, teachers, educational stakeholders including the DoE, both national and provincial. They should aim to work together to achieve successful results. The proposed framework aims to address the challenges and barriers to enhance access to educational resources within our low-income communities where parents and teachers feel the pressure. Limited attention has been given to this matter as the number of children still awaiting placement or any access to educational resources remains a concern. This concern is raised by teachers and parents. Research has shown that this has been a challenge for decades despite efforts to implement the inclusive policy.

According to Bronfenbrenner's systems theory (2005), our thinking should be aimed at the microsystem with the child being at the centre of the framework. Children are suffering the effects of their diagnosis daily; the magnitude is much bigger than the diagnosis itself. The barriers they are faced with has prevented them from excelling and gaining access to educational resources. The barriers will not be overcome immediately, therefore the framework has identified short and long-term outcomes and interventions. Despite the hardships, parents strive to seek the help their child

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needs to progress (Mthimunye & Mwaba, 2014). Chataika (2011) appeals for improved policy and implementation and for meaningful dialogue and interventions to take place. This is needed to achieve successful progression and advocacy for an inclusive education system.

Dialogue and communication between parents, teachers and the DoE must be prioritised for change to happen. Based on the discussion and proposed framework, several barriers that need urgent attention were identified. Participants' involvement and the suggestions made were captured and formed part of the framework to increase access to educational resources for children with ASD. The framework can be an effective tool in relieving the exclusion rate of children and increasing the chances of a more inclusive society. The framework clearly highlights the barriers and the need for close relationship building among the various stakeholders. Bronfenbrenner's systems theory takes into account that a society cannot function as a whole or effectively without its counterparts. Inclusion in schools will come into effect once the barriers are addressed and persons responsible can work closely with those that put measures in place effectively.

8.9 Ethical Considerations

Participants were provided with an information sheet (Appendix A) and a consent form (Appendix B). After reading and agreeing to what was written in both, they were asked to sign the consent form. This served as permission, allowing the researcher to use the data that participants provided during the workshop session. Participants were informed about confidentiality and that their names will not be used at any point and that they are participating on a voluntary basis and may withdraw at any time. The participants were informed that all recordings will be kept on a password protected computer at all times. All notes pertaining to the workshop will not have any information attached that could identify the participant and their contribution.

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8.10 Limitations

The workshop was held over one day, with the result that there were participants who could not attend due to unavailability. This served as a limitation as skilled and knowledgeable individual could not attend and were difficult to reach. The input from other experts could have added significant value to the study. Nonetheless, the data obtained from the participants that could attend were rich in nature. Another limitation identified is that the framework was not implemented and evaluated, as the study aimed to develop and not implement and evaluate.

8.11 Conclusion

This study served to validate the framework that was developed through previous study findings and open to comment during the workshop. The barriers highlighted were clarified and possible interventions were outlined in the framework. The implementation focuses on both short-term and long-term interventions and outcomes. The framework makes strong reference to the relationship, roles and responsibilities of various key role players. The various systems need to work closely together to improve the schooling system and promote inclusive education for all learners with special needs. Though this framework was not implemented or evaluated, the findings of the framework are realistic and feasible. Finances will be of great concern, the recommendation for this will be to apply for funding and the DoE to consider a budget that is more feasible to address the issue that need attention.

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8.12 Recommendations

The following recommendations were made: Studies should be conducted to develop frameworks for other specialised needs. Further research should be aimed at the implementation and evaluation of such frameworks.

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CHAPTER NINE

SUMMARY DISCUSSION, RECOMMENDATIONS AND CONCLUSION

9.1 Overview and Summary of Significant Findings

This chapter summarises the findings of the studies that formed part of chapters four to eight. The results obtained in the studies all contributed towards the development of the framework for parents and educators in low-income communities to enhance access to resources for educating children presenting with autism spectrum disorder. The objectives of each study were met through conducting thorough in-depth studies. The findings of the studies were presented in a horizontal table and concluding statements were derived from this table. The framework was presented based on the findings from chapters four to seven, and participants that formed part of this workshop were updated. The framework was structured and guided by the logic model that addresses the issues raised and this model seemed fit for the proposed framework.

This chapter serves to conclude the study on developing a framework, including the studies and their findings, to better the current system for inclusion. Furthermore, this chapter will aim to discuss the implications for this thesis and explore recommendations for future studies and for an inclusive education system. Lastly, this chapter will highlight the identified limitations of this study.

9.2 Summary of all Studies and their Significance

There were a number of studies that formed part of the broader study and aim. These studies all had their own objectives deriving from the overarching aim that was set for the broader study.

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These studies all had significant findings, and these were emphasised and formed part of the framework development.

Chapter four (Study one)

The findings of this study were gathered by conducting a scoping review incorporating a number of studies. However, only seven studies were relevant based on the search terms used. The findings for this study indicated that evidence-based practice modules do exist and serve a purpose within many educational settings. The implementation of the practices was identified as being effective and contributing towards the teaching and learning of learners with special educational needs. The following modules were identified by means of the scoping review:

(1) **Behavioural interventions (discrete trial)**: Leaf, Leaf, Taubman, McEachin and Delmolino (2014) primarily focused on discrete trial teaching (DTT) as a form of intervention for teaching learners with autism; they reported positive results.

(2) **Developmental interventions (milieu teaching)**: Boyd, Conroy, Asmus, McKenney and Mancil (2008) reported that the sequential behavioural coding system is better for use on smaller groups and that the activities are child-directed, and that the intervention influences the child's social behaviour in a positive manner.

(3) **Specific techniques (modelling and reinforcing)** has a positive learning outcome.

(4) **Technology-based interventions (video modeling)** (according to Akmanoglu, Yanardag & Batu, 2014)

(5) **Integrated interventions (learning experiences and alternative programmes for preschoolers and their parents (LEAP))** help to shape school programmes for learners with autism spectrum disorder.

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Chapter five (Study two)

This study highlighted the factors that enhance and hinder learning for children with ASD. The key findings discussed are as follows:

(1) The development of educational awareness and support was highlighted and perceived as needing enhancement. There is currently support, but more emphasis needs to be placed on it. This should be made a priority to raise community awareness.

(2) The education system is perceived as a hindrance. Children with ASD are finding it difficult to gain access to basic education and exercise their right to education. According to the study by Pillay, Duncan and De Vries (2017), there are not sufficient schools available for children with ASD, and many children are placed on waiting lists.

(3) The development of teachers and providing them with adequate training to fulfil their role as teachers and mediators in the classroom was discussed. If teachers are not adequately trained to meet the educational needs of learners, this is perceived as a hindrance to education. The training that should be provided must be specialised so that they can teach children with different educational needs.

(4) Lastly, lack of finances hinders education. Children with ASD have a variety of needs that have to be met, and this places financial strain on the parents. Participants were predominantly from low-income communities and find it difficult to cope on a daily basis.

This study indicated that there are hindrances to education and improvements that need to be made to the system.

Chapter six (Study three)

The study was conducted using individual interviews with teachers that were actively involved in the teaching and learning process. The following key findings were identified:
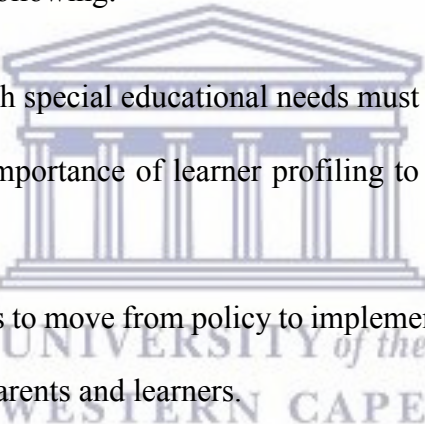
(1) The infrastructure and the physical learning environment have barriers to learning for children with ASD. The classroom environment can be better structured to enable better learning and inclusiveness for all. The lack of infrastructure and a conducive learning environment is a challenge faced internationally. Similar studies revealed that this is a global challenge (Polat, 2011).

(2) The curriculum is not aligned with the needs of children with ASD; they find it difficult to cope with the manner in which it is structured. Therefore, more inclusive teaching strategies must be introduced to ensure learners with ASD and other special needs are accommodated.

(3) There is a lack of collaborative partnerships, such as parent and teacher relations as well as teacher relations with the DoE and officials. Communication is crucial to ensuring that process and policies are implemented in a proper manner. The lack of communication among all stakeholders and parents will have an effect on the outcome of achieving inclusiveness within schools.

(4) There is a need for more training and development of teachers and resources to facilitate the teaching process. Teachers find it very difficult to teach if they do not have the needed resources and skills to teach learners with special needs. A study conducted by Sherwood (2010) in Jamaica mentioned the need for teachers to be empowered and they may do so by equipping themselves with professional training so that quality education can be

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conducted in the classroom. Therefore, training and teacher development programmes to upskill will be beneficial.

These findings indicate that both teachers in special education and learners face barriers across the entire system of education, which may infringe on the right of learners with ASD to inclusive education.

Chapter seven (Study four)

The stakeholders were part of a qualitative research design and individual interviews were conducted which identified the following:

(1) The needs of learners with special educational needs must be prioritised. Fuchs and Fuchs (2006) emphasised the importance of learner profiling to ensure that all learners receive the support they require.

(2) Inclusive education needs to move from policy to implementation. Poor implementation of policy affects teachers, parents and learners.

(3) Inadequate resources prevent teachers from providing optimal support for learners in the classroom environment.

(4) A lack of teacher training and development programmes were identified. Many teachers are not sure what they are required to do in the classroom with learners that have ASD.

(5) The highlight of this study was identifying that the current system is working optimally; however, with adequate resources, specialised teacher training and the prioritisation of IE (promoting policy and practice implementation), the current system will flourish.

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Chapter eight (Study five)

The aim of this study was to present the framework developed through the support of the previous studies. The findings of the previous studies provided a framework for access to resources that could benefit the learners, parents and teachers. The framework consensus was obtained through a workshop, where participants had the opportunity to view it and the steps followed in obtaining the data. After consolidation, feedback was given and suggestions made during the various workshop sessions. The framework identified four main areas that could increase access and resources for parents and educators to allow children with ASD to achieve their optimal potential. The following were seen as important and formed part of the framework being presented: (1) to increase the resources for promoting inclusion; (2) to focus on collaboration and communication among the Department of Education, parents, teachers and educational stakeholders; (3) to have knowledgeable and skilled teachers; (4) to promote and strive towards inclusive practices; and (4) curriculum adaptation.
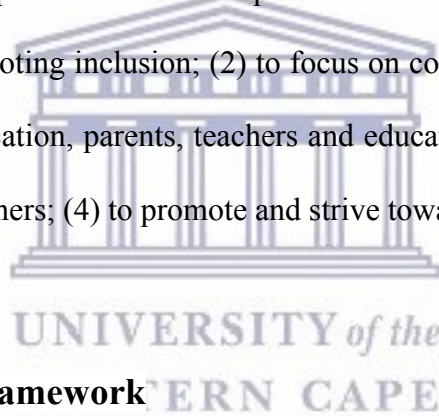
9.3 Implications of the Framework

The challenges faced in South Africa, which range from education to crime and poverty, all pose a threat to the outcome of a framework, intervention or guidelines to improve practice. In education, a lot of work is being done to address the challenges faced, such as creating an inclusive education system. South African education policies and policy-makers are under enormous pressure regarding the implementation and execution of policy. A question posed is whether South Africans are ready for an inclusive education system and the implementation of a framework. The White Paper 6 addressing the needs of learners with special educational needs has been in place for decades, but successful implementation is yet to be achieved (Donohue & Bornman, 2014).

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The challenges faced are influenced by various factors; however, it is important to note that those most affected are families that are suffering from unemployment and low income. Providing more educational opportunities and services for children with ASD in South Africa is influenced by what is available in the community in which they live. According to Wildeman (2008), for South Africa to make significant progress, the Department of Education would need to make the first move; when the barriers to implementation are addressed, success will be seen. These barriers are not unique to South Africa and are faced globally, including developed and developing countries (Nel et al., 2011). The findings of this study identify key areas that need attention and the resources needed, such as funding, government prioritising special needs education, entrepreneur funding and sponsorship. These are presented in the framework. The importance of resources and inputs needed to implement a framework for change can serve as a direct implication of the framework. The commitment and communication should come from the top down to ensure information is accurate and understood (Grima-Farrell, 2015).
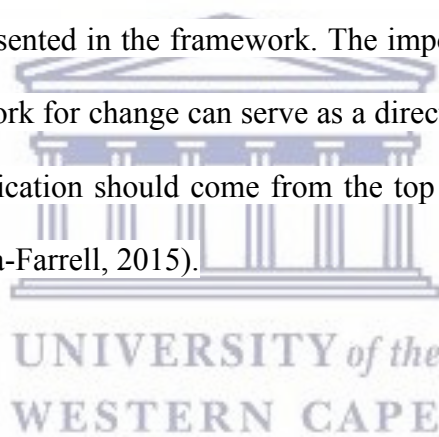
9.4 Limitations

The limitations of this thesis were highlighted in the various studies presented in chapters four to eight. An important limitation identified is that the current study only focused on the development of the framework and not the implementation and evaluation thereof. The findings will be disseminated through submission for publication and will contribute towards the broader body of literature.

The following limitations were identified based on the studies that were conducted:

Chapter four (scoping review): The studies that formed part of the scoping review were limited as they only included studies that published during a certain period. The scoping review only included articles that were in English and excluded all other languages.

Chapter five (qualitative study with parents): During this study, focus group discussions were used as tool for data collection. This method had its disadvantages as some participants did not feel comfortable speaking in front of a group. The participants did not know one another, and this can be awkward. Another limitation identified was that because the study was only conducted in the Western Cape Province, one of nine provinces in South Africa, the generalisability might be limited to the study context.

Chapter six (qualitative study with teachers): Participants were all from the Western Cape Metropole, and therefore generalisability may be limited to the study context. The participants included in the study were teaching in communities that are classified as low-income communities with low socioeconomic backgrounds and excluded teachers from other schools working in middle- to upper-class communities.

Chapter seven (qualitative study with stakeholders): This study only included participants from the Western Cape Province and did not include any other stakeholders; therefore, it may be limited to this context. The study focused on children with ASD and did not include other special needs and learning needs.

Chapter eight (consensus workshop): Only a small number of participants and educational officials could attend the workshop due to time constraints. Many specialists in the field were not available to attend due to the following reasons: (1) other commitments, (2) being unreachable, and (3) difficulty in finding a time that best suited everyone. This is viewed as a limitation, as many good specialists and experts could not attend.

9.5 Recommendations for education practice and research

There are a number of recommendations that can be made and suggested for improving inclusiveness within schools. The following recommendations were made using the Bronfenbrenner ecological systems theory as a structural guide:

9.5.1 Microsystem

Recommendation for practice

Parental involvement is important and parents should be proactive and reach out. The community resources that are available should be utilised to maximum effect. Parents play a key role in ensuring that children with ASD receive the help they need. Parents should enquire about training opportunities from their local schools in the community as well as psychologists, Occupational therapists and teachers. There are organisations that provide training on a regular basis and create opportunities for parents and children from low socioeconomic backgrounds. Once parents gain the needed skills, they can assist their children with home programmes while seeking placement or if they experience difficulty with placement. The knowledge parents obtain should be shared with others in the community to raise awareness and empower other parents with the needed skills,

parent support groups and information and resources to assist children with ASD. This will benefit the children and parents will feel empowered by seeing the growth and development.

Recommendation for research

Future research should be aimed at exploring the effectiveness of awareness programmes dedicated to empowering parents of children diagnosed with ASD. At the microsystem level, this will be important as it affects the child directly. The parents are the caregivers and the more knowledgeable they are the more children can gain from that knowledge.

9.5.2 Mesosystem

Recommendation for practice

Teacher support must be prioritised and ongoing training programmes must be provided to give teachers much-needed skills. This will instil confidence and allow teachers the opportunity to provide high-quality education for all. This way the learning environment will be conducive to learning. Learners will receive quality education and they will have equal support and opportunity to achieve their educational milestones. Teachers are a great resource for ensuring an inclusive education system. Another important recommendation is that the current schools and buildings should be used rather than focusing on developing new buildings. Having an inclusive education system does not imply that children with ASD need special needs schools; they must find a place within the mainstream and be given the support of teachers who are adequately trained to teach them.

Recommendation for research

Future research should be aimed at the teaching programmes being offered at teaching and learning institutions. Many institutions offer teaching qualifications and the assumption is that teachers are qualified to teach learners with learning difficulties and have the skills needed for the classroom. The reality becomes clear when teachers are not confident in their teaching practices and styles in the classroom.

9.5.3 Exosystem

Recommendation for practice

Apart from learners attending mainstream schooling and receiving classroom support, extra learner support classes and programmes should be offered after school for learners with special needs such as ASD to work on their individual needs. This will not create an exclusive concept but rather be seen as enrichment opportunities for children that experience barriers to learning. More opportunities should be created for awareness programmes in schools and the broader community to reduce the stigma/labelling and misleading perceptions. Once this is achieved, children with ASD will feel a sense of belonging and more included within society.

Recommendation for research

Future research should aim at exploring why learner support classes are no longer being offered, especially given that there are a significant number of learners who are struggling in the classroom. Many learners will appreciate the space and would benefit from such intervention. In previous decades, this was normal practice and was effective. Many retired teachers will attest to the

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amazing successes they had. Another recommendation is to explore BRICS countries and countries such as Australia and Finland where IE is taking a lead.

9.5.4 Macrosystem

Recommendation for practice

Communication from the top (management, Department of Education and officials) to the bottom (teachers, parents and learners) must be clear. Communication is key, and the breakdown thereof will only deteriorate the notion of inclusion. Policy must be implemented and evaluated on a regular basis to ensure proper implementation. Misinterpretation of policy and guidelines leaves the system more flawed.

Recommendation for research

Research should be conducted on a regular basis aimed at exploring the effectiveness of the current policies and procedures. The reworking and revising of policy should be done more often so that interventions can be designed in good time. Research should be exploring parents' knowledge on policy and the effective dissemination of information from the top down. Parents, teachers and principals should be provided with the needed support. Gaps in the successful implementation of IE will only be on paper and not very apparent in reality.

9.6 Conclusion

This chapter described all the outcomes based on the various objectives that were in line with the research aim of the broader study. The studies all had the common goal of developing a framework. The key role-players in ensuring an inclusive education system that is free from barriers and allows

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equal access to resources were identified and highlighted throughout the thesis. While this framework is newly proposed, the structure is clearly stated and can be easily understood by all parties involved. This framework will add significant value to the body of research focused on special needs education and ASD. Lastly, the recommendations were described and elaborated on. The research questions that formed part of the thesis were all answered and acknowledged through the thesis. The framework will be made available to all stakeholders including the Department of Education. The framework will be made available to the Department of Education to review and consider for their planning of educational curriculae, interventions and programmes. Furthermore, this framework will offer insight into teacher training and capacitation with the aim of removing barriers to education thus making inclusive education more accessible and available for all children in South Africa. This study will inform a Postdoc study that will take into consideration the findings of this study. implementation, recommendations and limitations of this study will be considered for Postdoctoral studies and further research.
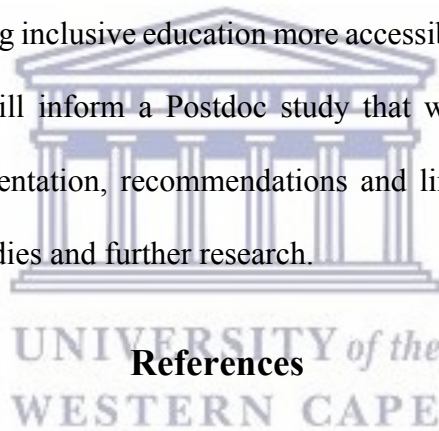
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UNIVERSITY OF THE WESTERN CAPE

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E-mail: bronwynrooi@gmail.com

INFORMATION SHEET

Project Title: Developing a framework for parents and educators in low-income communities to enhance access to resources that educate children presenting with autism spectrum disorder.

What is this study about?

This is a research project being conducted by Mrs Bronwyn Mthimunye a PhD candidate at the University of the Western Cape. We are inviting you to participate in this research project because you could add great value to this study. The purpose of this research project is to develop a framework for access and resources for children with ASD in a low-income area. The information obtained in the study will guide the researcher to the aim of this study.

What will I be asked to do if I agree to participate?

You will be asked to participate in an in-depth interview and you will be asked to discuss certain questions posed. The questions that will be addressed will be related to your experiences and knowledge about the managing of access and resources for an autistic child. The interview will be done within an hour and the venue will be communicated with you before the interview.

The focus group interviews are aimed at the parents of an autistic child currently in grade one. The focus group will be conducted at the school which your child attends; permission will be sort from the school. We will try out best to keep all information confidential and that only myself and my two supervisors will have access to the information given. All information given in both the individual interviews and focus groups, information will be saved on a computer with a password for security purposes.

Would my participation in this study be kept confidential?

The researchers undertake to protect your identity and the nature of your contribution. To ensure your anonymity, I will do my best to keep your personal information confidential. To help protect

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your confidentiality, the information you provide will be totally private; no names will be used so there are no way you can be identified for participating in this study. Your information will be anonymous and treated confidentially. If we write a report or article about this research project, your identity will be protected to the maximum extent possible. To ensure your confidentiality, if we write a report or article about this research project, your identity will be protected.

In accordance with legal requirements and/or professional standards, we will disclose to the appropriate individuals and/or authorities' information that comes to our attention concerning child abuse or neglect or potential harm to you or others. In this event, we will inform you that we have to break confidentiality to fulfil our legal responsibility to report to the designated authorities. This study will use focus groups therefore the extent to which your identity will remain confidential is dependent on participants' in the Focus Group maintaining confidentiality.

Audio taping

This research project involves making use of audio taping of you. This will ensure the researcher that everything is captured. All recordings will be saved and stored on a computer with a password to secure access. After the analysis, all recordings will be destroyed.

___ I agree to be audiotaped during my participation in this study.

___ I do not agree to be audiotaped during my participation in this study.

What are the risks of this research?

There may be some risks from participating in this research study. All human interactions and talking about self or others carry some amount of risks. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?

This research is not designed to help you personally, but the results may help the investigator learn more about the current situation. We hope that, in the future, other people might benefit from this study through improved understanding of an autistic child.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify

What if I have questions?

This research is being conducted by *Mrs Bronwyn Mthimunye,* if you have any questions about the research study itself, please contact *Mrs Bronwyn Mthimunye* at: +27814673801 or email to bronwynrooi@gmail.com. Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Prof Catherina Schenck

Head of Department

University of the Western Cape

Private Bag X17

Bellville 7535

cschenck@uwc.ac.za

Prof Anthea Rhoda

Dean of the Faculty of Community and Health Sciences

University of the Western Cape

Private Bag X17

Bellville 7535

chs-deansoffice@uwc.ac.za

This research has been approved by the University of the Western Cape's Senate Research Committee.

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Cell number*:* +27814673801

E-mail: bronwynrooi@gmail.com

CONSENT FORM

Title of Research Project: Developing a framework for parents and educators in low-income communities to enhance access to resources that educate children presenting with autism spectrum disorder.

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits. I am fully aware that this research project involves making use of audio taping. I am aware that all recordings will be saved and stored on a computer with a password to secure access. After the analysis, all recordings will be destroyed.

- I hereby agree to participate in the research being conducted.

- I hereby agree to contribute and assist the researcher with the needed information.

- I hereby agree to be as truthful and honest without the discussion.

Participant's name………………………..

Participant's signature…………………………….

Date………………………

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University of the Western Cape

Private Bag X 17, Bellville 7535, South Africa

Cell number*: +27814673801*

E-mail: bronwynrooi@gmail.com

FOCUS GROUP CONFIDENTIALITY BINDING FORM

Title of Research Project: Developing a framework for parents and educators in low-income communities to enhance access to resources that educate children presenting with autism spectrum disorder.
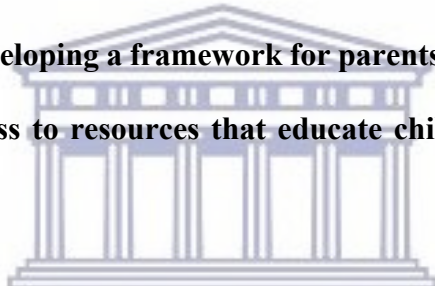
The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone by the researchers. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits. I understand that confidentiality is dependent on participants' in the Focus Group maintaining confidentiality.

I hereby agree to uphold the confidentiality of the discussions in the focus group by not disclosing the identity of other participants or any aspects of their contributions to members outside of the group.

Participant's name………………………………………..

Participant's signature…………………………………..

Date………………………

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Appendix D: Interview schedule (Stakeholders & Teachers)

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Cell number*: +27814673801*

E-mail: bronwynrooi@gmail.com

INTERVIEW SCHEDULE FOR STAKEHOLDERS & TEACHERS

1. What is your opinion on the current policies put in place for children with special needs?

2. Are these policies being monitored for successful implementation?

3. Do you think inclusive education is being prioritised in the Western Cape? If no, why not?

4. What are your thoughts on the WCED? Do you think they are ensuring that all children with special needs are accommodated?

5. School placement for children with autism: What is the current system put in place? Is this system effective?

6. What are your thoughts about the current situation with the long waiting lists? Where do you think the problem stems from?

7. As a stakeholder and advocate for children with special needs, what is your biggest concern?

8. Where do you see inclusive education in 10years from now?

Appendix E: Interview Schedule (Teachers)

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Cell number*: +27814673801*

E-mail: bronwynrooi@gmail.com

INTERVIEW SCHEDULE FOR TEACHERS

1. What is your understanding of inclusive education?

2. What is your role as a learner support teacher?

3. Which strategies do teachers use to assist learners with Autism?

4. In your opinion what are the educational needs of a learner with Autism? And do you think these needs are met?

5. What program or approach does your school use to assist the educational development of learners with Autism and are all learners accommodated?

6. Do you have a one size fit all approach?

7. What are the challenges experienced by teachers working with children that were diagnosed with Autism?

8. What are the barriers that you have identified in classroom?

9. Does children with Autism have easy access to education? If not, what are the barriers?

Appendix F: Interview Schedule (Parents)

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Cell number*: +27814673801*

E-mail: bronwynrooi@gmail.com

FOCUS GROUP SCHEDULE FOR PARENTS

1. What would you say was the biggest challenge was after the diagnosis?

2. How did you deal with the diagnosis? Were their key role players within society?

3. What was your experience finding school placement for your child diagnosed with Autism?

4. Is the school addressing your child's needs and do you see improvement?

5. What are your current challenges?

6. Have your challenges been addressed? How?

7. Are there resources and services in the community that serves as support to both you and your child? Accessibility to these services?

8. What would you like to see implemented/changed? To benefit your child?

Appendix G: Permission letter (WCED)

Western Cape Government
Education

Directorate: Research

Audrey.wyngaard@westerncape.gov.za

tel: +27 021 467 9272

Fax: 0865902282

Private Bag x9114, Cape Town, 8000

wced.wcape.gov.za

REFERENCE: 20170112 –7209

ENQUIRIES: Dr A T Wyngaard

Mrs Bronwyn Mthimunye

55 Casa Bella Estate

Albertersia Close

Kuilsriver

7580

Dear Mrs Bronwyn Mthimunye

RESEARCH PROPOSAL: **DEVELOPING A FRAMEWORK FOR PARENTS AND EDUCATORS IN LOW INCOME COMMUNITIES TO ENHANCE ACCESS TO RESOURCES THAT EDUCATE CHILDREN PRESENTING WITH AUTISM SPECTRUM DISORDER**

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

1.   Principals, educators and learners are under no obligation to assist you in your investigation.

2.   Principals, educators, learners and schools should not be identifiable in any way from the results of the investigation.

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3.   You make all the arrangements concerning your investigation.

4.   Educators' programmes are not to be interrupted.

5.   The Study is to be conducted from **08 March 2017 till 29 September 2017**

6.   No research can be conducted during the fourth term as schools are preparing and finalizing syllabi for examinations (October to December).

7.   Should you wish to extend the period of your survey, please contact Dr A.T Wyngaard at the contact numbers above quoting the reference number?

8.   A photocopy of this letter is submitted to the principal where the intended research is to be conducted.

9.   Your research will be limited to the list of schools as forwarded to the Western Cape Education Department.

10.   A brief summary of the content, findings and recommendations is provided to the Director: Research Services.

11.   The Department receives a copy of the completed report/dissertation/thesis addressed to:

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

We wish you success in your research.

Kind regards.

Signed: Dr Audrey T Wyngaard

Directorate: Research

DATE: 06 March 2017

Appendix H: Research Ethics Clearance

DEPARTMENT OF RESEARCH DEVELOPMENT

04 July 2016

To Whom It May Concern

I hereby certify that the Senate Research Committee of the University of the Western Cape approved the methodology and ethics of the following research project by:
Mrs B Mthimunye (Social Work)

Research Project:	Developing a framework for patents and educators in low income communities to enhance access to resources that educate children presenting with Autism Spectrum Disorder
Registration no:	15/7/244

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

The Committee must be informed of any serious adverse event and/or termination of the study.

Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape

A place of quality,
a place to grow, from hope
to action through knowledge

Appendix I: Permission request (Schools)

(School Address)

March 2017

Mrs Bronwyn Mthimunye

Department of Social Work (Child and Family Studies)

University of the Western Cape

Private Bag X17

Bellville 7535

Dear Mrs Mthimunye

Re: Developing a framework for parents and educators in low income communities to enhance access to resources that educate children presenting with Autism Spectrum Disorder.

On behalf of XXXXX School, I am pleased to offer my support for your research project "Developing a framework for parents and educators in low income communities to enhance access to resources that educate children presenting with Autism Spectrum Disorder". We welcome efforts such as yours to conduct research that may make a difference in the lives of many autistic learners.

Our school will assist you in recruiting two grade one/phase one teachers for an individual interview who may be interested in participating in the study as well as eight grade one/phase one parents for a focus group interview.

It is a pleasure to be chosen as a partner in this important research project.

Sincerely,

_____

HEAD MASTER

Appendix J: Proof of Language Editing

LETTER OF CERTIFICATION

Gareth O P H Lowe
9 Lamborghini Avenue
Wierda Park
Centurion
0157
Tel: +27 83 726 6868
Email: gareth_lowe@yahoo.com

8 November 2018

To whom it may concern

I hereby certify that I, Gareth Lowe, edited the abstract, chapters one, two, three, seven, eight and nine of the thesis written by Bronwyn Sarah Mthimunye entitled "**DEVELOPING A FRAMEWORK FOR PARENTS AND EDUCATORS IN LOW-INCOME COMMUNITIES TO ENHANCE ACCESS TO RESOURCES THAT EDUCATE CHILDREN PRESENTING WITH AUTISM SPECTRUM DISORDER**".

Regards

Gareth Lowe

Editor

33 Bloekom Avenue
Calitzdorp
6660
South Africa
24 October 2018

Ms Bronwyn Mthimunye
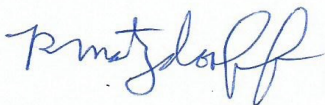University of the Western Cape
Cape Town

Dear Ms Mthimunye

Review entitled: <u>Educating children with autism spectrum disorder: A scoping review on best practice models used in the classroom</u>

I declare that I have read and edited the above review article from the standpoint of grammar, syntax, idiom and punctuation according to the norms of English in the style followed in South Africa, and the style and format generally used by academic and scientific publications.

I have worked for many years, and continue to work, as a copy editor for a number of professional South African academic and health sciences journals, including those published by the Health & Medical Publishing Group, which is a subsidiary of the South African Medical Association.

Yours sincerely

Robert Matzdorff
mobile 084 582 0460
landline +27 44 213 3033

http://etd.uwc.ac.za/

33 Bloekom Avenue
Calitzdorp
6660
South Africa
24 October 2018

Ms Bronwyn Mthimunye
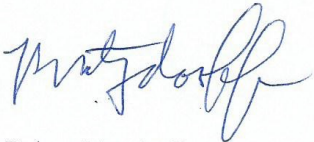University of the Western Cape
Cape Town

Dear Ms Mthimunye

re: Study entitled Factors which enhance or hinder the educational needs of autistic children in Western Cape Province, South Africa: A parents' perspective

I declare that I have read and edited the above article from the standpoint of grammar, syntax, idiom and punctuation according to the norms of English in the style followed in South Africa, and the style and format generally used by academic and scientific publications.

I have worked for many years, and continue to work, as a copy editor for a number of professional South African academic and health sciences journals, including those published by the Health & Medical Publishing Group, which is a subsidiary of the South African Medical Association.

Yours sincerely

Robert Matzdorff
mobile 084 582 0460
landline +27 44 213 3033

33 Bloekom Avenue
Calitzdorp
6660
South Africa
24 October 2018

Ms Bronwyn Mthimunye
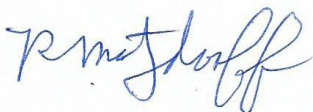University of the Western Cape
Cape Town

Dear Ms Mthimunye

re: Study entitled <u>South African teachers' perspectives on barriers to educational development of learners with autism spectrum disorder</u>

I declare that I have read and edited the above study from the standpoint of grammar, syntax, idiom and punctuation according to the norms of English in the style followed in South Africa, and the style and format generally used by academic and scientific publications.

I have worked for many years, and continue to work, as a copy editor for a number of professional South African academic and health sciences journals, including those published by the Health & Medical Publishing Group, which is a subsidiary of the South African Medical Association.

Yours sincerely

Robert Matzdorff
mobile 084 582 0460
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http://etd.uwc.ac.za/

LETTER OF CERTIFICATION

Lowe's
Editing Services

Gareth O P H Lowe
9 Lamborghini Avenue
Wierda Park
Centurion
0157
Tel: +27 83 726 6868
Email: gareth_lowe@yahoo.com

7 November 2018

To whom it may concern

I hereby certify that I, Gareth Lowe, edited the article written by **Bronwyn Sarah Mthimunye** entitled **"Promoting an inclusive education system for children with autism spectrum disorder: Perspectives of stakeholders"**.

Regards

Gareth Lowe
Editor

LETTER OF CERTIFICATION

Gareth O P H Lowe
9 Lamborghini Avenue
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0157
Tel: +27 83 726 6868
Email: gareth_lowe@yahoo.com

7 November 2018

To whom it may concern

I hereby certify that I, Gareth Lowe, edited the article written by **Bronwyn Sarah Mthimunye** entitled **"The development of a framework for parents and educators in low-income communities to enhance access to resources that educate children presenting with autism spectrum disorder."**

Regards

Gareth Lowe

Editor