



**Inclusive education and the associated classroom
challenges: The teachers' perspective with a focus on
ASD**

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ABSTRACT

Inclusive education is implemented in South Africa through inclusive policies such as Education White Paper 6, as well as the Screening, Assessment, Identification and Support Policy, which were used to guide the aims and questions of this research, as well as defining its scope. Inclusive education encompasses the inclusion of learners with Autism Spectrum Disorder characteristics, which is widely misunderstood and unidentified or unaccommodated. The current research set out to underline challenges faced by teachers when including learners with Autism Spectrum Disorder characteristics in the classroom in order to highlight gaps in the education system that these learners may fall through. Online questionnaires were dispersed to gather both qualitative and quantitative data. The gathered data were analysed using Chi-squared tests to highlight trends, which was followed by a thematic analysis to underline arising themes. It was determined that challenges such as the disconnect between theoretical awareness and practical application in the classroom environment, gaps in training and minimal support, inconsistent support from school-based support teams, a lack of knowledge of Autism Spectrum Disorder, and a lack of access to special schools and a rigorous placement process were outlined as possible reasons for learners with Autism Spectrum Disorder characteristics falling through the gaps. Focus areas were identified that need to be addressed in order to minimise learners with Autism Spectrum Disorder characteristics falling through the gaps, thereby maximising the inclusion of these learners in the education system.

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Chapter 1: Introduction to research

1.1 Introduction and background

The research explores the experiences of South African (SA) teachers with regards to the inclusion of learners with Autism Spectrum Disorder (ASD) characteristics. In doing this, it highlights the challenges teachers face when identifying, supporting and accommodating these learners within the classroom environment. Accordingly, how and why learners with ASD characteristics might “fall through the gaps” of the education system were investigated. This research focused on SA schools in the categories of public, full-service and mainstream schools in both categories of no-fee and fee-paying schools, and included schools from suburban, township, urban and rural areas (Department of Education [DOE], 2014). For the purpose of this research, learners with ASD characteristics will be referred to, which encompasses both those diagnosed with ASD and those not diagnosed with ASD but presenting with ASD characteristics.

Prior to democracy, SA’s educational system was based on marginalisation, segregation, and unequal access to resources (Van Dyk & White, 2019). According to Van Dyk and White (2019) this disadvantaged people of certain races, abilities and socioeconomic status (SES), and led to some communities experiencing restricted access to educational resources, skills and training, which reduced the quality of education. In 1996, the Amended National Norms and Standards for School Funding (ANNSSF) was introduced and a funding system which focused on schools in impoverished area was implemented. This system allowed all SA public schools to received funding based on quintile ranking, and ranks schools from 1 to 5 based on their poverty score, which is determined by the community literacy and unemployment rates (Van Dyk & White, 2019).

Currently, SA public schools are categorised into either no-fee or fee-paying, which is based on the quintile ranking system (Naicker et al., 2020). Quintiles 1, 2 and 3 are considered the lower quintiles and mostly rely on governmental financial support and, based on this, classified as no-fee schools. Quintiles 4 and 5 are considered the higher quintiles and rely on governmental financial support to a lesser extent, and are allowed to subsidise this support by charging school fees. They are, therefore, classified as fee-paying schools. For the purpose of this research, schools in both no-fee and fee-paying categories were considered when selecting the sample group for data collection. This was considered to ensure an accurate representation of the diversity of schools that exist in the SA context, as well as allowing for a comparison of challenges faced by teachers in these different categories of schools.

Education White Paper 6 on inclusive education was used to guide the aims and questions, as well as defining the scope of this research. Education White paper 6 was published in 2001, and for the scope of this research, the focus was on the principles provided on the inclusion of learners with barriers to learning (DOE, 2001). These principles are aimed at increasing the inclusivity of learners with barriers to learning into the mainstream education system by increasing support, and considering provision, the availability of resources, and the skills for these learners. Barriers to learning are defined in the Policy on Screening, Identification, Assessment and Support (SIAS Policy) as difficulties faced by learners either externally (environmental) or internally (within the learner) in the educational setting (DOE, 2014, p. 7). Education White Paper 6 refers to previously termed “special needs learners” as learners with barriers to learning, but makes use of both terms interchangeably throughout the document (DOE, 2001, p. 36). The inclusive principles discussed in Education White Paper 6 (2001) include objectives on a structural level, such as specifying provision based on the “intensity of support” (2001, p. 10), obtaining sufficient support through full-service schools, providing training and skills for teachers, and providing accessibility to “additional resources”

(2001, p. 10). The policy further outlines the following objectives, which should be implemented in order to achieve inclusivity in the classroom, namely “maximising participation”, “multi-level class instruction”, “curriculum flexibility”, “teaching strategies” and “support systems available in the classroom” (2001, pp. 5-19).

One of the most significant barriers to learning for learners in special and ‘ordinary’ schools is the curriculum. In this case, barriers to learning arise from different aspects of the curriculum, such as; the content (i.e. what is taught), the language or medium of instruction, how the classroom or lesson is organised and managed, the methods and processes used in teaching, the pace of teaching and the time available to complete the curriculum, the learning materials and equipment that is used and how learning is assessed. These barriers are clearly identified in the Education White Paper 6 (2001, p. 19). For the purpose of this research, barriers to learning, specific to learners with ASD characteristics, were taken into account.

In 2014, a further policy, called the SIAS Policy, which was based on Education White Paper 6, was introduced to outline the procedures implemented to ensure the inclusion of learners with barriers to learning in the mainstream educational system. Principles of the SIAS Policy include: Inclusive education, standardized procedures, support for learning barriers, early intervention, and partnership between parents and schools. Inclusive education aims to provide equal access to education, additionally standardised procedures aim for a uniform approach to identifying, assessing, and supporting learners. Another principle of the SIAS Policy outlines addressing barriers to learning, while early intervention is optimal to improve learning outcomes. Lastly, the importance of the relationship between parents and schools is highlighted in order to address the child’s needs. The SIAS Policy addresses the importance of the early identification of barriers to learning, and outlines a plan for identifying and accommodating learners with barriers to learning to ensure optimal support, intervention and inclusion (DOE, 2014). School-based support teams (SBSTs) or institution-level support teams

(ILSTs) and district-based support teams (DBST) are outlined in the SIAS Policy as structures put in place to provide support and aid the identification, assessment, support and best placement for a child. The primary function of SBSTs or ILSTs is to provide support to schools, learners and teachers on a school level by managing inclusive learning and assisting in the identification of learners with possible barriers to learning (Motitswe, 2014). DBSTs are in place to lead training, curriculum development, and assist in the identification, assessment and support of learners with barriers to learning on a district level (DOE, 2014). However, the implementation of the above-outlined suggestions is hindered due to the resources being low and skilled professionals being spread thinly among SA schools (Erasmus et al., 2019; Makhalemele & Nel, 2021). There is also an identifiable gap in policy and literature when considering the role of SBSTs, specifically with regards to learners diagnosed with ASD, raising concern from a ground roots or policy level. If guidelines are not provided at the policy level, teachers cannot be expected to implement strategies in terms of the identification, support and accommodation of learners with ASD characteristics who have very unique learning and support needs.

According to the SIAS Policy, full-service schools should aim to create an inclusive educational environment and should have access to appropriate resources in order to accommodate learners with a range of barriers to learning. Mainstream schools may not have the resources to accommodate learners with a range of barriers to learning or are not expected to provide the same level of support (DOE, 2014). This aligns with the SIAS Policy, which indicates that learners with low support needs should be placed in mainstream schools, and that learners with low to medium support needs should be placed in full-service schools and that those learners with high support needs should be placed in special or remedial schools (DOE, 2014). The SIAS Policy highlights government's goals to transform/transition many mainstream schools in SA into full-service schools, thereby increasing capacity for the

accommodation of the majority of the low to medium support learners. However, these goals do not seem to have been implemented as currently most schools are still categorised as mainstream or specialised schools, and not many schools are categorised under full-service schools (Pillay, 2022b). Therefore, many learners with barriers to learning, undiagnosed or even diagnosed ASD, requiring medium to high support were still in mainstream schools as opposed to being accommodated in full-service or remedial schools at the time of Donohue & Bornman's research (Donohue & Bornman, 2015). A more recent study conducted in 2021, states that learners with ASD characteristics are often placed in mainstream schools without considering their individual needs, further speaking to the persisting issue of inadequate placement of learners with ASD characteristics within the schooling system (Elliot, 2021). The present research was focused on understanding the challenges faced by teachers when identifying and accommodating learners with barriers to learning, specifically learners with ASD characteristics. Furthermore, this research ascertained possible barriers to learners with ASD characteristics being identified, and appropriately placed and/or supported through accommodation in a classroom.

This research was focused on ASD characteristics as barriers to learning. ASD is the “fastest growing neurodevelopmental disorder worldwide” (Nthibeli et al., 2022, p. 2). According to Statistics South Africa (2019), SA has an estimated population of 169 286 children under the age of 15 who have been diagnosed with ASD. This figure does not however account for undiagnosed cases that may have fallen through the gaps. Given the international trend, one might assume that this figure may have increased over the past 5 years and question whether this aligns with the level of available support. Current research indicates an increasing prevalence or recognition of children with ASD characteristics in SA; however, due to the limited number of available professionals in the field of ASD, the identification (and as such, the referral of these learner to the available professionals) often falls on the teacher (Nthibeli

et al., 2022; Statistics South Africa, 2019). To accommodate this, teachers should be equipped with the necessary tools and knowledge (have an understanding of ASD characteristics) to identify learners with ASD characteristics in their classrooms, which aligns with the protocol outlined in the SIAS Policy.

ASD can be characterised by deficits in “socio-emotional reciprocity”, “non-verbal communicative behaviours”, and “developing and maintaining relationships” (American Psychiatric Association [APA], 2013, p. 50), among other challenges. Furthermore, comorbidities such as hyperactivity, impulsivity, aggression, anxiety and depression can possibly also be present (Sauer et al., 2021). These challenges, deficits or comorbidities are due to the impaired development of social, physical, and cognitive elements, which are discussed in more depth in Chapter 1 of this report. People with ASD fall on a spectrum, meaning that it can display itself in a multitude of ways, as Dr Stephan Shore states: “When you meet one person with autism, you’ve met one person with autism” (Shore & Rastelli, 2006, p. 130). ASD is categorised into three levels in the DSM-5, namely “requiring support”, “requiring substantial support”, and requiring “very substantial support” (APA, 2013, pp. 50-51). Furthermore, in the classroom, these levels of support should be considered to ensure that the learner is placed in the necessary environment and provided with resources for optimal accommodation and support for the child’s needs. Owing to increasing prevalence, as discussed above, knowledge, skills and training around the inclusion of learners with ASD are imperative as the chances of teaching a child with ASD is increasing (Nthibeli et al., 2022). Typically, children with ASD face many barriers in school/classroom environments, yet ASD is not widely understood and accommodated for in SA educational settings, resulting in challenges that are discussed later in the study (Nthibeli et al., 2022).

1.2 Aim and objectives

This research explored teachers' lived experiences of processes and challenges around inclusion, specifically considering the identification and accommodation of learners with ASD characteristics within differently categorised SA schools. These challenges were explored to further understand whether teachers are equipped with the necessary skills to identify these learners, as well as the necessary skills and resources to accommodate them in the classroom or refer them to the necessary support. The Education White Paper 6 policy enforces inclusion; however, without implementation and action, inclusion is not attainable or realistic (Pillay et al., 2022). By exploring teachers' lived experiences, this research was able to highlight the gap between the above-discussed inclusive principles (policy) and implementation, and how this may inhibit the identification and accommodation of learners with ASD characteristics.

Many SA schools are faced with a multitude of everyday challenges, when considering classroom overcrowding, as well as a lack of skills, resources and infrastructure (Nthibeli et al., 2022; West & Meier, 2020). Further expectations are placed on teachers to implement inclusion, sometimes without sufficient resources and skills. The implementation of inclusive principles requires the teacher to have an understanding of barriers to learning and, for the purpose of this research, an understanding of the characteristics of ASD. Furthermore, it is required that teachers use this understanding and the necessary skills to identify "at risk learners" (DOE, 2014, p. 16) who are facing barriers to learning. Teachers are required to implement the SIAS Policy, which provides teachers with Support Needs Assessment (SNA) Form 1 and SNA Form 2. These forms are required to be completed, along with a learner profile (LP) when attempting to draft a support plan for learners who require low to medium support within a mainstream or full-service schooling environment. SNA Form 3 also needs to be completed if the learner requires high-level support or if the school needs additional support (DOE, 2014). According to the SIAS Policy, this process should be guided by the SBST,

enhancing the teachers' understanding of and experience around SBST support. When taking the previously discussed challenges into account, as well as those associated with the implementation of inclusion policies, the challenges SA teachers are faced with are multifaceted and nuanced. This research, therefore, sheds light on these challenges that are faced by teachers in the classroom when implementing inclusion, specifically when identifying and accommodating learners with ASD characteristics.

Objectives:

1. To determine SA teachers' awareness of the Education White Paper 6 principles and whether these principles are implemented in the classroom.
2. To ascertain whether SA teachers acquire the skills, resources and training to be able to identify and accommodate learners with ASD characteristics.
3. To realistically determine the extent of the inclusivity of learners with ASD characteristics in an SA context by drawing contrasts and comparisons from the perspectives of teachers from a diversity of public schools, highlighting any possible contrasts between specific demographic circumstances.
4. To highlight the reasons for teachers and/or learners 'falling through the gaps'.

1.3 Rationale

This research explored teachers' experiences and knowledge around inclusion in SA to determine their ability to identify and accommodate learners with ASD characteristics, as well as the possible gaps this may create for learners from schools of certain demographics. This was done by examining the applicability, practicality, and actual implementation of the inclusive principles and provisions expressed in Education White Paper 6 and the SIAS Policy. The realised numerical data were subjected to frequency analysis as an indicator of the levels at which policy was translated into action. Group differences across the sectors of educational

systems were calculated. Thereafter, a chi-squared test was conducted to examine where in the process learners with ASD characteristics might fall through the gaps, following which non-numerical data were subjected to thematic analysis. This research is important as it highlights instances and possible reasons for learners with ASD characteristics falling through the gaps, meaning that they have an increased chance of being unidentified or unaccommodated in the necessary educational environment, thereby inhibiting their learning potential. The present research allows for a comparison of the different perspectives around the challenges teachers face with regards to identification and inclusion within a diversity of educational settings/schools, yet within the same broader educational system of SA. The research is aimed at bridging the gap in research and knowledge of ASD with regards to learners with ASD characteristics who are not being identified or accommodated within the system.

Although recent literature suggests that ASD is widely studied and researched in SA, the lack of knowledge for accommodation and support of learners with ASD characteristics is raised (Pillay et al., 2021; Shilubane & Mazibuko, 2020). This research addresses a gap in the current knowledge around ASD, which is due to the lack of an ASD-specific policy and knowledge specifically around ASD in SA. In another study conducted in 2020, the shortage of knowledge around ASD in SA amongst colleagues was noted by teachers (Manukwana, 2020).

As discussed in Education White Paper 6, the education system needs to be focused on inclusivity (DOE, 2001). Learners with ASD characteristics are among the children who need specific learning programmes and teachers who have been trained with the necessary skills to teach and support them in their educational development. With such few schools equipped to accommodate learners with ASD, there are a lack of placements in schools, which could often lead to learners falling through the gaps in the system (Pillay, 2022b). By exploring the above-mentioned aspects, this research has further shed light on the challenges faced by teachers,

when specifically considering the placement of learners with ASD characteristics in the appropriate learning environment. This attempting to impact educational policymakers in SA, as well as adding to the knowledge on the inclusion of learners with ASD characteristics in SA.

1.4 Research questions

1.4.1 Primary research question

Does the knowledge and understanding of policy reflect in the identification and support of learners with ASD characteristics in the classroom, and does this differ across different school demographic circumstances?

1.4.2 Secondary research questions

- Are teachers equipped with the necessary skills, training, resources, and support structures to identify and accommodate learners with ASD characteristics specifically?

What trends can be identified when looking at specific school demographic circumstances and training, resources and knowledge of policy

Chapter 2: Literature Review

2.1 Introduction

This chapter is aimed at outlining the current and previous literature surrounding the topic of inclusive education and the associated classroom challenges from the teachers' perspective with a focus on ASD. This is discussed under the headings of Education in an SA Context, Defining ASD, ASD and Inclusive Education, Development in Children with ASD, and Challenges Faced by Teachers when Accommodating Learners with ASD characteristics. Furthermore, a theoretical framework, namely the Dynamic Skill Theory by Kurt Fischer, is discussed to establish an imperative understanding and theoretical framework for this research.

2.2 Education in a South African context

SA's education system should be considered in relation to the historical context of SA. Pre-1994, SA's education system was based on principles of exclusion and separation of learners in terms of ability and race under the control of the apartheid system (DOE, 2001). In the educational system, this meant that learners with barriers to learning, as well as learners of colour, were marginalised and denied access to resources and highly skilled teachers. In 1994, an international document called the Salamanca Statement was released, in which it was stated that all children have the right to quality education, which led to further policies around inclusion around the world (UNESCO, 1994). The South African Schools Act, 1996 (Act No. 84 of 1996) was passed in an attempt to implement the inclusion and amalgamation of learners of all races, disabilities and barriers to learning in schools.

In Education White Paper 6, disabilities are referred to as fundamentally organically based barriers in development and learning (DOE, 2001, p. 12). Learners with barriers are further included when referring to disabilities; however, for the purpose of this research, barriers to learning are discussed, specifically referring to ASD characteristics. Education

White Paper 6 was introduced by the DOE in SA to further develop inclusive education (DOE, 2001). In Education White Paper 6, inclusion and mainstreaming or integration are defined and distinguished. Inclusion is defined as accepting and respecting differences, while “building on the similarities” and adjusting school support systems (2001, p. 17). However, mainstreaming is focused on supporting learners to “fit into” mainstream classrooms (2001, p. 17). Considering these definitions, inclusion is considered ideal as it allows for the equality and acceptance of all children, which is further structured on the basis that “all children and youth can learn and that all youth and children need support” (2001, p. 6). However, in Education White Paper 6, the lack of provision and support for those learners with barriers to learning in SA schools was noted, with “up to 70% of children” of school-going age with barriers to learning receiving “little or no educational support” (2001, p. 54). Considering the progression of inclusive education over the years, a more recent study conducted in 2022 can be considered, which highlights that “38% of school going aged children were reported to be at home and receiving no educational or other intervention while they waited for a school” (Pillay, 2022b). This research is focused on the challenges of placing children with ASD characteristics in the SA schooling system, indicating the persisting difficulties surrounding including learners with ASD characteristics, and a lack of provision for learners with ASD characteristics. Furthermore, there will be a focus on the significant extent of the problem in SA due to the lack of implementation of provisions made for the inclusion of learners with barriers to learning. Due consideration of the SA context should be pivotal in ensuring the effective implementation of the Education White Paper 6 principles (Pillay et al., 2022). Furthermore, understanding and informing teachers’ attitudes toward inclusion should also be considered imperative in the process of attaining inclusive education (Adewumi & Mosito, 2019).

Teachers can be considered “key” in the process of implementing inclusive education (Adewumi & Mosito, 2019, p. 1). Nthibeli (2022) further highlights that positive attitudes

among educators is strongly associated with the successful implementation of inclusive policies. Teachers attitudes are influenced by many factors, for example, their exposure to learners with disabilities, and the nature of the disability, as well as the quality and level of support and training they receive (Donohue & Bornman, 2015). The lack of acceptance and integration of learners with barriers to learning in the education system may stem from many cultures in SA not accepting or understanding barriers to learning, and often not believing that these learners should attend school (Donohue & Bornman, 2015, p. 5). A study conducted by Erasmus et al. (2019) interrogated teachers' views on inclusion of learners with barriers to learning in mainstream schooling. Perceptions of prejudice, uneasiness and a lack of acceptance emerged and were linked to the opinion that it would be preferable for learners with barriers to learning to attend special, rather than full-service or mainstream schools. It was suggested that the resistance to change and negative attitudes towards inclusion may reflect perpetuation of historical segregation reinforced by the individuality of special needs or remedial teaching modules and mainstream pedagogy in teacher training (Engelbrecht & Savolainen, 2017). This separation in training was based on the initial use of the medical model in education, when it was thought that learners with disabilities have a problem and should, therefore, be treated differently and taught in separate classrooms to prevent other mainstream learners from being hindered in their performance. Institutionally and socially, we are conditioned to believe learners with barriers to learning and typical learners should be segregated (Engelbrecht & Savolainen, 2017). However, in a study conducted by Donohue and Bornman (2015), contrasting views are highlighted, stating that many SA teachers in principle agree with inclusion and have a positive view of inclusivity, yet the common issue of implementation was emphasised. Furthermore, a more recent study by Hooijer et al. (2021) speaks to the issue of teachers accepting inclusion but not putting the necessary steps into practice.

Furthermore, when considering the current context of SA schools, overcrowding is a major challenge faced by teachers (West & Meier, 2020). Additionally, systemic challenges such as a lack of resources, skills and infrastructure are in many cases everyday challenges for teachers (Pillay et al., 2022). These systemic challenges are explored in more depth in the literature review section of this research.

2.3 Defining Autism Spectrum Disorder

ASD is a nuanced neurodevelopmental disorder that is diagnosed in an estimated 1%-2% of children worldwide, and being four times more common in boys than in girls. Individuals with ASD often display poor communication, inhibited social skills, and have an increased risk of comorbidities such as ADHD, anxiety, depression, epilepsy, sleep disorders, gastrointestinal disorders, eating challenges, bipolar disorder, and obesity (Sauer et. al., 2021).

Figure 1

The insert below is taken from the Diagnostic and Statistical Manual of Mental Disorders (DSM) 5th edition Text Revision; and outlines the diagnostic criteria for ASD.

Autism Spectrum Disorder

Autism Spectrum Disorder

Diagnostic Criteria

299.00 (F84.0)

- A. Persistent deficits in social communication and social interaction across multiple contexts, as manifested by the following, currently or by history (examples are illustrative, not exhaustive; see text):
1. Deficits in social-emotional reciprocity, ranging, for example, from abnormal social approach and failure of normal back-and-forth conversation; to reduced sharing of interests, emotions, or affect; to failure to initiate or respond to social interactions.
 2. Deficits in nonverbal communicative behaviors used for social interaction, ranging, for example, from poorly integrated verbal and nonverbal communication; to abnormalities in eye contact and body language or deficits in understanding and use of gestures; to a total lack of facial expressions and nonverbal communication.
 3. Deficits in developing, maintaining, and understanding relationships, ranging, for example, from difficulties adjusting behavior to suit various social contexts; to difficulties in sharing imaginative play or in making friends; to absence of interest in peers.

Specify current severity:

Severity is based on social communication impairments and restricted, repetitive patterns of behavior (see Table 2).

- B. Restricted, repetitive patterns of behavior, interests, or activities, as manifested by at least two of the following, currently or by history (examples are illustrative, not exhaustive; see text):
1. Stereotyped or repetitive motor movements, use of objects, or speech (e.g., simple motor stereotypies, lining up toys or flipping objects, echolalia, idiosyncratic phrases).
 2. Insistence on sameness, inflexible adherence to routines, or ritualized patterns of verbal or nonverbal behavior (e.g., extreme distress at small changes, difficulties with transitions, rigid thinking patterns, greeting rituals, need to take same route or eat same food every day).
 3. Highly restricted, fixated interests that are abnormal in intensity or focus (e.g., strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interests).
 4. Hyper- or hyporeactivity to sensory input or unusual interest in sensory aspects of the environment (e.g., apparent indifference to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, visual fascination with lights or movement).

Specify current severity:

- E. These disturbances are not better explained by intellectual disability (intellectual developmental disorder) or global developmental delay. Intellectual disability and autism spectrum disorder frequently co-occur; to make comorbid diagnoses of autism spectrum disorder and intellectual disability, social communication should be below that expected for general developmental level.

Note: Individuals with a well-established DSM-IV diagnosis of autistic disorder, Asperger's disorder, or pervasive developmental disorder not otherwise specified should be given the diagnosis of autism spectrum disorder. Individuals who have marked deficits in social communication, but whose symptoms do not otherwise meet criteria for autism spectrum disorder, should be evaluated for social (pragmatic) communication disorder.

Specify if:

With or without accompanying intellectual impairment

With or without accompanying language impairment

Associated with a known medical or genetic condition or environmental factor

(Coding note: Use additional code to identify the associated medical or genetic condition.)

Associated with another neurodevelopmental, mental, or behavioral disorder

(Coding note: Use additional code[s] to identify the associated neurodevelopmental, mental, or behavioral disorder[s].)

With catatonia (refer to the criteria for catatonia associated with another mental disorder, pp. 119–120, for definition) (Coding note: Use additional code 293.89 [F06.1] catatonia associated with autism spectrum disorder to indicate the presence of the comorbid catatonia.)

(American Psychiatric Association, 2022)

While considering the above diagnosis criteria for ASD, it should be noted that the presentation of ASD characteristics can vary largely between individuals and can, therefore, be difficult to identify and diagnose in some cases. The following characteristics are also commonly present in individuals with ASD, namely heightened sensitivity, rigidity/inflexibility, difficulty with language, and becoming fixated on specifics. Research suggests that the etiology of ASD has a genetic and/or environmental basis. It further suggests that ASD comes with neurological diversity and a significantly increased amount of perinatal and immune complications occurring in infants who are later diagnosed with autism (Ornoy et al. 2015; Sauer et. al., 2021). Several environmental and gene risk factors for ASD include; maternal factors (advance age, chronic hypertension, preeclampsia, gestational hypertension, overweight), being monozygotic twins (60-90% higher) or dizygotic twins (0-30%) (Qiu et al., 2022). With the heritability of ASD being approximately 50%, further emphasising genetic factors being a significant contributor to the etiology of ASD. Treatment for ASD is as diverse and individualised as ASD itself, with there not being a scientific cure or specific treatment method for all individuals with ASD. However, anti-psychotic, antidepressants and anti-anxiety medication can be taken in order to assist in the treatment of ASD symptoms. As outlined above, ASD comes with a diversity of communication and social difficulties, which requires individualised education and, therefore, a unique educational approach.

2.4 Autism Spectrum Disorder and inclusive education

“Full-service/inclusive schools are first and foremost mainstream education institutions that provide quality education to all learners by supplying the full range of learning needs in an equitable manner. They should strive to achieve access, equity, quality and social justice in education.” (DBE, 2010, p. 7)

Full-service schools are ordinary public schools and not a separate specialist category. These schools give access to all learners and promote an accepting environment for learning

barriers by providing a wide range of support to all learners and accommodating the diverse abundance of educational needs. The function of full-service schools is to provide school-based support for learning, offer support to neighbouring ordinary schools, and collaborate with special school resource centres.

“A full-service school is a school with good leadership that sees itself as a beacon of the transformation process in education by developing cultures, policies and practices that celebrate diversity, respect difference and value innovation and problem-solving” (Guidelines for Full-Service Schools DBE, 2010, pp. 9).

In an SA context, inclusive education has been an ongoing progression toward accommodating children with a diversity of abilities. Education White Paper 6 was introduced in 2001 in an attempt to remedy the segregated education system inherited from the apartheid government, including the exclusion of and lack of resource allocation to learners with barriers to learning. Principles outlined in Education White Paper 6 include resources and skills to ensure the accommodation and inclusion of all learners. The SIAS Policy, promulgated a significant 13 years after the publication of the Education White Paper 6, provided a framework aimed at standardising the process for identification, assessment and accommodation of learners requiring additional support to enhance their learning capacity. These policies were created to guide inclusive education in SA. “Reasonable accommodation” is described in the SIAS Policy as making necessary adaptations to ensure equal access for learners with barriers to learning (DOE, 2014, p. 9). Education White Paper 6 further indicates the imperative role of teachers in “achieving our goal of an inclusive education and training system” (DOE, 2001, p. 18). It further outlined special needs schools in the area and highlighted that SBSTs and DBSTs would provide support for mainstream and full-service schools. The main goals of these support teams include leading curriculum development, identifying institutional needs and learner barriers, and providing strategies to address these barriers and needs (DOE, 2014, pp.

38). Furthermore, White Education Paper 6 highlights that these teams should aid in providing learner support plans and extra resources and skills for the implementation of these plans on school and district levels (Adewumi & Mosito, 2019). According to literature, within the SBSTs, there is an overall good understanding of the requirements and roles of the team holistically, yet gaps are highlighted in regards to individual roles and responsibilities not being clearly understood. Furthermore, it was highlighted that the identification of strengths and weaknesses was a major challenge within the SBSTs and, therefore, responsibility cannot be distributed accurately (Motitswe, 2014; Makhalemele & Nel, 2021). According to research conducted by Nel et al., (2011), in Gauteng, it is indicated that the majority of learners with barriers to learning “not so often”, “seldom” or “never” received support from DBSTs (Nel et al., 2011, pp. 48-49). When considering a more recent study on SBSTs, on average, they do not provide sufficient support due to “experiencing more challenges than successes” (Makhalemele & Nel, 2021, p. 310). The constant lack of support received by teachers from the SBSTs and DBSTs over the past 15 years has created possible challenges for teachers to be able to accommodate learners with barriers to learning effectively.

Six imperative modes of implementation of inclusivity are outlined in Education White Paper 6, namely the use of specialised schools as resource centres, the movement of some mainstream schools to becoming categorised as full-service schools, addressing and getting a large number of learners with barriers to learning who are out of school into the education system, upskilling the teachers to identify and support learners with barriers to learning, and addressing the imperative need for education and advocacy of learners with barriers within communities (DOE, 2001; Donohue & Bornman, 2015). The implementation of the above strategies, or a lack thereof, was investigated by Ramaahlo et al. (2018), who stated that the strategies were broad and that the policy lacked clarity. Other research further found that schools were not receiving any recognition or funding from the education department, often

leading to schools not implementing the strategies (Donohue & Bornman, 2015). Furthermore, according to research by Donohue and Bornman (2015), when exploring challenges around the implementation of the Education White Paper 6 principles, unclear planning about how to achieve inclusion, as well as ineffective implementation in the SA context are considered the two main challenges. When implementing inclusive principles in the SA context, one should consider the social and cultural context of the learners in the education system, for example, the beliefs and prejudices around learners with barriers to learning in an SA context (Donohue & Bornman, 2015). However, context does not seem to be appropriately considered, adding to the difficulty when implementing these principles in SA schools.

Education White Paper 6 and the surrounding principles on inclusion in SA rely on research conducted in the UK and the US, which raises questions around its relevance and applicability in a SA context, and may be discussed as a possible cause of ineffective implementation (Roberts & Simpson, 2016). Therefore, for inclusion to be achieved effectively in an SA context, research around inclusion of learners with ASD characteristics in an SA context specifically should be conducted in order to achieve optimal implementation within our diverse context. In SA, there is a major gap in knowledge around ASD, with it not being widely understood, even among policy creators (Pillay et al., 2024). This is indicative of the lack of knowledge on ASD among the general public in SA, as well as the concerns around policy being able to accommodate learners with ASD effectively (Pillay, 2022a). Owing to the lack of implementation and inclusion in schools, documents, namely Guidelines for Full-Service Schools (DBE, 2010), were introduced in an attempt to provide further knowledge on inclusion. However, these documents provided a more theoretical basis rather than a relevant, more practical approach, which Nthibeli et al. (2022) suggest was needed to allow for more effective implementation.

2.4.1 Development in children with Autism Spectrum Disorder

ASD is considered a neurodevelopmental disorder, meaning that children with ASD do not reach the age-appropriate neurodevelopmental milestones and face atypical development within several developmental areas (Hyman et al., 2020). These areas are a lack of understanding the intent of others, eye contact, non-verbal cues, social communication, social interaction, and symbolic play. Cognitive, sensory, motor and adaptive functioning are highlighted by Hyman et al. (2020) as areas that should be considered when identifying a child with ASD.

Poor social development is a primary focus area which is impacted negatively in children with ASD (Bamicha & Drigas, 2022). In a recent study conducted by Özerk et al. (2021), social competence is emphasised as an area of difficulty for children with ASD, and is divided into “peer acceptance, social skills and adaptive abilities” (Özerk et al., 2021, p. 345). Özerk et al. (2021) discusses the effects of social skills on different aspects of a child’s life, which include “peer relations, self-management, assertion, compliance, and academics” (Özerk et al., 2021, p. 347). The above discussed skills involve some level of social interaction and/or the social ability to follow instructions or rules. It is indicative of the possible challenges or barriers children with ASD characteristics may face when confronting social aspects within classroom or educational settings. These barriers may negatively affect the learner’s ability to follow classroom instructions or rules, and their ability to interact with their peers and teachers. Therefore, it is imperative for teachers to have the necessary skills to be able to recognise and identify learners with these behaviours, provide the required support, and accommodate these learners in the classroom.

Furthermore, cognitive development is highlighted as an area that does not often progress typically, leading to possible cognitive impairment in children with ASD (Bamicha & Drigas, 2022). The cognitive deficit can be seen in a lack of social understanding, deficit in

executive functioning skills, and delayed information processing, thereby indicating the type of daily challenges in a classroom setting where these learners are expected to ‘keep up’ academically with other typically developing learners.

Additionally, physical development is an important aspect of a child’s development and can be divided into gross motor and fine motor development (Mohd Nordin et al., 2021). In children with ASD both fine and gross motor development are significantly slower to that of typically developing children. The development of senses and managing sensory input can also be affected, with children with ASD often experiencing “hyper-responsiveness or hypo-responsiveness” (Gentil-Gutiérrez et al., 2021). Hyper-responsiveness refers to being overstimulated by sensory stimuli, while hypo-responsiveness is the lack of stimulation by sensory stimuli. Sensory over- or under-stimulation can be auditory, olfactory, visually, vestibular, or tactile, according to Gentil-Gutiérrez, et al. (2021). This research found that 69% of the children who participated, with ASD, had sensory symptoms (Gentil-Gutiérrez, et al., 2021).

The symptoms described above often present around 2-3 years of age, with a regression in development or skills also typically being seen around this time (Sauer et al., 2021). Therefore, it has been determined that early support and intervention is required to accommodate children with ASD in the educational system (Matlou, 2021). Intervention strategies for ASD should be multidisciplinary to allow a child to reach their full potential; yet, in SA, it is often seen that this support is not available due to the lack of specialist and therapist support, as well as financial constraints (Matlou, 2021).

2.5 Challenges faced by teachers when accommodating learners with Autism Spectrum Disorder

Many systemic challenges, as well as those arising from barriers to learning, can be identified as common challenges faced by teachers in the classroom (Pillay et al., 2022). In many cases, teachers expressed incompetency with the inclusion of learners with socio-structural barriers (Motitswe, 2014). Socio-structural barriers include teachers not having sufficient resources and/or skills in order to allow for optimal accommodation and, therefore, inclusivity within the classroom. SA has a lack of context-specific research on ASD, the causation, how its displayed, how and why these learners are “falling through the gaps”, and how best to accommodate learners with ASD characteristics in an SA context (Nthibeli et al., 2022). This leads to teachers not having a general understanding of ASD and how it typically displays in a learner in the classroom, and not being equipped with the necessary practical skills to deal with the barriers to learning that often come with ASD. Not having the necessary skills inhibits teachers’ ability to accommodate these learners in a typical SA classroom. Some of these challenges are behavioural, social, and academic in nature (Manukwana, 2020). The behaviour of learners with ASD in the classroom is highlighted as the biggest challenge or the aspect teachers were most concerned about in a study conducted by Roberts and Simpson (2016). Rigidity and structure are behavioural characteristics that are commonly seen in children with ASD and, therefore everyday school requirements, such as learners having to move between classrooms and different teachers for different subjects, could cause feelings of being overwhelmed and create a sense of a lack of consistency and stability (Lindsay et al., 2013). Furthermore, unstructured activities in class or unstructured fun days at school might be challenging for learners with ASD characteristics due to the lack of consistency that it might create. Behavioural challenges can be closely linked to social deficits, which should be considered when accommodating learners with ASD characteristics. The teacher should

consider the emotional or mental health of the learner around socialising, and how negative social interactions, especially in a mainstream school, may affect their confidence and mental health negatively (Cored Bandrés et al, 2022). A study conducted by Mitchell et al. (2021) was focused on the difference in communication techniques of an autistic child and non-autistic child. The study concludes that more communication challenges are faced between a typical child and child with ASD compared to two autistic children (Mitchell et al., 2021). This is indicative of the challenges learners with ASD characteristics may face when socialising with typical learners in the classroom. Considering the findings of this research, a mainstream classroom environment may cause further difficulties and possibly barriers to learning for learners with ASD characteristics due to this difficulty with socialising with typical learners.

Common challenges around the accommodation of learners with barriers to learning in schools were identified by Nthibeli et al. (2022), most of which are as a result of systemic failures, for example, a lack of resources, infrastructure, and training. According to Pillay et al. (2022), the accommodation of learners with ASD characteristics should be driven by policy in the educational system. Although policies such as Education White Paper 6 and the SIAS Policy outline inclusion, in SA, there are no policies specifically related to the inclusion of learners with ASD in the education system (Nthibeli et al., 2022). This lack of specific policy and management strategies could be due to the lack of contextually relevant research on ASD in SA (Pillay, 2022). Although Education White Paper 6 is aimed at shifting toward a more inclusive paradigm, the policy includes minimal detail of how to include learners with specific barriers to learning (Nthibeli et al., 2022). Learners with ASD characteristics in SA are accommodated within the education system in mainstream, full-service and ASD-specific schools.

Expectations and guidelines for teachers are outlined in the SIAS Policy with regards to screening, identifying, assessing, and supporting learners with barriers to learning, in which

teachers require the necessary training. However, teacher training in SA is not aligned with the existing inclusive policies, affecting its attainability, as well as the scope of teachers' skills (Nthibeli et al., 2022). This negatively affects the teachers' ability to provide support and accommodate learners with ASD in the classroom (Donohue & Bornman, 2015). Teacher training around the inclusion of learners with barriers to learning is discussed in the SIAS Policy and, in some cases, is expected from the teacher. However, the training provided, in some cases, is not leaving teachers feeling competent (Motitswe, 2014; Pillay et al., 2022). As outlined in the SIAS Policy, SBSTs and DBSTs were allocated to provide the teachers with the support and skills to aid the support of learners (DOE, 2014).

The professionals who make up the SBSTs and DBSTs are selected and trained to assist in the implementation of the SIAS Policy, which outlines the strategy of screening, identification, assessment, and support to achieve the inclusion of learners with barriers within the education system. According to the SIAS Policy, DBSTs should comprise psychologists, remedial teachers, health and welfare professionals, specialist support personnel, administrative personnel, management development support specialists, and curriculum specialists (DOE, 2014). DBSTs are responsible for the organisation of additional support programme training; managing the allocation and provision of support and resources to specific schools and learners; guiding, training and counselling teachers, parents and caregivers; and making use of the tools provided in the SIAS Policy (DOE, 2014; Motitswe, 2014). Furthermore, DBSTs are responsible for consolidating SBSTs in instances where a school does not have one. SBSTs comprise the principal, who is responsible for ensuring that there are members on the SBST, specialised teachers or teachers involved in the management of the school, as well as administrative staff or caretakers. SBSTs' support are required in identifying learners at risk and providing the necessary support and accommodation for these barriers to learning by developing programmes and tracking how effective the support is. They further

mobilise available assets and primarily support the process of teaching and learning. The DBSTs and SBSTs should work collaboratively to ensure the best placement and support of learners according to their specific support needs if a child does not receive sufficient support according to their learning support needs, challenges and deficits that arise (Erasmus et al., 2019). However, as discussed by Motitswe (2014), the members who were allocated to be a part of the SBST often do not have the necessary skills and are, therefore, unable to provide sufficient support and implement required strategies in order to achieve inclusion. Furthermore, in some cases, SBSTs are lacking support from the DBST and are, therefore, unable to implement their knowledge and skills effectively. Considering research conducted in the Gauteng province, the fact that learners with barriers to learning “never” or “seldom” receive support from these support teams indicate the lack of implementation (Nel et al., 2011, p. 49). According to the SIAS Policy, SBSTs and DBSTs are expected to find the best placement for each learner, taking their support needs into account to address the child’s specific educational needs, which is an imperative step in the process (DOE, 2014; Weber, 2013). However, as discussed above, learners with medium to high support needs are still being placed in mainstream schools, and those with high support needs in ASD-specific schools, or otherwise not receiving placement owing to the magnitude of the support needed (Pillay, 2022; Weber, 2013). This places these learners at risk of possibly falling through the gaps of the education system.

According to Pillay (2022b), SA schools lack the capacity to support ASD learners, which can be seen when considering that “744 children, with ASD or suspected ASD were reported to be waiting for special school placement” (2022b), and that most children with ASD are on a waiting list for public ASD-specific schools due to the lack of infrastructure and capacity (Erasmus et al., 2019). Capacity should be considered in private as well as public, mainstream, full-service and ASD-specific schools. In Gauteng, public ASD-specific schools

hold a larger capacity due to large class sizes and have a larger variety of therapy services compared to ASD-specific private schools (Erasmus et al., 2019). Yet, a study conducted by Erasmus et al. (2019) indicates that it may be opposite in terms of service delivery as learners in ASD-specific private schools have a younger average age of diagnosis and intervention, which can be considered imperative as it is highlighted that early intervention is predictive of successful intervention (Matlou, 2021). When considering the accommodation of a learner with ASD characteristics in the classroom, a teacher should consider the developmental impairments discussed above, which may lead to challenges in the classroom. Development is imperative for teachers/educators to consider when factoring in accommodation or providing the necessary support of a learner. Being aware of these differences in development should guide curriculum changes, classroom adaptations and teaching adaptations. Roberts & Simpson (2016) further discusses factors a teacher should consider when teaching learners with ASD, namely teaching style, classroom environment, curriculum, and social factors. Roberts & Simpson (2016) speaks to these factors not being considered or not being able to be considered due to constraints, and how this could result in challenges. A teacher should adopt a learner-centred teaching style to provide an individualised intervention based on their specific needs (Morsa et al., 2022). Interventions should be initiated as early as possible and should include a multidisciplinary approach, using specialists such as speech therapists, occupational therapists and psychologists (Pillay et al., 2022; Weber, 2013). However, there are instances in SA where these specialists are not available, thereby creating a lack of support (Matlou, 2021). Additionally, due to a lack of skill and training with regards to inclusion among teachers in SA, as well as the lack of support from SBSTs and DBSTs, identification and intervention are often not achieved (Motitswe, 2014; Weber, 2013).

Additionally, resource constraints often lead to overcrowding, which is among the main challenges experienced by teachers in SA schools, as discussed above (West & Meier, 2020).

Overcrowding is due to the lack of resources, such as the lack of infrastructure and teacher capacity (West & Meier, 2020). For typical learners, overcrowding causes an average decrease in academic performance due to noise and space restrictions, as well as less one-on-one time from the teacher (South African Democratic Teachers Union et al., 2019; West & Meier, 2020). When considering learners with barriers to learning, specifically ASD, overcrowding could be unhelpful for the learning process, as well as the provision of support, thereby inhibiting capacity for learning support (West & Meier, 2020). Teaching learners with barriers to learn requires a low teacher-to-learner ratio, considering that a learner with ASD is regarded as the same as teaching six neurotypical learners (Erasmus et al., 2019). Yet, one-on-one attention is limited in an overcrowded classroom, as discussed above, and could, therefore, affect learning and support negatively. Furthermore, high noise levels and limited space could potentially increase anxiety owing to the typical sensory sensitivity often displayed in children with ASD (West & Meier, 2020).

Individualised educational development plans (IEDPs) or Individual Support Plans (ISPs) are learning plans created for a specific learner's education and support needs, and are aimed at creating goals and effective stimulation for a specific learner (Siegel, 2020). Creating IEDPs requires skills and resources and is an imperative part of inclusion (DOE, 2014). Yet, when considering the lack of skills and resources discussed above, IEDPs are often not used in the classroom environment effectively or at all. The barriers to learning discussed above should be kept in mind when designing IEDPs, and it should be further recognised that these barriers to learning may result in challenges for teachers in the classroom environment (Manukwana, 2020). IEDPs should be created and updated to ensure consistent stimulation and development based on their individual needs and abilities, thereby achieving the inclusion of learners with barriers to learning. However, creating and implementing IEDPs require skills and resources,

which may, therefore, be a challenge for teachers who are not provided with the necessary training, skills and resources (Siegel, 2020).

A further systemic challenge in an SA context, when including learners with ASD, is the lack of skills or teacher capacity for teachers to be able to implement inclusive principles sufficiently (Erasmus et al., 2019). Skills are an imperative part of being able to achieve an inclusive classroom or school, and can be attained through teacher training. Although some teachers receive training, they often feel as though it is not adequate, which possibly leaves them lacking proficiency and confidence in being able to apply inclusive principles and strategies in the classroom. This highlights the possible gap in skills and, therefore, confidence to implement these skills (Donohue & Bornman, 2015).

Learners with ASD have a diverse range of characteristics and challenges, as discussed above, which could possibly lead to a variety of challenges in the classroom environment (Nthibeli et al., 2022). Some of these common challenges are highlighted by Nthibeli et al. (2022) and include challenges surrounding social interactions, non-verbal and verbal communication, sensory sensitivity, and rigidity (Nthibeli et al., 2022). In a study conducted by Pillay et al. (2022) in the Western Cape, existing services were explored by interviewing ASD service providers, and recommended improvements were outlined. In this research, resource, contextual, and competency constraints were also identified as gaps in existing ASD provision services in the Western Cape (Pillay et al., 2022). More specifically, curriculum adjustment was identified as a challenge due to the lack of competence and capacity among teachers to adjust the curriculum for individual learners' learning and support needs effectively (Pillay et al., 2022; DOE, 2001). Yet, as outlined in Education White Paper 6, the curriculum should be adjusted by teachers to accommodate each learner's barrier(s) to learning. However, this expectation is not realistic as it will be extremely time consuming to adjust the entire curriculum for each learner, especially when accommodating many learners with barriers to

learning (Chiwandire, 2019). Furthermore, overcrowding and a possible lack of resources and skills, as discussed above, could further add to the workload and unrealistic expectations placed on teachers around curriculum adjustment.

Often when attempting to accommodate learners with barriers to learning, teachers focus more on psychosocial inclusion, rather than stimulating and optimising the learners' academic learning (Donohue & Bornman, 2015). One of the main resources to consider to achieve optimal learning when accommodating learners with ASD is the use of visuals (Nthibeli et al., 2022). In many schools in SA, this will not be possible due to the lack of resources, skills and training in order to include this support in the classroom.

Systemic barriers are highlighted as one of the main challenges when achieving inclusion. Additional challenges are faced in the classroom around specific or common barriers to learning associated with ASD. However, in many cases, systemic challenges do not allow for teachers to intervene and accommodate these learners effectively (Pillay et al., 2022). Workload will seemingly increase significantly for teachers when considering the added training and time it would take for teachers to make curriculum adjustments and other discussed classroom adjustments. Yet, these adjustments are necessary to accommodate learners with barriers to learning such as ASD, as well as creating and updating IEDPs for these learners (Donohue & Bornman, 2015). Furthermore, one needs to consider the support, identification, assessment and support duties assigned to teachers in the SIAS Policy to achieve early intervention and inclusion of learners with barriers to learning such as ASD (DOE, 2014).

2.6 Theoretical framework

Early childhood is the period before a child enters formal schooling, but is a crucial period of development in a person's life (Anderson et al., 2003). Children develop socially, physically, and cognitively during this period; however, in children with ASD, development is

impaired and takes place differently to that of a typically developing child. This may manifest in certain challenges or barriers to learning and specific learning support needs (Mohd Nordin et al., 2021; Özerk et al., 2021). Kurt Fischer established the Dynamic Skill Theory, which is focused on the differences in contexts and how the support or lack of support in a child's environment can lead to the achievement of either optimal level skills or functional level skills (Fischer & Bidell, 2007). This theory suggests that high support level contexts stimulate and provide accurately for a child's needs, thereby producing an optimal level of skills, meaning that the child has achieved the best possible level of skill for their cognitive capacity. However, attainment of functional level skills is due to a low support level environment that does not allow for the optimisation of their skills based on brain capacity. The child will, therefore, only be able to do enough to merely function in their environment, instead of attaining optimal achievement in their environment (Fischer & Bidell, 2007). Sufficient support of children with ASD characteristics is, therefore, imperative, as outlined by Fischer, who also highlights that one's environment could determine a child's skill ability for the rest of their lives. A supportive classroom environment, which supports and stimulates a child, could lead to optimised skill ability based on their cognitive capacity. Yet, the very same child, with the same cognitive capacity, without the support and stimulation in the classroom, could merely acquire functional level skills. Therefore, there is a focus on supportive environments and how influential an environment or context is when achieving optimal skills development. Learners with ASD characteristics in SA schools who face barriers to learning and are not stimulated due to not attending a school with the needed support (skills and resources), or are undiagnosed or lack early intervention, could end up not achieving optimal development. Challenges teachers face in the education system, as well as in specific circumstances when accommodating learners with ASD characteristics or barriers to learning, should be highlighted and addressed to ensure

that policymakers and the general public are aware of the challenges encountered in the educational system in SA.

2.7 Conclusion

The current research topic was discussed in light of current and previous research under the headings of Education in an SA Context, Defining ASD, ASD and Inclusive Education, Development in Children with ASD, Challenges Faced by Teachers when Accommodating Learners with ASD. Furthermore, a theoretical framework, namely the Dynamic Skill Theory by Kurt Fischer, was discussed to establish an imperative understanding and approach for this research.

Chapter 3: Research Design and Methodology

3.1 Introduction

An overview of the research design, which was adopted for the purpose of this research, as well as an outline of the methodology adopted for the study, is provided in this chapter. The methodology discussed includes the sample and sampling techniques, instruments, data analysis, procedures, and ethical considerations.

3.2 Research design

A convergent parallel mixed methods design was adopted to gain an understanding of whether the knowledge and understanding of policy reflects in the identification and support of learners with ASD characteristics in the classroom, and whether this differs across different school demographic circumstances. The research questions are, therefore, as follows:

- Are teachers equipped with the necessary skills, training, resources, and support structures to identify and accommodate learners with ASD characteristics specifically?
- What trends can be identified when considering specific school demographic circumstances and training, resources and knowledge of policy?

This research adopted a non-experimental design, which does not use manipulation or control variables, but rather observes phenomena in their natural environment. The non-experimental design was used to highlight the relationships between variables by making use of a correlational design, or investigate a phenomenon through the use of a descriptive design, meaning that the data were used to identify the challenges faced by teachers when identifying and including learners with ASD characteristics in the classroom (Ivankova, 2006). This research adopted a convergent parallel mixed methods design, which collects both quantitative

and qualitative data concurrently. The strength of this design is that it combines the generalisability of quantitative data and the depth of information about the context gained by qualitative data. It, therefore, allows the research to achieve a more wholistic understanding of a topic or perspectives about a topic (Schoonenboom & Johnson, 2017). A structured questionnaire was distributed; thereafter the numerical quantitative data collected were analysed using inferential and descriptive statistical analyses, while the non-numerical, qualitative data collected were analysed using thematic analysis.

This research used a positivist paradigm for the quantitative section, which relies on measurement and reason, with knowledge being revealed from a neutral and measurable (quantifiable) observation of activity, action or reaction. It was used in this research to identify trends between specific demographic circumstance schools, understanding policy, and their ability to identify and support learners with ASD. In this research, the interpretive paradigm was assumed to further explore and understand teachers' lived experience of identifying and accommodating learners with barriers to learning, with a specific focus on learners with ASD characteristics (Rahi, 2017). These experiences were explored in the context of SA, specific schools' demographic circumstances, and individual experience. Through the interpretation of these experiences, this research aimed to further whether teachers are equipped with the necessary skills, training, resources, and support structures in order to identify and accommodate learners with ASD characteristics specifically.

3.3 Sample and sampling

The study sample group comprised teachers across Gauteng and KwaZulu-Natal from public primary schools, in the categories of full-service and mainstream schools, including both full-service and mainstream schools in the categories of no-fee and fee-paying schools; suburban urban, suburban rural, and township urban mainstream schools; as well as township rural full-service schools. Mainstream schools are described in Education White Paper 6 as

accommodating learners requiring low or very low support. It further states that “500 out of 20,000” mainstream schools were planned to be converted into full-service schools (DOE, 2001, p. 8). Full-service schools are aimed at providing support for moderate support needs learners (DOE, 2001). For the purpose of this research and the categorisation of data, the assumption were made that suburban schools are either in rural or urban areas (suburban rural or suburban urban), and township schools (township rural or township urban) were either in rural or urban areas. Rural schools usually have less capacity for learners and occur in smaller towns rather than cities or more urbanised areas, urban schools are in larger cities and often have a larger capacity for learners, Suburban schools are often located in areas where there is a higher SES, and township schools are often in areas with a lower SES, thereby providing a diverse sample group from a diversity of demographic circumstances (Ramnarain, 2014). These different groups allowed for a greater diversity of participants and more representational data. The sample comprised teachers who teach primary school learners (Grades 1-7). As discussed above, this is a pivotal time for development and, therefore, for the identification and accommodation of learners with ASD characteristics. Teachers from public schools are the best sample group for this specific study owing to the expectations placed on them by the Department of Education to apply inclusive education, as well as expectations placed on them to identify and accommodate learners with barriers to learning, including learners with ASD characteristics. In Education White Paper 6 and the SIAS Policy, these expectations and goals are presented in order to achieve inclusion in SA schools. This, therefore, puts teachers at the forefront of experiencing the challenges that come with the inclusion of learners with ASD characteristics, as well as at the forefront of experiencing the challenges that may put learners at risk of falling through the gaps of the education system (DOE, 2001, 2014). The sample of teachers included a range from newly qualified teachers to experienced teachers. The G*Power application was used to compute the required sample size for this research. Using a 0.05 alpha

error of probability, 0.95 Power, and 2 degrees of freedom (Df), an ideal sample size is between 62 and 172 participants to achieve a medium to large effect size. According to this calculation, between 62 and 172 participants would be a large enough sample group to observe any significant comparisons or themes, and disparities in the data. However, due to teachers and schools being unwilling and/or overburdened with school-based workload to allow participation in research, a sample size of 37 participants completed the questionnaire. A posthoc power test was conducted using the G*Power Application to determine the sample power/effect. When making use of a large effect size (0.5), Df = 2, error of probability = 0.05, on a total sample size of 37, the power of sample size = 0.8, which is considered acceptable power.

Non-probability, purposive sampling is defined by a group that is specifically chosen owing to a specific criterion that is necessary for the study to obtain certain information (Tongco, 2007). This research made use of purposive sampling in order to include teachers across a diversity of demographics, as mentioned above. This allowed comparison and contrasting of the experiences and a more accurate representation of the schools in SA, as well as more valid results being obtained. University ethical approval and permission from the relevant educational departments were granted and the principal of each school was approached to obtain their informed consent to approach teachers. The link to the online questionnaire was distributed. Snowballing is defined as a sampling technique that makes use of a smaller number of contacts who have experience in the scope of the study to make contact with a larger group of people who are relevant to the study (Rahi, 2017). For the purpose of this research, snowballing was used as teachers were given the opportunity to encourage other teachers to participate in the study.

3.4 Instruments

Structured survey questionnaires (Appendix A) are a research instrument or data collection technique used in mixed methods studies and was adopted for this research instrument (Creswell & Tashakkori, 2007). The structured questionnaires included Likert rating scale questions to gather quantitative responses, as well as qualitative questions to gather more opinion, subjective-based responses. In this research, structured self-report questionnaires were used to collect data from teachers who teach at a range of public, full-service and mainstream schools in SA. This questionnaire took the participants approximately 30 minutes to complete. The questionnaires were made available digitally via a link to a Google document. The school principal emailed a link to the questionnaire to the teachers. The first section of the questionnaire contained questions in a forced choice categorical format to classify groups and attain categorical demographic data, which were used as the independent variables in the study. These independent variables were the category of school, how experienced the teachers are, the number of learners in the class, number of learners in the school, and what age group the teacher teaches. In following sections of the questionnaire, Likert scale formatted questions were used to collect numerical data about challenges that teachers face when identifying and accommodating learners with ASD characteristics in the classroom. This section of the questionnaire further explored the implementation of Education White Paper 6 and other inclusive policies. The Likert scale questions were included to gather numerical data, which highlighted comparisons and contrasts among schools of different demographics. Statistical significance among categorical groups highlighted group differences, which was achieved through the use of statistical tests, namely the Cramer's V test of independence. The next section of the questionnaire was used to gather non-numerical data. Qualitative instruments are used to collect information about a topic of interest through the use of open-ended questions. The open-ended questions in the questionnaire allowed the collection

of in-depth information about the challenges teachers face when considering Education White Paper 6. This was achieved by exploring the identification and accommodation of learners with ASD characteristics. Thematic analysis was used to analyse the non-numerical data by highlighting reoccurring themes within the non-numerical responses.

Validity is focused on the correctness of measurement or the study measuring what it is meant to measure, as well as ensuring an accurate representation of the population (Heale & Twycross, 2015). The questionnaire in this research was self-designed, with questions posed specifically directed at the purpose of the present research, thereby ensuring internal validity. Although the study aimed to include participants from a variety of school demographics, the lack of participation from schools in rural areas, as well as participants from full-service schools decreased the validity of this research. External validity refers to the generalisability of the instrument, which can be identified as a limitation in this research as the questionnaire was self-designed, indicating that the instrument has not been tested for reliability and/or validity. Although the research sample will ensure the inclusion of perspectives from a variety of different categories of schools, due to the small sample size of 37 participants, the study is not generalisable to the SA population. The questionnaires were self-report surveys, meaning that the questionnaire was completed in the absence of the researcher, thereby reducing the bias that may have been introduced if the researcher were collecting the data. However, this may have also introduced test bias due to the process of the participants making use of resources to help answer the questionnaire, thereby possibly introducing the possibility of the data not being a true reflection of the participants' knowledge. The use of a mixed methods approach to collect data on the same topic, where both numerical and non-numerical data were adopted, enabled triangulation to increase the validity of the data. Although validity cannot be ensured in this research, it was considered when creating the survey and current literature was considered when creating the questionnaire, allowing for an increased validity. Content validity was also

considered by formulating clear, concise, and unambivalent questions in the questionnaire. Reliability is the precision and consistency of a research instrument, and cannot be ensured in this research owing to the use of self-designed surveys (Heale & Twycross, 2015). Trustworthiness in qualitative research ensures that the researcher's biases have not influenced the data collection or results in any way (Connelly, 2016). Trustworthiness was considered in this research.

3.5 Data analysis

A relational analysis was performed on the numerical data collected in the questionnaire, using the chi-square test of independence or test of association, more specifically the Cramer's V test of independence. Cramer's V is an effect size measurement for the chi-square test of independence, which measures the strength of association between two nominal variables (this varies from 0 to 1, where 0 indicated no association between the two variables and 1 indicated a perfect association between the two variables). Cramer's V was calculated as follows:

$$\text{Cramer's } V = \sqrt{(X^2/n) / \min(c-1, r-1)}$$

Where:

X^2 : The chi-square statistic

n: Total sample size

r: Number of rows

c: Number of columns

The analysis of non-numerical or qualitative data collected was done using thematic analysis to identify themes in teachers' experiences. Thematic analysis involved coding the data, reviewing the codes, and then organising the codes into groups and developing themes.

The first step was coding the data, which involved “chunking” or grouping the answers and highlighting the commonly mentioned phrases or words. The second step is to organise these codes into groups, and then finally derive themes from the grouped codes. The primary research question was answered through the analysis and integration of both quantitative and qualitative data, which highlights trends and themes, and provides an understanding of how knowledge and understanding of policy reflect in the identification and support of learners with ASD characteristics in the classroom, and how this differs across different school demographic circumstances. To determine the knowledge and understanding teachers have of policy such as Education White Paper 6 and the SIAS Policy, the Likert scale questions based on the procedures and knowledge of these policies and procedures were analysed using the chi-square test of independence. This statistical technique was used to achieve a relational analysis, which highlighted the relational significance between different schools, as well as the procedures and knowledge of these policies and procedures. Relational significance was analysed between differently rated skills, training, resources and support structures, and the category of school. In order to compare teachers’ experiences in a diversity of schools in SA, a statistical analysis of the forced choice categorical questions and Likert questions was used to determine the strength of the relational significance. Furthermore, a thematic analysis of the non-numerical data allowed for a deeper understanding into how the participants’ knowledge and understanding of policy reflects in the implementation (identification and support) of learners with ASD characteristics in the classroom and how this differs across a diversity of school demographic circumstances.

3.6 Procedures

- i. Ethical clearance (Appendix E) was obtained from the University of the Witwatersrand Human Resource Ethics Committee Non-Medical (HREC) prior to gathering data from

teachers in public, full-service and mainstream schools in the categories of no-fee and fee-paying schools.

- ii. Permission to conduct the research involving the teachers in full-service and mainstream public schools in Gauteng and KwaZulu-Natal was obtained from the Gauteng Department of Education (Appendix B) and the KwaZulu-Natal Department of Education (Appendix C). Furthermore, letters to request permission from each school principal (Appendix D) to conduct research in the respective schools was sent via email.
- iii. The questionnaires were piloted by the researcher as well as two professionals within the educational field, prior to being dispersed. Approximately 120 online structured, self-report questionnaires (Appendix A) were dispersed to school principals for further distribution to teachers and snowballing. The questionnaires were used to gather numerical and non-numerical data from teachers to examine the application of Education White Paper 6 by exploring the challenges teachers encounter around the identification and accommodation of ASD characteristics in SA classrooms. The aim and description of the study and ethical considerations regarding participation in the study were provided in the introduction to the digital questionnaire.
- iv. The questionnaire was made available electronically via a Google form. The principal provided all the teachers the link to complete the questionnaire, those who were willing completed it.
- v. No identifying information was required in the questionnaire. Owing to the anonymity of the completion of the questionnaire, once it had been submitted, the participant was not able to withdraw from the study. The completion and submission of the digital questionnaires were considered informed consent.
- vi. The data were stored on iCloud and protected by a password.

- vii. When considering the numerical data that were collected, statistical analysis was performed using a chi-square test of independence, Cramer's V, which was useful to test for significance relationships between categorical groups.
- viii. Analysis of the non-numerical data collected was done using thematic analysis to identify themes in teachers' experiences.
- ix. The results are displayed in this research report. Direct quotes collected in the open questions are used anonymously and the final report does not provide any identifiable information about the school or participants.

3.7 Ethical considerations

Ethical clearance was obtained through the University of the Witwatersrand Ethical Clearance for HREC Non-Medical prior to gathering data. Permission to conduct the research involving the teachers in primary full-service and mainstream public schools in Gauteng and KwaZulu-Natal was obtained from the Gauteng Department of Education and the KwaZulu-Natal Department of Education (Appendix B and Appendix C). Furthermore, letters to request permission from each school principal to conduct research in the respective schools were sent via email, and permission was obtained from several schools. The aim, description, and ethical procedures of the study were provided in the introduction to the digital questionnaire. If the participants were disturbed in any way by the content of the questionnaire, they were provided with the researcher's email address. Thereafter, on contract, there was the option for referral to SA's education, training, and skills development to give them the opportunity to broaden their capacity as a teacher or otherwise other relevant support services. The potential participants were advised that participation in this research was voluntary, and no consequences or benefits were linked to participation. The participants' responses are discussed in this research report as anonymous and are kept confidential. Some direct quotes collected in the open questions are

used anonymously. This report does not provide any identifiable information about the school or participant. Submission of a complete questionnaire was considered consent, and consent to allow data collected in this research to be used for future studies. However, due to anonymous participation, the participants were not able to withdraw after having submitted their responses. Participant data is kept safely on the researcher's iCloud with a security password. The research results are included in this research report and can be emailed to each participant on request.

3.8 Reflexivity

Reflexivity is described as having a self-awareness through self-reflection and understanding your role as a researcher, and can be practised to ensure a more ethical research study (Guillemin & Gillam, 2004). Observation of one's assumptions, thoughts, and beliefs should be recognised and thought about critically in terms of the study and how this may influence the study. By identifying this and being reflective, the researcher was constantly aware of personal assumptions which may be linked to schools or teachers from certain areas. For example, assuming that teachers or schools in more rural areas would not have resources or knowledge to complete the questionnaire; or that teachers or schools from more suburban areas would have the resources and knowledge to complete the questionnaire. Reflecting allowed the researcher to learn from the experiences, which allowed these experiences to be shared with an open mind. Owing to the instrument being digital and self-reporting, throughout gathering the data, the researcher's thoughts and assumptions did not impact the participants in any way, neither did it impact their responses to the questions in the questionnaire. The analysis of the numerical responses was done through statistical analysis and was, therefore, not influenced by the researcher's opinions or assumptions. When analysing the non-numerical data through the use of thematic analysis, the researcher was consistently aware of their thoughts and critically reflected on possible biases and assumptions linked to personal opinions of the outcome, ensuring that they did not impose on the analysis of results. For example, a

potential personal bias may have been that ASD learners are not accommodated for in SA schools, but throughout the process and particularly within the analysis section of the results I had to be aware of these potential biases, by being reflective and open minded. The researcher was aware of their personal thoughts by writing them down in a diary and being reflective throughout the research process. This was further achieved by allowing the supervisor to supervise the analysis to ensure that personal assumptions neither influenced the analysis of the data, nor how they were presented in the research report. Although this research did not impose any identifiable harm onto the participants, the researcher was aware of possible negative feelings around failures in the system, or around inclusion of learners with ASD characteristics.

3.9 Conclusion

This chapter provided an overview of the research design and methodology adopted for the study. Sample and sampling techniques, instruments, data analysis, procedures, and ethical considerations were all considered and outlined in this chapter.

Chapter 4: Findings, results and interpretations

4.1 Introduction

The previous section explained the research design and methodology used. This section provides the results of the study, highlighting the trends that arose from the data analysis. The trends highlighted in the chi-square test of independence analysis guided the thematic analysis, which provides evidence through the use of quotations from the qualitative responses. The objective of this research was to gain an understanding of the resources teachers are equipped with in order to identify, accommodate and support learners with ASD characteristics in the classroom, and accordingly allow for a greater understanding of the challenges faced by

teachers, which are resulting in learners with ASD characteristics ‘falling through the gaps of the education system’. The research was guided by the primary research question, along with the secondary research questions.

Primary research question

Does the knowledge and understanding of policy reflect in the identification and support of learners with ASD characteristics in the classroom, and does this differ across different school demographic circumstances?

Secondary research questions

- Are teachers equipped with the necessary skills, training, resources, and support structures in order to identify and accommodate learners with ASD characteristics specifically?
- What trends can be identified when considering specific school demographic circumstances and training, resources and knowledge of policy?

4.2 Participant overview: Descriptive statistics

Teachers participated and completed the questionnaire anonymously. A total of 37 participants completed the survey, namely teachers at public primary full-service or mainstream schools across the Gauteng and KwaZulu-Natal provinces. A posthoc power test was conducted using the G*Power Application in order to determine the sample power/effect. When making use of a large effect size (0.5), $Df = 2$, error of probability = 0.05, on a total sample size of 37, the power of sample size = 0.8, which is considered acceptable power. The participants taught at schools across township urban, township rural, suburban urban and suburban rural areas, and the schools fell in the categories of either no-fee or fee-paying, as summarised in Table 4.1.

School location

Suburban – Characterised by their small population size

- Rural – A suburban rural area also has limited access to educational resources (books, stationary, computers, professionals) and technological resources (signal, data, computers) (are not central).
- Urban – A suburban urban area also has access to educational resources (books, stationary, computers, professionals) and technological resources (signal, data, computers) (is central).

Township – Characterised by their large population and being underdeveloped

- Rural – A township rural area also has limited access to educational resources (books, stationary, computers, professionals) and technological resources (signal, data, computers) (are not central).
- Urban – A township urban area also has access to educational resources (books, stationary, computers, professionals) and technological resources (signal, data, computers) (is central).

Level of support (Intensity of support the school is able to offer)

Mainstream – Able to accommodate learners with none, mild and moderate support needs

- Fee-paying (also receive little financial support from the department)
- No-fee (also receive substantial financial support from the department)

Full-service – Able to accommodate learners with moderate to severe support needs

- Fee-paying (also receive little financial support from the department)

- No-fee (also receive substantial financial support from the department)

Table 4.1 below displays the number of participants in different school locations and with different levels of support.

Table 4.1

Number of participants (teachers) by school location with different levels of support

The table below outlines the descriptors according to School Location.

School Location	Level of Support			
	Mainstream		Full-Service	
	Fee-Paying	No-Fee	Fee-Paying	No-Fee
Suburban rural	7	2	0	0
Suburban urban	18	0	0	0
Township rural	0	3	1	3
Township urban	2	1	0	0
TOTAL	27	6	1	3

The table above outlines the school demographics from which the participants are, displaying school location and level of support.

With regards to the distribution of the data, the mode or the most occurring response to *Level of support* of participants from different *School locations* are participants from suburban urban schools with a mainstream fee-paying level of support. This is due to teachers from suburban urban schools being more accessible and willing to participate in this research. There were predominantly more participants from suburban schools (27) than from rural schools (10), which is closely linked to whether participants were from fee-paying (28) or no fee-paying (9) schools, due to schools in township areas usually requiring more government funding/support.

These numbers may have been due to the questionnaire being online, and many of the rural schools in South Africa not having access to computers, internet, or the required knowledge to complete questionnaires online. Furthermore, there were significantly more participants from mainstream schools (33) than full-service schools (4), which is due to the sparsity of full-service schools.

Table 4.2 displays the number of participants in different school locations and how many years' experience the participants have, as well as the class size they teach.

Table 4.2

Reported years' experience and class size according to the different school locations

School Location	Years' Experience				Class Size				
	<2	2-5	6-10	>10	<15	15-25	26-35	36-45	>45
Suburban rural	0	2	1	6	2	7	0	0	0
Suburban urban	0	6	7	5	0	10	8	0	0
Township rural	0	1	0	6	2	3	0	0	2
Township urban	0	0	0	3	0	0	1	0	2
TOTAL	0	9	8	20	4	20	9	0	4

The table above displays the lack of newly qualified teachers (teachers with less than two years' experience) among the participant group across all types of schools. When considering participants from a *Township urban* school location, all the participants had 10 or more years' experience.

A total of 81,1% of the participants responded that they had taught a learner with ASD who was undiagnosed, yet only 32,4% of the participants attended training for ASD specifically, and only 18,9% of the participants were confidently familiar (*Very familiar*) with the SIAS Policy.

With regards to the distribution of the data, the mode or the most occurring response to *Years' Experience* of the participants from different *School locations* are participants from suburban urban schools with 6-10 years' teaching experience. This is due to teachers from suburban urban schools being more accessible and willing to participate in this research, therefore allowing these participants to be the most occurring.

4.3 Research findings

4.3.1 Statistical analysis

This section examines the quantitative data obtained from the descriptive data of the realised sample. In Table 4.4, the responses from different school locations regarding participants' awareness of Education White Paper 6, as well as their familiarity with the SIAS Policy, are highlighted. Following this, Table 4.5 indicates whether participants from different school locations had taught learners with ASD characteristics (diagnosed and undiagnosed), whether they were able to facilitate learners with ASD characteristics in the classroom, and whether they attended training for ASD specifically. Further exploration is presented in Tables 4.6, 4.7, 4.8, 4.9 and 4.10, where chi-square tests were run in order to identify trends and relationships between school location, level of support and participant familiarity and/or implementation of ISPs, LPs and SBSTs. ISPs, LPs and SBSTs are highlighted within the SIAS Policy as guidelines and resources that teachers should adopt to accommodate learners with barriers to learning.

Pearson's chi-square tests are a means of statistically evaluating data. They are used to compare categorical data from a sample with expected results to determine whether this difference is owing to a relationship between the variables. Assumptions for the chi-square test of independence include two categorical variables, two or more categories (groups) for each variable, independence of observations, and frequency for each cell at least once. The present

data meets 3 of the 4 assumptions for the chi-squared but due to the small sample size failed to populate all cells. Chi-squared assumptions stipulate that each cell in the contingency table should be 5 or greater in at least 80% of cells and that no cell should have an expected value less than 1. While there's no strict minimum, small samples can lead to problems with the chi-square approximation. Also, low expected frequencies in the cells of the contingency table (less than 5) can make the test less reliable. Therefore, Cramer's V was used as a measure of effect size for each of the significant calculations. Effect size measures how strongly two categorical fields are associated. This research intended to run Chi-squared tests on participant demographic descriptors (years of experience, class size, school size, school location, level of support) and awareness of policies and related resources, however this was not possible due to the inability to populate all cells and where the frequency was below 5. This impacts the validity of the quantitative analysis due to the results not being an accurate representation of the broader population.

A quantitative analysis of the quantitative survey responses are discussed in the following section in an attempt to answer the secondary research question: *What trends can be identified when considering specific school demographic circumstances and training, resources and knowledge of policy?*

Table 4.3 below provides a summary of the survey questions used to collect quantitative data, and the number and percentage of participants who selected different responses under the headings of *Participant demographic descriptors*, *Awareness of policies and related resources*, *Exposure to teaching and facilitating learners with ASD*, and *Training content and accessibility*.

Table 4.3

Summary of survey questions used to collect quantitative data

Question	Options	Responses
Participant Demographic Descriptors		
What kind of school do you teach at? (Level of Support)	Mainstream	33 (89%)
	Full-service	4 (11%)
How would you describe your school? (School Location)	Suburban urban	18 (49%)
	Suburban rural	9 (24%)
	Township urban	3 (8%)
	Township rural	7 (19%)
How many years' teaching experience do you have?	2-5	9 (24%)
	6-10	8 (22%)
	Over 10	20 (54%)
What age group do you teach?	Foundation Phase (Gr 1-3)	21 (57%)
	Intermediate Phase (Gr 4-6)	12 (14%)
	Senior Phase (Gr 7)	4 (11%)
What is the average number of learners in your class/classes?	Less than 15	4 (11%)
	15-25	20 (54%)
	26-35	9 (24%)
	36-45	0
	Over 45	4 (11%)
Awareness of Policies and Related Resources		
Are you aware of the principles outlined in Education White Paper 6?	I have never heard of it	3 (8%)
	No	7 (19%)
	Somewhat	13 (35%)

	Yes	14 (38%)
Have you ever made use of LPs?	No	2 (5%)
	No, I am not familiar with LPs	6 (16%)
	Somewhat	7 (19%)
	Yes	22 (59%)
Are you familiar with ISPs?	No	3 (8%)
	Somewhat	11 (30%)
	Yes	23 (62%)
How would you describe your skills when drafting ISPs?	I do not use ISPs	4 (11%)
	I have some skills	11 (30%)
	I have the necessary skills	8 (22%)
	I need support in this area	14 (38%)
How familiar are you with the SIAS Policy?	Unfamiliar, I have never heard of it	10 (27%)
	Unfamiliar, but I have heard of it	8 (22%)
	Somewhat familiar	12 (32%)
	Very familiar	7 (19%)
Are you familiar with SBSTs?	No	2 (5%)
	Somewhat	9 (24%)
	Yes	26 (70%)
Does your school have an SBST?	No	3 (8%)
	I am unsure	5 (14%)
	Yes	29 (78%)

Exposure to Teaching and Facilitating Learners with Autism Spectrum Disorder		
In your opinion, have you taught a learner with possible ASD characteristics who was undiagnosed?	No	5 (14%)
	I am not familiar with the characteristics of ASD	2 (5%)
	Yes	30 (81%)
Have you ever taught a learner who has been diagnosed with ASD?	No	14 (38%)
	I am not sure	5 (14%)
	Yes	18 (49%)
Do you think you are/would be able to facilitate learners with ASD characteristics in your classroom?	No	6 (16%)
	Somewhat	21 (57%)
	Yes	10 (27%)

Training Content and Accessibility		
Have you ever attended training for the inclusion of learners with barriers to learning?	No	10 (27%)
	Yes	27 (73%)
Have you attended training for the inclusion of learners, specifically with ASD?	No	25 (68%)
	Yes	12 (32%)
Who provided the training?	Private training	15 (41%)
	Not sure	18 (49%)
	Government training	4 (11%)
How often do you attend training?	I have never attended	9 (24%)
	I have only attended once	10 (27%)

	More than once a year	10 (27%)
	Once a year	3 (8%)
	Once every few years	5 (14%)

Table 4.4 below displays the number of participants from different school locations and their awareness of the Education White Paper 6 principles, as well as their familiarity with the SIAS Policy.

Table 4.4

Awareness of Education White Paper 6 and familiarity with the SIAS Policy according to different school locations

School Location	Aware of the Education White Paper 6 Principles				Familiarity with the SIAS Policy			
	Yes	Somewhat	No	I have never heard of it	Unfamiliar, I have never heard of it	Unfamiliar, but I have heard of it	Somewhat familiar	Very familiar
Suburban rural	3	4	2	0	3	1	4	1
Suburban urban	6	6	3	3	5	5	4	4
Township rural	4	2	1	0	2	1	4	0
Township urban	1	1	1	0	0	1	0	2
TOTAL	14	13	7	3	9	8	12	7

The table above demonstrates that most participants are *unfamiliar, and have never heard of it*, or are *Somewhat familiar* of the Education White Paper 6 principles. A total of seven participants were not aware of the Education White Paper 6 principles and three more

participants never heard of it. When considering their familiarity with the SIAS Policy, 46% of the participants were unfamiliar with the policy. A further 32% of the participants were somewhat familiar with the policy, meaning that only 18,9% of the participants were confident in their familiarity (*Very familiar*) with the SIAS Policy.

Table 4.5 below displays the number of participants in different *School Locations and whether the participants have taught a learner with ASD, their ability to facilitate learners with ASD, and whether they have attended training for ASD.*

Table 4.5

Whether the participant has taught a learner with ASD characteristics, whether they are able to facilitate learners with ASD characteristics in their classroom, and whether they have attended training for ASD specifically according to School Location.

School Location	Taught a Learner with ASD Characteristics			Ability to Facilitate Learners with ASD characteristics in the Classroom			Attended Training for ASD Specifically	
	Undiagnosed ASD	Diagnosed ASD	Unsure	Yes	No	Somewhat	Yes	No
Suburban rural	8	6	0	4 (56%)	0	5	3	6
Suburban urban	13	9	1	4 (28%)	2	9	6	9
Township rural	4	1	3	1 (14%)	2	4	2	5
Township urban	3	2	1	0	1	2	0	3
TOTAL	28 (76 %)	18 (49%)	5 (14%)	9	5	20	11	23

Further examining the participants' responses outlines in the table above, 49% said they had taught a learner who had been diagnosed with ASD, yet only 19% of them responded as having the necessary skills to facilitate learners with ASD characteristics. A further 14% of the participants were unsure whether they had taught a learner diagnosed with ASD, and should a teacher be unaware of a learners' ASD diagnosis, it may further result in these learners falling through the gaps of the education system and not receiving the necessary support in the classroom.

The table above displays that 4 in 9 (56%) participants from *Suburban rural* schools were able to facilitate learners with ASD characteristics in their classrooms to a certain degree, suggesting a lack of confidence in their ability to facilitate learners with ASD characteristics. Only 5 in 18 (28%) participants from *Suburban urban* schools felt confident in being able to facilitate learners with ASD characteristics in their classrooms, meaning 13 in 18 (72%) participants from *Suburban urban* schools were only *partially* or *unable* to facilitate learners with ASD characteristics in their classrooms. Only 1 in 7 (14%) participants from *Township rural* schools felt confident in being able to facilitate learners with ASD characteristics in their classrooms. All participants from *Township urban* schools felt that they were only *partially* or *unable* to facilitate learners with ASD characteristics in their classrooms, thereby indicating that 57% of the participants were unsure whether they would be able to facilitate learners diagnosed with ASD in their classrooms, and a further 16% unable to facilitate learners with ASD characteristics in their classroom. Therefore, 73% of the participants were neither confident, nor able in their abilities to facilitate learners with ASD characteristics in their classrooms.

Chi-square tests were run to determine whether there is an association between level of support or school location and other variables in this research. When looking at participant responses from a Suburban rural school location and whether they have taught a learner with ASD characteristics, no responses were in the unsure cell and therefore cannot be included in the

Chi-squared test or may be unreliable. Furthermore, when considering participants responses from Suburban rural school locations and whether they are able to facilitate learners with ASD characteristics in their classroom, the no cell has no responses and therefore cannot be used in a Chi-square test or may be unreliable. Lastly, considering participant responses from a Township urban school location and whether they had attended training for ASD specifically, had no responses in the Yes cell and therefore unable to use in a Chi-squared test or making it unreliable. The above outlined empty cells were addressed through collapsing School Location from 4 categories (Suburban rural, suburban urban, Township rural, Township urban) into 2 categories (Suburban and Township). Although this addressed the empty cells, the frequency in 50% of the cells for School Location and Taught a learner with ASD, and School Location and Ability to Facilitate Learners with ASD characteristics in the Classroom, and 25% of cells for School Location and Attended Training for ASD Specifically, were below the frequency of 5. This reducing the validity of the results and may impact the accuracy of results from the Chi-squared tests.

The following was considered when analysing the chi-square test:

p-value: The area under the density curve of this chi-square distribution to the right of the value of the test statistic, which is used to determine whether there is an association between variables. If $p < 0.05$, then the null hypothesis is rejected and the alternative hypothesis is accepted, thereby demonstrating an association between the two variables. Yet, if $p > 0.05$, then the null hypothesis is accepted and the alternative hypothesis is rejected, thereby demonstrating no association between the two variables.

Degrees of Freedom (Df): The maximum number of logically independent values that have a freedom of varying in a sample dataset. The smaller the dataset, the smaller the Df.

Significance: If $p < 0.05$, there is an association, yet if $p > 0.05$, there is no association.

Effect Size: How meaningful the relationship between variables or the difference between groups is. The numbers below have been adopted to guide the interpretation of the effect size:

Cramer's V was used to determine the effect size for this research. It ranges from 0-1:

- 0 indicates no association between the two variables.
- 1 indicates a perfect association between the two variables.

It is calculated as:

$$\text{Cramer's } V = \sqrt{(X^2/n) / \min(c-1, r-1)}$$

X²: The Chi-square statistic

n: Total sample size

r: Number of rows

c: Number of columns

The following table shows how to interpret Cramer's V based on the Df:

Degrees of freedom	Small	Medium	Large
1	0.10	0.30	0.50
2	0.07	0.21	0.35
3	0.06	0.17	0.29
4	0.05	0.15	0.25
5	0.04	0.13	0.22

Power of Sample Size: How significant or powerful the results are. A posthoc power test was conducted using the G*Power Application to determine the sample power/effect. When making use of a large effect size (0.5), Df = 2, error of probability = 0.05, on a total sample size of 37, the power of sample size = 0.8, which is considered acceptable power.

Table 4.6 below displays the number of participants in each *School Location* (*Suburban and Township*) and whether their school has an SBST. *School Location* was collapsed into two categories (*Suburban included Suburban Rural and Suburban Urban, while Township included Township Rural and Township Urban*) for the purpose of simplifying the chi-square analysis. SBSTs are outlined in the SIAS Policy as teams containing professionals who obtain the necessary skills and resources to support learners with learning difficulties, and, therefore, can indicate support for learners with learning difficulties.

Table 4.6

Whether the school has an SBST by school location (crosstabulation)

Determined

	No	Yes	Unsure	TOTAL
Suburban	3	23	1	27
Township	0	6	4	10
TOTAL	3	29	5	37

The table above shows that of the 37 participants, 29 responded *Yes* to having an SBST at the school at which they teach. A total of 8 of 37 of the participants (19%) were *Unsure* or responded *No* to having an SBST at the school at which they teach. These participants responded as *Unsure* as to whether they have an SBST, suggesting that although the schools may have SBSTs, the teachers do not seem confident or sure of their presence or support in the school environment.

Expected

	No	Yes	Unsure
Suburban	2,189189	21,16216	3,648649
Township	0,810811	7,837838	1,351351

(O-E)²/E

	No	Yes	Unsure
Suburban	0,3003	0,159608	1,922723
Township	0,810811	0,430941	5,191351

X² 8,815734

Df 2

p-value 0,012181

A chi-square test was run to determine whether there is an association between *School Description* and *whether the school has an SBST*. Null hypothesis = There is no association between School Location and participants having SBSTs, Alternative hypothesis = There is an association between School Location and participants having SBSTs. The table above demonstrates that the p-value = 0,012, which means $p < 0,05$. Therefore, the null hypothesis was rejected and it can be concluded that there is an association between Level of Support and Whether the participants are familiar with SBSTs.

Asymmetric Measure

No. of rows 2

No. of
columns 3

Q 2

Cramer's V 0,488122

Cramer's V was used to determine the nature of the relationship between these variables. This determined that the effect size = 0,49, which is considered large when considering that Df = 2.

Therefore, based on the results, the following can be stated:

There was a significant association between *School Description* and *whether the school has an SBST*, ($\chi^2(6) = .566, p < .05$).

Table 4.7 below displays the number of participants in schools with different Levels of Support (*Mainstream or Full-Service*), and *whether the participants are familiar with SBSTs*. SBSTs are outlined in the SIAS Policy as teams containing professionals who obtain the necessary skills and resources to support learners with learning difficulties and, therefore, can indicate support for learners with learning difficulties.

Table 4.7

Familiar with a school-based support team by two levels of support (crosstabulation)

Determined

	No	Yes	Somewhat	TOTAL
Mainstream	2	25	6	33
Full-service	0	1	3	4
	2	26	9	37

Expected

	No	Yes	Somewhat
Mainstream	1,783783784	23,18919	8,027027
Full-service	0,216216216	2,810811	0,972973

(O-E)²/E

	No	Yes	Somewhat
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Mainstream	0,026208	0,14140364	0,511875512
Full-service	0,216216	1,16658004	4,222972973

X^2 6,285256

Df 2

p-value 0,043169

A chi-square test was run to find the nature of the relationship between *Level of Support (Mainstream or Full-Service)* and *whether the participants are familiar with SBSTs*. Null hypothesis = There is no association between Level of Support and Whether the participants are familiar with SBSTs, Alternative hypothesis = There is an association between Level of Support and Whether the participants are familiar with SBSTs. Cramer's V Symmetric Measures were used to determine the nature of the relationship between these variables, with the p-value = 0,043, which means $p < 0,05$. Therefore, the null hypothesis was rejected and it can be concluded that there is an association between Level of Support and Whether the participants are familiar with SBSTs.

Asymmetric Measure

No. of rows 2

No. of
columns 3

Q 2

Cramer's V	0,412155
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Cramer's V was used to determine the nature of the relationship between these variables. This determined that the effect size = 0,41 which is considered large when considering that Df = 2.

Based on the results, the following can be stated:

There was a significant association between *Level of Support (Mainstream or Full-Service)*, and whether the participants are familiar with SBSTs ($X^2(2) = .412, p < .043$).

Table 4.8 below displays the number of participants in schools with different *Levels of Support (Mainstream or Full-Service)*, and whether the school the participant teaches at has an SBST.

One of the main roles of the SBST is to ensure that learners with learning difficulties are identified and supported appropriately within the school environment. Therefore, an SBST is an indicator of identification and support available for learning difficulties.

Table 4.8

Levels of support and whether the participants' school has a school-based support team (crosstabulation)

Determined

	No	Yes	Unsure	TOTAL
Mainstream	3	29	1	33
Full-service	0	0	4	4
TOTAL	3	29	5	37

Expected

	No	Yes	Unsure
Mainstream	2,675676	25,86486	4,459459
Full-service	0,324324	3,135135	0,540541

(O-E)²/E

	No	Yes	Unsure
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Mainstream	0,039312039	0,380016	2,68370188
Full-service	0,324324324	3,135135	22,1405405
X ²	28,7030303		
Df	2		
p-value	5,85081E-07		

A chi-square test was run to determine whether there was an association between *Level of Support (Mainstream or Full-Service)* and *whether the school at which the participants teach has an SBST*. Null hypothesis = There is no association between Level of Support and whether participants have an SBST, Alternative hypothesis = There is an association between Level of Support and whether participants have an SBST. The p-value = 5,85, which means $p > 0,05$. Therefore, the null hypothesis was accepted and it can be concluded that there is no association between Level of Support and whether the participants have an SBST.

Asymmetric Measure

No. of rows	2
No. of columns	3
Q	2

Cramer's V	0,880771012
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Cramer's V was used to determine the nature of the relationship between these variables. This determined that the effect size = 0,88 which is considered large when considering that Df = 2.

Based on the results, the following can be stated:

There is no association between *Level of Support (Mainstream or Full-Service)* and *whether the school at which the participants teach have an SBST* ($X^2(2) = .881, p < .001$).

Table 4.9 below displays the number of participants in schools of different Levels of Support (*Mainstream or Full-Service*) and *whether the participants make use of LPs*. LPs are helpful tools used to support learners with learning difficulties and can, therefore, indicate support for learners with learning difficulties.

Table 4.9

Whether learner plans are used by participants from different levels of support (crosstabulation)

Determined

	No	Yes	Somewhat	TOTAL
Mainstream	6	22	5	33
Full-service	2	0	2	4
TOTAL	8	22	7	37

Expected

	No	Yes	Somewhat
Mainstream	7,135135	19,62162	6,2432432
Full-service	0,864865	2,378378	0,7567568

(O-E)²/E

	No	Yes	Somewhat
Mainstream	0,18059	0,288288	0,24757225
Full-service	1,489865	2,378378	2,04247104

χ^2	6,627165
Df	2
p-value	0,036386

A chi-square test was run to determine whether there is an association between *Level of Support (Mainstream or Full-service)* and *whether the participants make use of LPs*. Null hypothesis = There is no association between Level of Support and whether participants make use of LPs, Alternative hypothesis = There is an association between Level of Support and whether participants make use of LPs. The p-value = 0,03, which means $p < 0,05$. Therefore, the null hypothesis was rejected and it can be concluded that there is an association between Level of Support and Whether participants make use of LPs.

Asymmetric Measure

No. of rows	2
No. of columns	3
Q	2
Cramer's V	0,42321691

Cramer's V was used to determine the nature of the relationship between these variables. This determined that the effect size = 0,42, which is considered large when considering that Df = 2.

Based on the results, the following can be stated:

There was a significant association between *Level of Support* and *whether the participants make use of LPs* ($\chi^2(2) = .475, p < .036$), thereby suggesting that the use of LPs was consistent within schools of different Levels of Support. All Full-service school participants reported only "somewhat" having used LPs or not being familiar with LPs. LPs are outlined in the

SIAS Policy and are an imperative tool used to track learners' progress, strengths and weaknesses, as well as providing a summary of the child's overall functioning and development, aiding academic management and individualised support. This suggests a gap in training, as well as the possibility of learners needing further support (who would be enrolled at a Full-service school) falling through the gaps and not attaining the support needed.

Table 4.10 below displays the number of participants in each *School Location (Suburban or Township)* and *participants skill level when making use of ISPs*. ISPs are helpful tools used to support learners with learning difficulties and can, therefore, indicate support for learners with learning difficulties.

Table 4.10

Reported skill level when creating individual support plans relative to the school locations (crosstabulation)

Determined

	Do not use	Need support	Have some skills	Have skills	TOTAL
Suburban	3	8	10	6	27
Township	1	6	1	2	10
TOTAL	4	14	11	8	37

Expected

	Do not use	Need support	Have some skills	Have skills
Suburban	13,5	10,21621622	8,027027027	5,8378378
Township	5	3,783783784	2,972972973	2,1621622

	Do not use	Need support	Have some skills	Have skills
Suburban	8,1666667	0,480766481	0,484939485	0,0045045
Full-service	3,2	1,298069498	1,309336609	0,0121622
X ²	14,956445			
Df	3			
p-value	0,0018543			

A chi-square test was run to find the nature of the relationship between *School Description* and *skills when creating ISPs*. Null hypothesis = There is no association between School Location and how the participants describe their skills for creating ISPs, Alternative Hypothesis = There is an association between School Location and how participants describe their skills for creating ISPs. The p-value = 0,002, which means $p < 0,05$. Therefore, the null hypothesis was rejected and it can be concluded that there is an association between Level of Support and whether participants make use of ISPs.

Asymmetric Measure

No. of rows	2
No. of columns	4
q	2
Cramer's V	0,6357895

Cramer's V was used to determine the nature of the relationship between these variables. This determined that the effect size = 0,64, which is considered large when considering that Df = 2.

Based on the results, the following can be stated:

There was a significant association between *School Description* and *skills when creating ISPs*. ($\chi^2(3) = .412, p < .005$). This demonstrates that School Type (Suburban rural, Suburban urban, Township rural and Township urban) can be indicative of whether the teacher has Skills when creating ISPs, suggesting a trend in the School Type and their Skills when creating ISPs.

Although 91,6% of the teachers were familiar or somewhat familiar with ISPs, only 22% of them responded with having the necessary skills for creating ISPs. This indicates the teachers' lack of skills and knowledge in the implementation and practical part of creating and using ISPs, as well as the need for further training and support in this area.

Table 4.11 below displays *whether the participants are familiar with ISPs in schools of different levels of support (Mainstream or Full-Service), and ISPs are helpful tools used to support learners with learning difficulties*, and can, therefore, indicate support for learners with learning difficulties.

Table 4.11

Participants' familiarity with individual support plans in mainstream and full-service schools

Determined

	No	Yes	Somewhat	TOTAL
Mainstream	1	22	10	33
Full-service	2	1	1	4
TOTAL	3	23	11	37

Expected

	No	Yes	Somewhat
Mainstream	2,675676	20,51351	9,8108108

Full-service	0,324324	2,486486	1,1891892
	No	Yes	Somewhat
Mainstream	1,049413	0,107716	0,00364828
Full-service	8,657658	0,88866	0,03009828
X ²	10,73719		
Df	2		
p-value	0,004661		

A chi-square test was run to find the nature of the relationship between *Level of Support (Mainstream or Full-Service)* and *whether the participants are familiar with ISPs*. Null hypothesis = There is no association between Level of Support (Mainstream or Full-Service), and whether the participants are familiar with ISPs, Alternative hypothesis = There is an association Level of Support (Mainstream or Full-Service) and whether the participants are familiar with ISPs. The p-value = 0,004, which means $p < 0,05$. Therefore, the null hypothesis was rejected and it can be concluded that there is an association between Level of Support and whether participants are familiar with ISPs.

$(X^2(2) = .539, p < .005)$.

Symmetric Measure

No. of rows	2
No. of columns	3
q	2
Cramer's V	0,53869698

Cramer's V was used to determine the nature of the relationship between these variables. This determined that the effect size = 0,54 which is considered large when considering that $Df = 2$.

Based on the results, the following can be stated:

There was a significant association between *schools of different Levels of Support (Mainstream or Full-Service)* and *whether the participants are familiar with ISPs*. This indicates that these learners who the teachers think may have ASD are likely to fall through the gaps of the education system, unidentified, undiagnosed and unsupported.

This research included 37 participants, who have an estimated average (*mean*) of eight years' teaching experience and teach an estimated average (*mean*) of 23,5 learners per class. Therefore, the participants were teaching an estimated average of 870 learners at the time of completing the questionnaire. Considering the global estimate of 1%-2% of children having ASD, between 8,7 and 17,4 learners with ASD are likely to have been taught by the teachers who participated in the questionnaire. This research further reached an estimated average of 376,2 learners per school, of which (based on the global average of 1%-2% prevalence of ASD in children) between an average of 3,7 and 7,5 learners per school have ASD.

When considering participant familiarity with the SIAS Policy, 50% of the participants were unfamiliar with the policy, with 29,4% of the teachers having never heard of it, highlighting the gap in knowledge of the procedures and resources outlined in the policy. Only 61,8% of the teachers said that they make use of LPs, with 17,6% not familiar with LPs. However, in the open-ended question, some significant gaps in making use of LPs were clearly evident due to the irrelevant information given in the majority of the responses.

4.3.3 Thematic analysis

Considering the primary and secondary research questions, as well as the quantitative and qualitative responses obtained from the questionnaire, the following themes can be identified as significant to this research:

The primary research question (*Does the knowledge and understanding of policy reflect in the identification and support of learners with ASD characteristics in the classroom, and does this differ across different school demographic circumstances?*) is answered throughout the themes highlighted below, with each theme highlighting a challenge encountered.

Theme 1: Lack of skills and training

This theme was highlighted in an attempt to answer a secondary research question: *Are teachers equipped with the necessary skills, training, resources, and support structures to identify and accommodate learners with ASD.*

Some of the participants who were aware or somewhat aware of Education White Paper 6, and expressed that they did not use the Education White Paper 6 principles in the classroom setting. This demonstrates the disconnect between theoretical-based awareness and the practical application of these principles in the classroom environment. This disconnect may reflect a lack of practical training in the skills required to translate theory into practice. *Unless you have not heard of Education White Paper 6, describe how you make use of these inclusive principles in the classroom?* The responses to this question included the following:

Participant 1: “I don’t really”, Participant 15: “I do not make use of them” and Participant 23: “I do not often make use of them”. Such responses clearly demonstrate the lack of implementation of the Education White Paper principles in the classroom for these participants despite having the knowledge of the principles in some cases. In addition, responses such as that of Participant 8: “Read their assessments from the educational psychologist, so that I can better assist them in the classroom”, Participant 9: “Providing resources for learners to

experiencing barriers to learning” “providing accommodations where necessary” and Participant 18: “The school accommodates all learners despite of their sexuality, religion or disability” which raises the possibility of the knowledge of the Educational White Paper remaining theoretical rather than being translated into pedagogic skills development and practical application within the classroom setting. However, responses also included the following: Participant 3: “To teach each child to the best of my ability including their learning barriers into my planning and assessing” and Participant 7: “Be informed of what additional help, particular learners need, so that I can be more informed of what assistance I can provide to my learners”, which indicates knowledge of the principles, as well as application in the classroom. The responses above demonstrate the broad spectrum of knowledge and skills in the application of these principles across teachers in mainstream and full-service schools in SA, which is further demonstrated in the statistics discussed above.

A total of 35,3% of teachers who responded to the survey indicated that they were aware of the principles outlined in Education White Paper 6, with 29,4% of teachers not being aware or having never heard of the Education White Paper 6 principles. Three of those teachers who were aware or somewhat aware of the Education White Paper 6 principles expressed that despite being aware, they did not make use of the principles in the classroom. Awareness of Education White Paper 6 affords a teacher the opportunity or possibility to make use of the principles in the classroom setting to aid their support and accommodation of learners with ASD. With 29,4% of the participants expressing that they are not aware or have never heard of Education White Paper 6, it can be concluded that due to their lack of knowledge in this area, they are unable to implement the outlined principles to achieve inclusion in the classroom. Furthermore, teacher training is an imperative part of equipping teachers with the necessary practical skills to implement the inclusive principles in the classroom. A lack of training for

supporting and accommodating learners with learner barriers, specifically learners with ASD, emerged as another main theme.

The following themes (Themes 2 and 3) were highlighted in an attempt to answer the research question: *Are teachers equipped with the necessary skills, training, resources, and support structures to identify and accommodate learners with ASD?*

Theme 2: Gap in training and minimal support

Training and support available for drafting ISPs were explored in an open-ended question, with teachers expressing their experiences, as follows: Participant 1: “None, I would need training support”, Participant 4: “No training support available” and “We are just expected to do it according to the districts standards which are not communicated”, Participant 6: “I need support”, Participant 20: “No support”, Participant 9: “Needing support”, Participant 21: “Very minimal training and support”, Participant 29: “Not much training”, Participant 35: “No training available” and Participant 18: “We don't make individual support plans, children are still expected to complete the same curriculum and assessments as their peers”. This demonstrates the frustration among educators with regards to having the necessary training or support to identify and accommodate learners with ASD characteristics specifically. The responses included participants hoping for “workshops”, “departmental support” and “learning and teaching materials and resources” for further support for teachers when drafting ISPs. Participant 20: “However, I don't feel that there is enough training and support for teachers in general, i.e. online, within departmental schools, etc. Our school has a CORE Centre which is made up of an Ed Psych, OT, SALT, Counsellor and Social Worker so ISPs are generally created and initiated by them”. These responses highlight that even schools fortunate enough to have access to the needed professionals who are able to support the learners still seem to have a gap in teacher training regarding identifying and supporting learners with learning difficulties needing an ISP.

Furthermore, responses such as that of Participant 5: “I was given a table with an example from the department, and I was expected to make individual support plans for the children struggling in my class. I hardly look at them to be honest.”, Participant 11: “Very little support. I was assisted and trained in writing ISP'S when teaching in the UK. Very little is known about them in my current school.” and Participant 19: “We do put internal concessions in place...but are not processed easily or in the time needed” indicated that minimal support/training provided is often not useful, applicable, or attainable in an SA context. Some responses indicated alternative methods which have been adopted when faced with questions around inclusive education, which is due to participant's not having sufficient support and training. Responses such as that of Participant 10: “Only information told by other teachers.”, Participant 25: “I did do some courses in inclusive education whilst studying but I think with years of experience I have learnt to adapt work to ensure children thrive in my learning environment” and Participant 14: “At my school, we have a wonderful support system with both older (experienced) teachers along with teachers who are more qualified than necessary” suggest that the participants rely on more experienced teachers or personal experience for support and knowledge.

Those participants who attended training responded with a range of descriptions, as follows: Participant 2: “Provided a lot of information that teachers are not taught at university institutions”, Participant 10: “Helpful”, Participant 22: “It enlightened my mind a little bit about learners with barriers, due to time little was shared and would like to attend more of them”, Participant 27: “Was a bit helpful, but need more”, Participant 29: “ It helps to close some gaps that I experience in class with learners that experience barriers”, Participant 12: “Somewhat helpful, but lacks how to implement into a real life classroom taking into consideration our economic constraints” and Participant 33: “ Average”. Participant 8 stated: “The best training is actually dealing with an ASD learners and having close interaction with the support team”,

Participant 9: “I attended training while I was in Varsity. It was worthwhile, but it was over 10 years ago, and it would be beneficial to attend courses yearly”, Participant 11: “Helpful being educational and providing the knowledge to possibly identify these learners. Unhelpful with regards to support from parents and department” and Participant 16: “I have never attended training, but the last time I had any sort of education/training with regards to learners with ASD was in my Bachelor of Education Degree”. Further responses included that of Participant 6: “Unhelpful”, Participant 21: “It did not help much”, Participant 32: “Unhelpful because I find all the examples/scenarios of incorporating these ideas into a classroom so idealistic”, and Participant 36: “Very brief”. This highlights that although training is helpful, it is often not consistently available and often provides idealistic interventions and/or does not consider the SA context.

The SIAS Policy was introduced to support teachers in the process of identifying and accommodating learners with barriers to learning, and outlines the importance of the use of LPs and ISPs. LPs and ISPs are put in place to guide teachers in the support of each learner’s specific learning needs, and is imperative in the identification and accommodation of learners with barriers to learning. Without the necessary training in inclusive education, which is the basis for supporting learners with learning difficulties, teachers cannot be expected to support learners with learning difficulties in the classroom. Minimal support was highlighted as a further limitation to identifying and accommodating learners with ASD. A total of 29,4% of teachers had never attended training for the inclusion of learners with barriers to learning, while 70,6% of teachers had attended the relative training. However, only 32,4% of the teachers had attended training for the inclusion of learners specifically with ASD, highlighting the lack of ASD-specific training. Furthermore, most teachers had only attended training once, further indicating the lack of training available to teachers in the public sector. With only 11,8% of this

training being government training, the need for more government-based training in the public education sector was highlighted.

Theme 3: Inconsistent support from school-based support teams

According to Education White Paper 6 and the SIAS Policy, SBSTs are put in place to implement inclusive principals and ensure accurate identification and support for all learners within the school environment in order to provide equal learning opportunities to all learners. LPs are one of the many areas in which SBSTs offer support to teachers. Lps assist teachers in gaining an understanding of a child as an individual, as well as providing an outline of the learners individual strengths and weaknesses., Lps can provide imperative information in order for learners with barriers to learning to be effectively included in a classroom environment.

In response to the question: *In your experience, describe the training support available to you when putting together ISPs?*, only one participant mentioned that they rely on support offered by SBSTs, namely Participant 15: “School-based support team assists”. Considering the responses received from the teachers with regards to the support their respective SBSTs offer them in terms of LPs, support was described by Participant 26: “If it was just a box to be ticked”, Participant 11: “Not much guidance is given if asked”, Participant 25: “We are in the process of trying to get these correct”, Participant 1: “Not sure” and Participant 5: “Some support”. This indicates the challenges faced by some teachers when trying to implement and make use of resources such as LPs in their teaching. This could also raise questions about whether learners’ individual needs are accounted for in the classroom environment due to the above-mentioned challenges. Furthermore, responses included Participant 2: “They explain what needs to go into a learner profile”, Participant 4: “Guidance on what to do in difficult situations and calls the relevant people if anything needs to be taken further” and Participant 11: “They offer guidance, advice and help to ensure that all information gets recorded at all

times”, suggesting appropriate support offered by the SBSTs at these schools. Alternatively responses such as that of Participant 24: “They identify, support and refer learners to the department” may indicate a lack of practical everyday support offered by the SBST. The above responses demonstrate that although some schools may have the necessary SBST support, some have very little or no SBST-based support. A total of 78,4% of the participants responded “Yes” to their respective schools having an SBST.

Theme 4: Lack of knowledge of Autism Spectrum Disorder

Although autism is widely misunderstood, our knowledge has increased substantially over the years. The DSM-V introduced the umbrella term “Autism Spectrum Disorder”, which included the previously (in the DSM-IV and DSM-IV-TR) separate Autistic Disorder, Pervasive Developmental Disorder (PDD), and Asperger’s Disorder.. These changes were made due to confusion regarding the application of the previous diagnostic criteria to improve the specificity of the diagnostic criteria. Many teachers who are not exposed to training specific to ASD, which was previously highlighted as a challenge for many teachers, are unaware of the symptoms or presentation of ASD in learners in the classroom environment.

- **Identification and support of learners with Autism Spectrum Disorder**

Early identification of ASD has been increasingly found to be beneficial, with the diagnosis of ASD being imperative for access to resources and services, such as placement in a full-service, remedial or special school, available specifically for those with ASD. ASD symptoms can be evident and diagnosable from the age of two years old, yet are often identified in early childhood (0-8 years old) or in some cases later. Responses to qualitative questions in the questionnaire highlighted the lack of knowledge of ASD among teachers who play an imperative role in the identification of learners with possible ASD symptoms, according to the SIAS Policy (Department of Education, 2014). Responses such as Participant 3: “I do not know

what ASD stands for.”, Participant 22: “I need more resources to understand more about it.”, Participant 20: “I do not know much about ASD.” and Participant 21: “I do not know ASD characteristics.” indicate the lack of knowledge of ASD. Teachers play a pivotal role in the identification and support of learners with ASD, yet they have not been provided with the knowledge of ASD in order to identify these learners in their classrooms accurately. This raises concerns about learners with ASD symptoms falling through the gaps due to this significant lack of knowledge of ASD among teachers, as well as raising questions around how these teachers might be expected to identify learners with ASD characteristics in order to implement support plans outlined in the SIAS Policy, thereby placing these learners at risk of not being identified or receiving the needed educational support. Some vague responses such as Participant 4: “Normally very intelligent but lack social skills.”, Participant 8: “Affects can be behavioural, cognitive, developmental or psychological.”, Participant 5: “It is a very unique diagnoses.” and Participant 27: “Sweating very early in the morning, epilepsy.” further demonstrates the lack of exposure to detailed knowledge around ASD or practical experience with ASD learners. Responses that demonstrate knowledge of ASD included those of Participant 4: “These learners often battle to change and prefer a strict routine.”, Participant 7: “I have observed that they don't often change the pitch in their voice when talking, almost robotic talking.”, Participant 12: “They also get easily overwhelmed when overstimulated.”, and Participant 16: “They can be sensitive to sound, light and smells”. The responses emphasise the lack of uniformity in the knowledge, with majority of the vague responses and responses which demonstrate a lack of understanding of ASD, being from participants from township school locations.

Despite the evident lack of knowledge of ASD, the demonstrated knowledge of ASD should be acknowledged. Considering that 81,1% of teachers responded as having taught a learner with possible ASD characteristics, but who was undiagnosed,, indicating that majority

of these teachers are expected to teach learners with ASD characteristics and provide them with the necessary educational support, yet are unable to confidently describe ASD characteristics. This may further place these learners at risk of not being effectively identified or provided with the necessary support. Furthermore, 48,6% of teachers responded as having taught a learner who was diagnosed with ASD, with only 27% of teachers having responded to being able to facilitate learners with ASD characteristics in their classroom. A total of 79,4% of the teachers said that they had taught a learner with ASD characteristics, but who was undiagnosed, and 47,1% of teachers had taught a learner who was diagnosed with ASD. However, many of these teachers expressed that they ‘don’t know much about ASD’. A total of 55,9% of teachers said that they could only somewhat be able to facilitate learners with ASD characteristics, with a further 17,6% of teachers not being able to facilitate learners with ASD characteristics. These teachers expressed some of their challenges including “not having the skills” or “not sure how” to identify and support learners with ASD characteristics in the classroom.

Theme 5: Lack of access to special schools and a rigorous placement process

When considering learners who are diagnosed with ASD of a moderate or profound severity, placement in a special school environment is often essential for them to obtain the necessary educational support. Overall themes of inaccessibility and inefficiency were highlighted regarding placing learners with ASD in special schools, which raises questions around how these learners receive required support and increases the possibility of these learners not being placed in the necessary learning environment. The inaccessibility and inefficiency of placing learners was highlighted in the following responses, namely Participant 1: “As a mainstream school when we get children with ASD characteristics it is very hard for us to get them into another school that is suitable for them.” and “There aren't many schools that accommodate ASD, especially government schools!”; Participant 5: “Schools are often far from the learners homes.”, “No space available within the school.”, “The language for teaching

instruction differ from the children's home language.” and “Schools are often under resourced”; Participant 7: “We do not have many options for ASD learners to go to specific schools.” and “No special schools within our area to support learners with ASD.”; Participant 8: “Unfortunately we do not have special schools within our catchment area that we can send children to.”; Participant 20: “Some learners need a lot more support and would benefit from being in a school that provides more support.”; Participant 21: “In our area, there are not many registered and equipped schools for these children; there is a need for more.” and Participant 31: “Not enough schools to provide necessary support.”. This indicates the lack of schools able to provide the necessary support for learners with ASD and the inaccessibility of these schools in some areas. Schools that may have the appropriate support for learners with ASD were intimated as stated by Participant 5: “Far from learners’ homes.”, having “no space” for placement of learners, “often under resourced” and a participant felt as though they “could not recommend it” due to the bad state of the school. This further indicates the significant lack of educational resources for learners with ASD, creating a risk for these learners not receiving the necessary educational support.

In cases where the school the participant taught in had the needed support for a learner, placement of these learners in these schools was described in responses such as that of Participant 11: “Lengthily frustrating process, often the children are already in high school before we hear positive feedback with their placements.”, Participant 12: “Not helpful at all. Takes too long for learner to be placed.”, Participant 13: “Long and tedious process that often requires learners to suffer for years before receiving the help that they need.”, Participant 26: “Placement is very slow and I feel it delays the learners support.”, Participant 27: “Department takes long to place learners with ASD, they can take 4 years to place a learner.”, Participant 28: “It was not easy, and took years.” and Participant 31: “Rigorous – only 60% have been accepted.”, indicating the almost impossible placement of learners in schools with the

necessary support. This highlights that these learners who require specialised educational support have a high possibility of falling through the gaps of the education system due to the lengthy and ineffective placement of learners in special schools.

4.4 Concluding summary

The key themes and trends highlighted in this section provide insight into how knowledge and understanding of policy reflects in the identification and support of learners with ASD characteristics in the classroom, and how this differs across different school demographic circumstances. This was achieved by identifying strong relational trends across specific demographic circumstances and training, resources and knowledge of policy. Furthermore, teachers' experiences regarding being equipped with the necessary skills, training, and support structures in order to identify and accommodate learners with ASD characteristics were explored while considering the identified themes.

ISPs are used in order to support learners with specific learning support needs, and in a school or classroom environment can be an indicator of the level of support available to support learners with learning difficulties. As a result of the relational analysis conducted using the quantitative data, trends suggest significant associations between *School Description* and *Skills when creating ISPs*. This demonstrates that School Type (Suburban rural, Suburban urban, Township rural and Township urban) can be indicative of whether the teacher has Skills when creating ISPs, suggesting a trend in the School Type and their Skills when creating ISPs. Furthermore, a significant association between *Levels of Support (Mainstream or Full-Service)*, and *whether the participants are familiar with ISPs* was realised. This indicates a trend in School of different Levels of Support and familiarity with ISPs.

SBSTs provide support for teachers and learners regarding the identification and accommodation of learners according to their specific learning needs. A school having an

SBST can be an indicator of the amount of level of support available to support learners with learning difficulties. *A significant association between School Description and whether the school has an SBST was highlighted*, suggesting a trend in School description and a school having an SBST. Furthermore, a significant association between *Levels of Support (Mainstream or Full-Service)* and *whether the participants are familiar with SBSTs was outlined*, which suggests a trend in Levels of Support and familiarity with SBSTs. Another significant association between *Levels of Support (Mainstream or Full-Service)* and *whether the school which the participants teach at have an SBST* was realised, indicating a trend in Levels of Support and having an SBST. LPs are important tools that can be used to understand a learner's strengths and weaknesses in order to provide them with the appropriate support. A significant association was determined between *Levels of Support* and *whether the participants make use of LPs*, indicating a trend in Levels of Support and making use of LPs.

Five themes were highlighted as a result of the thematic analysis of the qualitative data, including the disconnect between theoretical awareness and practical application in the classroom environment, a gap in training and minimal support, inconsistent support from SBSTs, a lack of knowledge of ASD, and a lack of access to special schools and rigorous placement process. These themes summarise the challenges highlighted by teachers and outline gaps in the identification and support of learners with ASD characteristics in the classroom. Gaps in skills, training, resources, and support structures were also raised. The above themes can also be identified as the main challenges faced by teachers when including learners with ASD characteristics in a classroom and, therefore, the possible reasons for learners with ASD characteristics falling through the gaps of the public education system.

Chapter 5: Discussion

5.1 Introduction

In this chapter, the research findings are discussed further and an understanding of the findings provided in the context of the relevant literature. It aims to highlight significant relationships, trends, as well as emerging themes identified in the analysis phase of this research, which raised several tentative hypotheses. This chapter considers the trends and themes outlined and provide an understanding of the results relative to current literature, and highlights the relevance of Dynamic Skill Theory, as the chosen theoretical framework.

5.2 Discussion

After the analysis of the quantitative questions, significant relationships were determined between certain demographic descriptors and familiarity with policy, as well as access to resources and training. Furthermore, themes such as the disconnect between theoretical awareness and practical application in the classroom environment, a gap in training and minimal support, inconsistent support from SBSTs, a lack of knowledge of ASD, and a lack of access to special schools and rigorous placement process were outlined. This section follows this structure due to *policy* being the foundation of change, *training* equipping one to acquire the skills and confidence in order to implement change, and lastly *support* being the mechanism that allows longevity and sustainability.

Disconnect between theoretical awareness around policy and practical application in the classroom environment was raised among the trends and themes of this research.

A policy is a deliberate system of guidelines to guide decisions and achieve rational outcomes, and is the foundation of changes in a society or group. Education White Paper 6 and the SIAS Policy are implemented by the Department of Education to achieve inclusive

education. Although these guidelines are available in policy and on paper, awareness and skills are needed to implement these principles in the classroom. Therefore, policy awareness is the first step to being able to implement expected changes. When considering this research, Table 4.4 presents 17 of the 37 participants (46%) expressing that they are unfamiliar with the SIAS Policy, and 10 of the 37 participants (27%) not being aware of the Education White Paper 6 principles. It can be deduced that this creates a gap at the foundation of achieving inclusive education, thereby limiting the implementation of the guidelines and principles highlighted in these policies (Engelbrecht et. al., 2016; Donohue & Bornman, 2014).

The next significant step to achieve inclusive education is implementation, which concerns being able to apply these principles and guidelines in the classroom. When considering responses around Education White Paper 6, a theme of a lack of specific skill to implement the principles was raised. Responses ranged from those who expressed that they do not make use of the principles (Participant 23: “ I do not often make use of them.”) to those who demonstrated their vague knowledge of and, therefore, lack of detail in order to implement the Education White Paper 6 principles (Participant 9: “Providing resources for learners to experiencing barriers to learning.”). This highlights the vast gap between implementation policy and literature, as well as services.

When considering the SIAS Policy, ISPs and LPs were outlined as imperative and assistive resources/guidelines for the implementation and practical achievement of the accommodation of learners with barriers to learning. However, considering Table 4.1, 92% of the participants responded as being at least somewhat familiar with ISPs, but only 22% had the necessary skills to create ISPs. This suggests the possible lack of implementation of ISPs due to a lack of skills. This was further highlighted in the qualitative responses, which emphasises the need for support when implementing ISPs, with “very little support” or “no support” being reported, and requests of “workshops”, “guidance” and “training”. LPs are another resource

outlined in the SIAS Policy as an assistive measure used to support learners. A total of 51% of the participants were somewhat aware of the SIAS Policy, in which LPs are introduced, and 22% of the participants do not use LPs, which suggests that many participants are not implementing these principles in their classrooms. The lack of these resources being used indicates further gaps forming in the achievement of inclusive education and highlights the disconnect between policy and practical application within the classroom environment. This can be identified as a potential reason for gaps forming, thereby increasing the risk of learners with ASD characteristics falling through these gaps. This is further in agreement with current literature, which speaks to implementation and a lack of resources being among the reasons for inclusive education policies not being implemented in schools (Walton & Engelbrecht, 2024; Andrews et al., 2019).

Research findings align with current research, which highlights the following reasons for the disconnect between theoretical awareness around policy and implementation. Research conducted by Donohue and Bornman (2015) suggests that schools were not receiving any recognition or funding from the education department, often leading to schools not implementing the strategies, which may be regarded as a lack of support. This is further raised in this research considering the lack of resources given for training, as well as a lack of support and access to inclusive policies and guidelines. Previous research further highlights policy being unclear and broad in nature, which can be noticed within the broad responses when participants were asked to describe their implementation of the Education White Paper 6 principles within the classroom environment (Ramaahlo et al., 2008).

Although these policies have been around for many years, the importance of, and inclusion of inclusive education as a topic in educational degrees is relatively recent (Walton, 2017). This research emphasises that 9 out of 10 (90%) participants from a school in a township area had over 10 years' experience, which could be a possible reason for the lack of inclusive

education-based knowledge in these areas. According to this research, the participants from schools located in township areas seemed to have the most teaching experience, which can be regarded as positive, yet suggests a lack of newly hired teachers who may have current knowledge and skills such as inclusive education. These findings are consistent with Taylor (2019), who describes the inequality in teaching knowledge, and emphasises the issues around teachers not wanting to teach in undesirable areas such as townships as it comes with many challenges. Although the sample is biased due to the limited responses obtained from participants who teach in schools in rural areas, it raises questions around the potential lack of recent inclusive knowledge/education among teachers in schools in township for learners with barriers to learning attending schools in a township location. Furthermore, the disconnect between policy and practical implementation in the classroom environment is creating gaps through which learners with ASD characteristics are at risk of falling.

Dynamic Skill theory suggests that high support level contexts stimulate and provide accurately for a child's needs, thereby producing an optimal level of skills, meaning that the child has achieved the best possible level of skill for their cognitive capacity. However, considering the above highlighted disconnect between theoretical awareness and practical application, thus limiting learners with ASD characteristics, impacting their ability to attain optimal achievement in their environment (Fischer & Bidell, 2007).

Gaps in training and professional development was raised among the trends and themes of this research.

As mentioned in the previous section, it is imperative for teachers with experience and who studied over 10 years ago to continue developing themselves professionally and integrating new knowledge in their teaching. Training is an imperative and necessary step in the process of implementing inclusive education (Donohue & Bornman, 2014). Yet, recent

literature by Du Plessis and Mestry (2019) emphasise that, in many cases, the necessary training is not provided. This research highlights that teacher training is limited and that more is required, Table 4.5 shows that 25 of the 37 participants (68%) had never attended training specifically for ASD, and of these participants, 13 out of 25 (52%) were teachers for over 10 years, and 19 out of 25 (76%) of these participants believed that they may have taught a learner with ASD characteristics who was undiagnosed, and 9 out of 25 (36%) of these participants having taught a learner diagnosed with ASD. This raises questions around teachers being expected to accommodate learners with ASD, yet not being provided the necessary training to accommodate these learners. Although some teachers are given the opportunity to attend training for inclusion and specifically for ASD, 9 out of 37 participants (24%) had never attended training, highlighting the need for increased training and professional development in the government sector. Furthermore, only 4 out of the 28 participants (11%) who attended training, attended interventions provided by government, thereby raising the possibility of a lack of professional development/training offered by the Department of Education. A concern was raised regarding the lack of teacher training and skills available in public schools to accommodate and support learners with ASD. This gap in knowledge of ASD can further be seen in qualitative responses that highlight that many of the participants are not aware of ASD characteristics, with 5 out of 37 participants (14%) not being sure whether they have taught a learner with ASD. In current literature, Pillay et al. (2022) speak to the lack of ASD training, which is described as a “gap” (Pillay et al., 2022, p. 1), thereby aligning with the findings of this research.

Learners in SA schools require a wide variety of skills and needs, especially those with ASD characteristics who often have a spectrum of individualised and unique abilities and support needs, which requires specialised training (Becerra-Murillo, 2022). Environmental factors and personal circumstances are known to impact the manifestation of these unique

abilities, thereby moulding the individualised support needed. Although general teaching concepts can be introduced to accommodate learners with ASD characteristics (such as structured learning, visual prompts, repetition, and slowed learning pace), it should be noted that each individual with ASD characteristics has different skills, challenges, and support needs. Each case is unique in specific presentation and, therefore, requires individual consideration and individualised support plans (Becerra-Murillo, 2022). Familiarity and skill can be identified as the two main indicators of training in this area, and yet, while 62% of the participants in the present study were familiar with ISPs, only 22% were of the opinion that they have the necessary skills. A lack of training leads to limited skills, for example, when creating ISPs. Considering trends realised in the quantitative data analysis, a significant association was highlighted between *School Location* (*Suburban rural, Suburban urban, Township rural, Township urban*), and *how participants described their skills when creating ISPs*. With 75% of the participants with the necessary skills to draft ISPs being from schools in suburban urban areas, 60% of the participants require support when drafting ISPs from schools in township rural areas. It should be considered that this may be bias due to limited responses from schools in township rural areas and may, therefore, not be generalisable. However, this raises questions around disparity in training and skills for drafting ISPs, with certain demographic descriptors indicating teachers' level of skill when drafting ISPs. An additional significant relationship between *Level of Support* (*Mainstream or Full-service*) and *their familiarity with ISPs* was highlighted, with only 25% of the participants from full-service schools being confident in their familiarity with ISPs. Furthermore, of the responses from participants who teach at full-service schools, 2 of 4 participants (50%) had not attended training on inclusive education, and 4 out of 4 participants (100%) had never attended training for ASD specifically. This raises questions around a possible lack of training and skills for drafting ISPs in full-service schools. However, it should be noted that all participants from full-

service schools were from schools located in township rural areas, indicating that the sample was biased due to the limited responses obtained from full-service schools, as well as schools in a township rural area. It can, therefore, be concluded that, in this research, participants from schools in township rural areas seem to lack skills when drafting ISPs. Current literature is aligned with the findings of this research as it highlights the following: “Rural teachers receive less in-service training or support from the provincial departments of education” (Du Plessis & Mestry, 2019, p. 7). The DOE (2014) states that the skills and resources necessary to create IEDPs and ISPs are imperative for inclusive education and yet the findings from the present study suggests that schools in certain demographic areas or of a certain support level (mainstream or full-service) may not have the necessary skills and training to implement ISPs in the classroom. The present study raises questions around IEDPs and ISPs not being used effectively or at all in the classroom environment due to a lack of familiarity, and skills and resources being raised. The inclusion of learners with barriers to learning requires IEDPs/ISPs to be created and updated to ensure consistent educational stimulation and development based on their individual needs and abilities. However, skills and resources are required to draft and implement these IEDPs/ISPs (Siegel, 2020). Considering both the recent literature and data outcomes found in this research, there appears to be limited support for learners in these areas. This increases the risk that learners do not receive the necessary support, thereby placing learners with ASD characteristics at risk of falling through the gaps of the education system.

Although 12 of the 37 participants (32%) have attended training for ASD, only 10 of the 37 (27%) felt that they were confidently able to facilitate a learner with ASD characteristics in their classroom. With 90% of the participants who felt confident in facilitating learners with ASD characteristics being from schools located in suburban areas. Over the past decade, multiple authors have spoken to the lack of training and resultant feeling of incompetency on the part of teachers (Motitswe, 2014; Pillay et al., 2022). This puts learners with ASD

characteristics at risk of falling through these gaps. Despite the participants expressing their lack of confidence when facilitating learners with ASD characteristics in their classroom, the qualitative responses of those participants who attended training for ASD specifically outlined the training as “helpful” and appeared to have “assisted” these teachers in their understanding of ASD.

Minimal support (school-based support team) was raised among the trends and themes of this research.

As outlined in the SIAS Policy, SBSTs and DBSTs were created to provide teachers with the support and skills needed to aid the support of learners (DOE, 2014). The professionals who make up the SBSTs and DBSTs are selected and trained to assist in the implementation of the SIAS Policy, which outlines the strategy of the screening, identification, assessment, and support needed to incorporate those with specific barriers to learning successfully within the mainstream educational system. According to the SIAS Policy, DBSTs should comprise psychologists, remedial teachers, health and welfare professionals, specialist support personnel, administrative personnel, management development support specialists, and curriculum specialists (DOE, 2014). DBSTs are responsible for the organisation of additional support training programmes managing the allocation and provision of support and resources to specific schools and learners, guiding, training and counselling teachers, parents and caregivers, and making use of tools provided in the SIAS Policy (DOE, 2014; Motitswe, 2014). Furthermore, DBSTs are responsible for consolidating SBSTs in instances where a school does not have one. SBSTs comprise the principal, who is responsible for comprising the SBST, specialised teachers or teachers involved in the management of the school, as well as administrative staff or caretakers. SBSTs’ support is required in identifying learners at risk and providing the necessary support and accommodation for these barriers to learning through developing programmes, and tracking how effective the support is. They further act to mobilise

available assets and primarily support the process of teaching and learning. It is suggested that the DBSTs and SBSTs work collaboratively to ensure that learners are afforded the support and placement best suited to their needs. It is accepted that if a child does not receive adequate recognition and accommodation for their learning needs, challenges and deficits will arise (Erasmus et al., 2019).

Table 4.6 highlights a significant association between School Location and whether the school has an SBST. This suggests that schools in certain locations, such as those located in township areas, may be under resourced and operated in the absence of SBST guidance. Table 4.7 presents an additional significant association between Levels of Support and familiarity with SBSTs, with 70% of participants being familiar with SBSTs, and 22% of the participants being unsure as to whether they have an SBST. Furthermore, 25% of full-service responses reflected a confident familiarity with SBSTs, while 81% of participants from mainstream schools were confident in their familiarity with SBSTs. This raises questions around support provided by SBSTs, which is additionally highlighted in participant responses, demonstrating the lack of support around inclusive education. Considering the lack of support, as well as the high percentage (22%) of participants who are not sure or do not have an SBST, a concern is raised regarding support for the accommodation of learners with ASD. Previous literature conducted in the Gauteng province aligns with this research and emphasises the fact that learners with barriers to learning “never” or “seldom” (Nel et al., 2011, pp. 49)

An integral part of the roles of SBSTs and DBSTs is the placement of learners in schools with the necessary support to accommodate their learning needs. However, as discussed above, learners with medium to high support needs are still being placed in mainstream schools, while those with high support needs in ASD-specific schools or not receiving placement due to the magnitude of the support needed (Pillay, 2022; Weber, 2013). This places these learners at risk of possibly falling through the gaps of the education system. This research highlights the

process of placing a learner who requires additional support as lengthy, difficult, having no access to special schools, and slow.

Dynamic Skill theory suggests that high support level contexts stimulate and provide accurately for a child's needs, thereby producing an optimal level of skills, meaning that the child has achieved the best possible level of skill for their cognitive capacity. However, considering the above highlighted disconnect between theoretical awareness and practical application, gaps in training and professional development, and minimal support (school-based support team); learners with ASD characteristics may not acquire the necessary support, and therefore impacting their ability to attain optimal achievement in their environment (Fischer & Bidell, 2007).

5.3 Conclusion

In this chapter questions were raised regarding the disconnect between theoretical awareness around policy and practical application in the classroom, gaps in training and professional development, as well as minimal support (SBST). The highlighted trends and themes align with recent and previous research that were conducted, and can be understood using the Dynamic Skill Theory in order to gain understanding regarding the impact of these factors on learners' being able to attain optimal achievement.

Chapter 6: Potential limitations and recommendations

6.1 Introduction

This chapter provides an understanding of the limitations in this research, as well as possible recommendations for future research. Recommendations for further research are made after the previously highlighted significant relationships, trends, as well as emerging themes identified in the analysis phase of this research, which raised several tentative hypotheses.

6.2 Potential Limitations and recommendations

While the aim of the study was to gather data from both mainstream and full-service schools from different areas (suburban rural, suburban urban, township rural, township urban), the demographic of the participants is not in line with the national demographic. The realised sample was biased toward mainstream schools from suburban urban and suburban rural areas. Future studies could include more participants from full-service schools and participants from schools in township rural, as well as township urban areas. The study included only two of the nine provinces, which further reduces the generalisability of the study. It is, therefore, recommended that future studies be done across all the provinces. The sample size of this research was 37, which limits the generalisability of the findings. Future studies could include a larger sample size to allow generalisability and increase the power and effect size of the study.

At least 35 schools were approached for permission to conduct research across both provinces. But only got permission to conduct research at 7 schools. 3 schools were in KZN and 4 schools were in Gauteng. Although many rurally located schools were approach to take part in the research, at least 3 of the 7 schools who participated were considered rurally located; thus suggesting a small number of participants from these schools. The limited sample size may be as a result of the questionnaire being online, and therefore potentially excluding those in rural areas who may not have signal, or data access. This can be highlighted as a potential deterrent to participate in this research and may have resulted in the limited number of participants from rural areas. Furthermore, the questionnaires were only offered in English which may have appeared daunting for those teachers who were not English speaking. Many teachers within rural schools in SA are not English speaking, therefore this may further be considered as a potential reason for the lack of participants from rural areas.

Recommendations for further research includes an increased sample size in order to increase the generalisability. In order to provide a more accurate representation of the school demographics, including more schools from township urban school locations, as well as schools from more schools categorised as full-service schools is suggested. The collection of qualitative information was limited owing to the structured layout of the survey. In order to

improve this, it is suggested that interviews be conducted in order to collect qualitative data with a semi-structured layout, thereby allowing the collection of more in-depth information.

6.3 Conclusion

The present research highlights the trends and themes among schools of different demographics in order to bring to light the potential gaps that learners with ASD characteristics may fall through within the education system in SA. Despite the limited sample size in this research, significant questions were raised regarding the disconnect between theoretical awareness around policy and practical application in the classroom, gaps in training and professional development, as well as minimal support (SBST). The highlighted trends and themes align with recent and previous research that were conducted. This indicates that these difficulties are felt on a larger scale, thereby indicating that consequential gaps have formed, suggesting significant quantities of learners with ASD falling through these gaps, having a magnitudinous impact.

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Appendix A

Online Questionnaire

Inclusive education and the associated classroom challenges: the teacher's perspective with a focus on autism spectrum disorder (ASD)

Information about the study:

This research will collect data from teachers using a digital questionnaire which will be accessed through a link to a google document. The questionnaire will take about 40 minutes to complete, and contains forced choice categorical formatted questions, as well as Likert scale and open- ended questions. The research will take place in public, full-service and mainstream schools. The aim of the study is to understand more about the challenges faced by teachers when identifying and accommodating learners with barriers to learning, specifically learners with ASD characteristics. It further aims to explore the challenges in relation to principles and procedures outlined in the Education White Paper 6. Through exploring these challenges, the study aims to highlight how learners with ASD characteristics are 'falling through the gaps' in the SA education system.

Completion of the digital questionnaire will be regarded as informed consent, including that the data collected by the questionnaire can be used in future studies. Research participants are able to stop the questionnaire at any point, and the risks of the study are no more significant than in everyday life. There will be no remuneration for taking part in this research. Results will be displayed in a research report. Direct quotes collected in the open questions will be used anonymously, therefore once the questionnaire has been completed the participant cannot withdraw from the study. The final report will not provide any identifiable information about the school or participant. The results will be provided anonymously in my research report, which you may receive on request.

In each question circle the option which refers to you. This questionnaire will take approximately 40 minutes to complete.

Demographic information:

1. What kind of school do you teach at?
 - a. Full- service school
 - b. Mainstream school
2. Is your school considered a fee paying or non-fee-paying school?
 - a. Fee paying
 - b. Non- fee- paying
3. How would you describe your school?
 - a. Township urban
 - b. Township rural
 - c. Suburban urban
 - d. Suburban rural
4. How many years of teaching experience do you have?

- a. 1
 - b. 2-5
 - c. 6-10
 - d. Over 10
5. What age group do you teach?
- a. Foundation Phase (grades 1-3)
 - b. Intermediate Phase (grades 4-6)
 - c. Senior Phase (grade 7)
6. What is the average number of children in the school you teach at?
- a. Less than 20
 - b. 21-50
 - c. 51-100
 - d. 101-200
 - e. 201-500
 - f. 501-1000
 - g. More than 1000
7. What is the average number of learners in your class/classes?
- a. Less than 15
 - b. 15-25
 - c. 26-35
 - d. 36-45
 - e. Over 45

Please choose the most appropriate option or describe your personal experience to the best of your abilities.

1. Are you aware of the principles outlined in Education White Paper 6?
- ☐ Yes
 - ☐ Somewhat
 - ☐ No
 - ☐ I have not heard of Education White Paper 6
 - a. Unless you have not heard of Education White Paper 6, describe how you make use of these inclusive principles in the classroom?

2. Have you ever made use of learner profiles (LP's)?
- ☐ Yes
 - ☐ Somewhat
 - ☐ No
 - ☐ No, I am not familiar with Learner Profiles

- b. Unless you are not familiar with Learner profiles, describe how you make use of LPs to support learners? E.g. When you make use of LPs, and whether or not you refer to previous LP's.

3. Are you familiar with Individual Support Plans (ISP's)?

☐ Yes

☐ Somewhat

☐ No

a. How would you describe your skills when creating ISP's?

☐ I have the necessary skills

☐ I have some skills

☐ I need support in this area

☐ I do not use ISP's

b. In your experience, describe the training support available to you when putting together ISP's?

a. If yes, what further support do you need as a teacher to put together ISP's?

4. How familiar are you with the Support, Identification, Assessment and Support (SIAS) document?

☐ Very familiar

☐ Familiar

☐ Unfamiliar

☐ I have never heard of it

b. Are you familiar with Support Needs Assessment forms 1& 2 provided in the SIAS document?

☐ Yes

☐ Somewhat

☐ No, I have never heard of them

c. If yes or somewhat, Describe in full when and how you would make use of form 1 and form 2?

5. Are you familiar with School- based support teams (SBST's)?

- ☐ Yes
- ☐ Somewhat
- ☐ No

b. Does your school have a SBST?

- ☐ Yes
- ☐ I am unsure
- ☐ No

c. In your experience, what support does your SBST offer you with regards to learner profiles?

5. Are you familiar with District- based support teams (DBST's)?

- ☐ Yes
- ☐ Somewhat
- ☐ No

d. Describe the support offered by DBST's when supporting a learner with ASD characteristics.

6. In your opinion, have you taught a learner with possible ASD characteristics but who was undiagnosed?

- ☐ Yes
- ☐ No
- ☐ I am not familiar with the characteristics of ASD

b. Have you ever taught a learner who was diagnosed with ASD?

- ☐ Yes
- ☐ No

c. What do you understand about ASD characteristics?

- d. In an average class, what percentage would you identify as having:
- ☐ Poor social abilities
 - ☐ Sensitivity towards sounds, textures, or visuals
 - ☐ Being overly ridged or routine- based
 - ☐ Engaging in repetitive movements or behaviours
 - ☐ Deficit in functional play (realistic play)
- e. What percentage of learners would you, as a teacher, identify as possibly being on the autism spectrum?
- ☐ 0%
 - ☐ 1%
 - ☐ 5%
 - ☐ 10%
 - ☐ More than 10%
- f. Do you think you are/ would be able to facilitate learners with ASD characteristics in your classroom?
- ☐ Yes
 - ☐ Somewhat
 - ☐ No
- g. How do you/would you go about identifying and supporting ASD characteristics in the classroom?

7. Have you ever attended training for inclusion of learners with barriers to learning?
- ☐ Yes
 - ☐ No
- b. Have you attended training for inclusion of learners specifically with ASD?
- ☐ Yes
 - ☐ No
- c. Who provided the training?
- ☐ Government training
 - ☐ Private training
- d. How often do you attend training?
- ☐ More than once a year
 - ☐ Once a year
 - ☐ Once every few years
 - ☐ I have attended once
 - ☐ I have never attended
- e. If you have attended training, in your opinion, how was the training helpful/unhelpful?

8. Describe your experience of the placement of learners requiring more substantial support, in ASD specific schools or schools providing more intensive support for learners with ASD.

Please note that if you are in anyway upset by the content in the questionnaire, you should immediately contact me via email (2570908@students.wits.ac.za). I will thereafter promptly refer you to the relevant support services.

Appendix B

Gauteng Department of Education Permission to Conduct Research



GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

For admin. Use only:

Ref. no.:

Enquiries: 011 3550775/1379

GDE RESEARCH REQUEST FORM

REQUEST TO CONDUCT RESEARCH IN INSTITUTIONS AND/OR OFFICES OF THE GAUTENG DEPARTMENT OF EDUCATION

1. PARTICULARS OF THE RESEARCHER

1.1	Details of the Researcher	
a) Surname and Initials:	EGBERINK GS	
b) First Name/s:	Georgina Sarah	
c) Title (Prof/Dr/Mr/Mrs/Ms):	Miss	
d) Student Number:	2570908	
e) SA ID Number:	9910160076080	
f) Work permit no. (If not SA citizen)		

1.2	Private Contact Details	
a. Home Address	c. Postal Address (if different)	
Dundalk Ave		
Parkview		
Randburg		
b. Postal Code: 2122	d. Postal Code:	
e. Tel: 079 486 4252	f. Cell:	
g. Fax:	h. E-mail:	

2. PURPOSE & DETAILS OF THE PROPOSED RESEARCH

2.1	Purpose of the Research (Place a cross where appropriate)	
	<i>Undergraduate Study – Self</i>	
	<i>Postgraduate Study – Self</i>	X
	<i>Private Company/Agency – Commissioned by Provincial Government or Department</i>	
	<i>Private Research by Independent Researcher</i>	
	<i>Non-Governmental Organisation</i>	
	<i>National Department of Education</i>	
	<i>Commissions and Committees</i>	
	<i>Independent Research Agencies</i>	
	<i>Statutory Research Agencies</i>	
	<i>Higher Education Institutions only</i>	
2.2	Full title of Thesis / Dissertation / Research Project	
	Inclusive education and the associated classroom challenges: The teachers' perspective with a focus on ASD.	
2.3	Value of the Research to Education (Attach Research Proposal)	
2.4		Date
	a. <u>Estimated</u> date of completion of research in GDE Institutions	03/2023- 10/2023
	b. <u>Estimated</u> date of submission of Research Report /Thesis/Dissertation and Research Summary to GDE:	03/2024
2.5	Student and Postgraduate Enrolment Particulars	
	a. Name of institution where enrolled:	University of Witwatersrand
	b. Degree / Qualification:	MEd
	c. Faculty and Discipline / Area of Study:	Educational Psychology
	d. Name of Supervisor / Promoter:	Enid Schutte
2.6	Employer (or state Unemployed / or a Full Time Student): Full Time student	

a. Name of Organisation:	University of Witwatersrand
b. Position in Organisation:	Full Time Student
c. Head of Organisation:	
d. Street Address:	
e. Postal Code:	
f. Telephone Number (Code + Ext):	
g. Fax Number:	
h. E-mail address:	

2.7	PERSAL Number (GDE employees only)
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3. PROPOSED RESEARCH METHOD/S

(Please indicate by placing a cross in the appropriate block whether the following modes would be adopted)

3.1 Questionnaire/s (If Yes, supply copies of each to be used)

YES	x	NO	
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3.2 Interview/s (If Yes, provide copies of each schedule)

YES		NO	x
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3.3 Use of official documents

YES		NO	x
If Yes, please specify the document/s:			

3.4 Workshop/s / Group Discussions (If Yes, Supply details)

YES		NO	x

3.5 Standardised Tests (e.g. Psychometric Tests)

YES		NO	x
<i>If Yes, please specify the test/s to be used and provide a copy/ies</i>			

4. INSTITUTIONS TO BE INVOLVED IN THE RESEARCH

4.1 TYPE and NUMBER of Institutions (Please indicate by placing a cross alongside all types of institutions to be researched)

INSTITUTIONS	Write NUMBER here
<i>Primary Schools</i>	Maximum of 20
<i>Secondary Schools</i>	
<i>ABET Centres</i>	
<i>ECD Sites</i>	
<i>LSEN Schools</i>	
<i>Further Education & Training Institutions</i>	
<i>Districts and / or Head Office</i>	

4.2 Name/s of institutions to be approached for research (Please complete on a separate sheet if space is found to be insufficient).

Name/s of Institution/s
Parkview Junior school (Public mainstream)
KwaPhalo Primary school
KwaNtikane middle school (no fee- paying)
Eden Park Primary school (Full- service)
<i>Zenzeleni Primary School (no fee- paying Mainstream)</i>
Ikage Primary school (fee paying mainstream)

Bosmont Primary school (fee- paying mainstream)
GR Harris Primary School (fee paying mainstream)
Westbury primary school (no fee- paying mainstream)
DISCOVERY PRIMARY SCHOOL (full- service, fee- paying)
TSAKANI PRIMARY SCHOOL (full- service, fee- paying)
WALTER SISULU PRIMARY SCHOOL (full- service, no fee - paying)
JAKARANDA PRIMARY SCHOOL (full- service, no fee- paying)
Rosebank Primary School
Greenside Primary School
Norwood Primary School
Melpark Primary School
Linksfild Primary School

4.3 District/s where the study is to be conducted. (Please indicate by placing a cross alongside the relevant district/s)

District/s			
<i>Ekurhuleni North</i>		<i>Ekurhuleni South</i>	
<i>Gauteng East</i>	<i>x</i>	<i>Gauteng North</i>	<i>x</i>
<i>Gauteng West</i>	<i>x</i>	<i>Johannesburg Central</i>	<i>x</i>
<i>Johannesburg East</i>	<i>x</i>	<i>Johannesburg North</i>	<i>x</i>
<i>Johannesburg South</i>	<i>x</i>	<i>Johannesburg West</i>	<i>x</i>
<i>Sedibeng East</i>		<i>Sedibeng West</i>	
<i>Tshwane North</i>	<i>x</i>	<i>Tshwane South</i>	<i>x</i>
<i>Tshwane West</i>	<i>x</i>		

If Head Office/s (Please indicate Directorate/s)

4.4 Approximate number of learners to be involved per school (Please indicate the number by gender: M- Male and F- Female)

Grade	1		2		3		4		5		6	
Gender	M	F	M	F	M	F	M	F	M	F	M	F
Number												

Grade	7		8		9		10		11		12	
Gender	M	F	M	F	M	F	M	F	M	F	M	F
Number												

4.5 Approximate number of educators/officials involved in the study (Please indicate the number in the relevant column)

Type of staff	Educators	HODs	Deputy Principals	Principal	Lecturers	Office Based Officials
Number	120					

4.6 Letters of Consent (Attach copies of Consent letters to be used for Principal, SGB and all participants. For learners also include parental consent letter)

4.7 Are the participants to be involved in groups or individually?

Groups		Individually	x
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4.8 Average period of time each participant will be involved in the test or other research activities (Please indicate time in minutes for ALL participants)

Participant/s	Activity	Time
Teachers	Questionnaires	40 minutes

4.9 Time of day that you propose to conduct your research.

<u>Before school hours</u>	<u>x</u>	<u>During school hours (for limited observation only)</u>		<u>After School Hours</u>	<u>x</u>
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SEE Condition 5.4 on Page 7

4.10 School term/s during which the research would be undertaken

<i>First Term</i>		<i>Second Term</i>	<i>x</i>	<i>Third Term</i>	<i>x</i>
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5. CONDITIONS FOR CONDUCTING RESEARCH IN GDE

Permission may be granted to proceed with the above study subject to the conditions listed below being met and permission may be withdrawn should any of these conditions be flouted:

- 1) The District/Head Office Senior Manager/s concerned, the Principal/s and the chairperson/s of the School Governing Body (SGB.) must be presented with a copy of this letter.***
- 2) The Researcher will make every effort to obtain the goodwill and co-operation of the GDE District officials, principals, SGBs, teachers, parents and learners involved. Participation is voluntary and additional remuneration will not be paid;***
- 3) Research may only commence from the second week of February and must be concluded by the end of the THIRD quarter of the academic year. If incomplete, an amended Research Approval letter may be requested to conduct research in the following year.***
- 4) Because of COVID 19 pandemic researchers can ONLY collect data online, telephonically or may make arrangements for Zoom with the school Principal. Requests for such arrangements should be submitted to the GDE Education Research and Knowledge Management directorate. The approval letter will then indicate the type of arrangements that have been made with the school.***
- 5) The Researchers are advised to make arrangements with the schools via Fax, email or telephonically with the Principal.***
- 6) Research may only be conducted BEFORE or AFTER school hours so that the normal school program is not interrupted. The Principal and/or Director***

must be consulted about an appropriate time when the researcher/s may carry out their research at the sites that they manage.

- 7) Items 3 and 6 will not apply to any research effort being undertaken on behalf of the GDE. Such research will have been commissioned and paid for by the Gauteng Department of Education.*
- 8) It is the researcher's responsibility to obtain written consent from the SGB/s; principal/s, educator/s, parents and learners, as applicable, before commencing with research.*
- 9) The researcher is responsible for supplying and utilizing his/her own research resources, such as stationery, photocopies, transport, faxes and telephones and should not depend on the goodwill of the institution/s, staff and/or the office/s visited for supplying such resources.*
- 10) All research conducted in GDE Institutions is anonymous. The names and personal details of the GDE officials, schools, principals, parents, teachers and learners that participate in the study may neither be asked nor appear in the research title, report / thesis/ dissertation or GDE Research Summary.*
- 11) On successful completion of the study the researcher must supply the Director: Education Research and Knowledge Management, with electronic copies of the Research Report, Thesis, Dissertation as well as a Research Summary (on the GDE Summary template). Failure to submit these documents may result in future permission being withheld, or a fine imposed for BOTH the Researcher and the Supervisor.*
- 12) Should the researcher have been involved with research at a school and/or a district/head office level, the Director/s and school/s concerned must also be supplied with a GDE Summary.*
- 13) The researcher may be expected to provide short presentations on the purpose, findings and recommendations of his/her research to both GDE officials and the schools concerned;*

6. DECLARATION BY THE RESEARCHER	
6.1 <i>I declare that all statements made by myself in this application are true and accurate.</i>	
6.2 <i>I have read, understand and accept ALL the conditions associated with the granting of approval to conduct research in GDE Institutions and I undertake to abide by them. I understand that failure to comply may result in permission being withdrawn, further permission being withheld, a fine imposed and legal action may be taken against me. This agreement is binding.</i>	
6.3 <i>I promise once I have successfully completed my studies, (before graduation) or on successful project completion, to submit electronic copies of my Research Report / Thesis / Dissertation as well a GDE Summary on the GDE template sent to me with my approval letter or found on www.education.gpg.gov.za</i>	
Signature:	G. EGBERINK
Date:	31/03/2023
7. DECLARATION BY SUPERVISOR / LECTURER / PROMOTER	

7.1	<i>I declare that: (Name of <u>Researcher</u>)</i>	
7.2	<i>is enrolled at the institution / employed by the organisation to which the undersigned is attached.</i>	
7.3	<i>The questionnaires / structured interviews / tests meet the criteria of:</i> • <i>Educational Accountability;</i> • <i>Proper Research Design;</i> • <i>Sensitivity towards Participants;</i> • <i>Correct Content and Terminology;</i> • <i>Acceptable Grammar;</i> • <i>Absence of Non-essential / Superfluous items;</i> • <i>Ethical clearance</i>	
7.4	<i>The student / researcher has agreed to ALL the conditions of conducting research in GDE Institutions and will abide by them.</i>	
7.5	<i>I will ensure that after success completion of the research degree / project / study an electronic copy of the Research Report / Thesis / Dissertation and a Research Summary (on the GDE template) will be sent to the GDE. Failure to submit the Research Report, Thesis, Dissertation and Research Summary may result in: permission being withheld from BOTH the student and the Supervisor in future and a fine may be imposed.</i>	
7.6	Surname of the Supervisor :	Schutte
7.7	First Name/s of the Supervisor :	Enid
7.8	Title:	Ms
7.9	Institution / Organisation:	University of Witwatersrand
7.10	Faculty / Department:	Psychology
7.11	Telephone:	082 920 6731
7.12	E-mail address:	Enid.Schutte@wits.ac.za
7.13	Signature:	
7.14	Date:	

Appendix C

KwaZulu- Natal Department of Education Permission to Conduct Research



kzn education
Department
Education
KWAZULU-NATAL

Application for Permission to Conduct Research in KwaZulu Natal Department of Education Institutions

1. Applicants Details

Title: Prof / Dr / Rev / Mr / Mrs / Miss / Ms Surname: EGBERINK

Name(s) Of Applicant(s): Georgina Sarah Email: 2570908@students.wits.ac.za

Tel No: 079 486 4252 Fax: _____ Cell: _____

Postal Address: Redlands Farm, Underberg, P.O. Box 3257

2. Proposed Research Title: _____

Inclusive education and the associated classroom challenges: A teachers perspective with a focus on ASD

3. Have you applied for permission to conduct this research or any other research within the KZNDoE institutions?

Yes ☒ No ☐

If "yes", please state reference Number: _____

4. Is the proposed research part of a tertiary qualification?

Yes ☐ No ☒

If "yes"

Name of tertiary institution: University of the Witwatersrand

Faculty and or School: Psychology

Qualification: Master's in Educational Psychology

Name of Supervisor: Enid Schutte Supervisors Signature _____

If "no", state purpose of research: _____

5. Briefly state the Research Background

This study aims to explore experiences of South African teachers around inclusion of learners with autism spectrum disorder (ASD), highlighting the challenges teachers face when identifying and accommodating these learners within the classroom environment. Through this, exploring how and why learners with ASD characteristics might 'fall through the gaps'. South Africa's educational system, prior to democracy, was based on marginalisation,

segregation, and unequal access to resources which led to some communities having restricted access to educational resources, skills and trainings, reducing the quality of education. Currently, SA public schools are categorised by fee- paying and no- fee paying, which is based on the quintile system of categorisation. Quintiles 1, 2 and 3 are considered the lower quintiles, and mostly rely on governmental financial support, and are therefore no-fee paying schools. The Education White Paper 6 on inclusive education will guide the aims and questions, as well as define the scope of this research. The Education White paper 6 was published in 2001, and for the scope

of this research, the principles provided on inclusion of learners with barriers to learning will be focused on. These principles aim to increase inclusivity of learners with barriers to learning into the education system, through increasing support, considering provision, availability of resources, and skills for these learners. In 2014 a further policy, based on the Education White Paper 6, called the SIAS policy, was introduced to outline procedures implemented to ensure inclusion of learners with barriers to learning specifically in the education system. The SIAS policy addresses the importance of early identification of barriers to learning, and outlines a plan for identifying and

accommodating learners with barriers to learning in order to ensure optimal support, intervention and inclusion. ASD can be characterised by deficits in "socio- emotional reciprocity", "non-verbal communicative behaviours", and "developing and maintaining relationships" (American Psychiatric Association, 2013, p.50).

6. What is the main research question(s) :

- What challenges do South African teachers encounter, relative to the white paper 6 policy and

recommended procedures, when identifying and accommodating a child/children with ASD characteristics in

the classroom? And is this universal under public schools in SA, or dependant on specific demographic

circumstances?

7. Methodology including sampling procedures and the people to be included in the sample:

Non- probability, purposive sampling will be used, as well as snowballing, as teachers will be asked to encourage other teachers to participate in the study. My sample group will be comprised of teachers from Public primary schools, in the categories of full- service and mainstream schools, fee- paying and non- fee- paying schools, from rural, urban, and suburban and township schools. Approximately 120 online Semi- structured questionnaires (Appendix A) will be dispersed to gather numerical and non- numerical data from teachers to examine the application of the Education White Paper 6, through exploring the challenges teachers encounter around identification and accommodation of ASD in SA classrooms. The aim and a description of the study will be provided on a poster, which will be made available in the school staff room or somewhere where the teachers might view it, possibly encouraging teachers to participate in the research. The aim and description of the study will also be provided in the introduction to the digital questionnaire. The questionnaire will be available electronically via a google document. The principal will provide the link to the questionnaire to all the teachers, those willing to participate can use the link to complete the questionnaire.

8. What contribution will the proposed study make to the education, health, safety, welfare of the learners and to the education system as a whole?:

This study aims to highlight the challenges faced by teachers in the identification and accommodation of learners with barriers to learning, specifically learners with characteristics of ASD. Therefore by using the Education White Paper 6 to guide this study i hope to bring about awareness of possible challenges experienced by teachers which causes learners with ASD characteristics to 'fall through the gaps', and therefore bringing these challenges to the forefront and providing policy makers and the general public with the challenges that teachers face when identifying and accommodating learners with ASD characteristics.

KZN Department of Education Schools or Institutions from which sample will be drawn – If the list is long please attach at the end of the form

Howick Primary school		
Underberg Primary school		
Laddsworth Primary school		
Thokwane Primary school		
Merchiston Preparatory school		
Goxhill Primary School		
Thukeyane Primary School		
Camanaga Primary School		
Nkelebantwana Full Service School		
Enhlanhlani Full Service School		

9. Research data collection instruments: *(Note: a list and only a brief description is required here - the actual instruments must be attached):* _____

Semi-structured self- administered questionnaires will be used to collect data from teachers who teach at a diversity of public, full- service and mainstream schools in South Africa. These questionnaires will be in a digital format, and made available via a google document.

10. Procedure for obtaining consent of participants and where appropriate parents or guardians:

Completion of the digital questionnaires will be considered informed consent.

11. Procedure to maintain confidentiality (if applicable):

Participation in this research will be anonymous and will be kept confidential, some direct quotes collected in the open questions will be used anonymously, and the final report will not provide any identifiable information about the school or participant.

12. Questions or issues with the potential to be intrusive, upsetting or incriminating to participants (if applicable):

There is no perceivable harm, or intrusive content. However if participants become upset in any way by feeling inadequate to comply with the principles and procedures outlined in the Education White Paper 6, the steps highlighted below will be taken.

13. Additional support available to participants in the event of disturbance resulting from intrusive questions or issues (if applicable):

When dispersing the questionnaires, although There are no identified risks of harm associated with this study, if the participant starts feeling upset in any way by the questionnaire, it will be suspended, and the researcher will provide debriefing. Should participants be disturbed in anyway by the content of the questionnaire, I will refer them to South Africa's Education, training and skills development, to give them the opportunity to broaden their capacity as a teacher

14. Research Timelines : This research will take place from after receiving ethics approval, until March 2024.

15. Declaration

I hereby agree to comply with the relevant ethical conduct to ensure that participants' privacy and the confidentiality of records and other critical information.

I Georgina Sarah Egberink declare that the above information is true and correct


Signature of Applicant

05/04/2023
Date

16. Agreement to provide and to grant the KwaZulu Natal Department of Education the right to publish a summary of the report.

I/We agree to provide the KwaZulu Natal Department of Education with a copy of any report or dissertation written on the basis of information gained through the research activities described in this application.

I/We grant the KwaZulu Natal Department of Education the right to publish an edited summary of this report or dissertation using the print or electronic media.


Signature of Applicant(s)

05/04/2023
Date

Return a completed form to:
Sibusiso Alwar

The Research Unit; Resource Planning; KwaZulu Natal Department of Education

Hand Delivered:

Office G25; 188 Pietermaritzburg Street; Pietermaritzburg; 3201

Or

Ordinary Mail

Private Bag X9137; Pietermaritzburg; 3200

Or

Email

sibusiso.alwar@kzndoe.gov.za

Appendix D

Permission to Conduct Research at School Form



University of Witwatersrand

Department of Educational Psychology

[Date]

Dear Sir/Madam,

RE: Permission to conduct research at [school name].

My name is Georgina Egberink.

I am an Educational Psychology master's student at the University of the Witwatersrand, Johannesburg. I am seeking permission to conduct research at [school name]. My supervisor is Mrs Schutte, and I am conducting a research study on inclusive education and the associated classroom challenges: the teachers' perspective with a focus on ASD. I have chosen your school due to its specific profile which complies to that needed for the study. I request permission to invite teachers in your school to complete questionnaires. If they agree to completing the questionnaire, they will receive a link for a digital questionnaire. The questionnaires should take an average of 40 minutes to complete and should be completed depending on the availability of the teacher. Completion of the digital questionnaire will be regarded as informed consent. Research participants are able to stop the questionnaire at any point, and the risks of the study are no more significant than in everyday life. There will be no remuneration for taking part in this research. Results will be displayed in a research report. Direct quotes collected in the open questions will be used anonymously, therefore once the questionnaire has been completed the participant cannot withdraw from the study. The final

report will not provide any identifiable information about the school or participant. In order to obtain consent to collect data at your school I require a typed permission letter, including my name and the title of my study, signed and dated, and including your school's letterhead.

For more information please don't hesitate to contact my supervisor or I on the details given below.

Yours sincerely,

Georgina Egberink

Georgina Egberink

079 486 4252

2570908@students.wits.ac.za

Enid Schutte

082 920 6731

Enid.Schutte@wits.ac.za

Appendix E

Ethical Clearance (Non-Medical)



SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT ETHICS COMMITTEE
CONSTITUTED UNDER THE UNIVERSITY HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)

CLEARANCE CERTIFICATE

PROTOCOL NUMBER: MED/23/01

PROJECT TITLE:

Inclusive education and the associated classroom challenges: the teachers perspective with a focus on ASD.

INVESTIGATOR

Georgina Egberink (2570908)

SCHOOL/DEPARTMENT OF INVESTIGATOR

SHCD/Psychology

DATE CONSIDERED

19 June 2023

DECISION OF THE COMMITTEE

Approved unconditionally

RISK LEVEL

Low Risk

EXPIRY DATE

31 December 2025

ISSUE DATE OF CERTIFICATE: 05 July 2023 (30 October 2023)

CHAIRPERSON Aline Ferreira Correia
 (Dr Aline Ferreira Correia)

cc: Ms Enid Schutte (Supervisor)

DECLARATION OF INVESTIGATOR

To be completed in duplicate and ONE COPY returned to the Chairperson of the School/Department ethics committee.

I/we fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure be contemplated from the research procedure as approved, I/we undertake to submit an amendment of the protocol to the Committee.

GEgberink
 Signature

Date

18 / 11 / 2023

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES