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AUTISM AND INCLUSION: TEACHERS' PERSPECTIVES ON THE MAINSTREAMING OF AUTISTIC STUDENTS

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A research report submitted to the Faculty of Humanities, University of Witwatersrand, in partial fulfillment of the requirements for the degree of Masters of Education (Educational Psychology)

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ABSTRACT

As a result of White Paper 6 (2001), South Africa has embarked on a radical restructuring of its entire education system, with the aim of removing barriers to learning and including children with disabilities into mainstream schooling (Mittler, 2003). According to this new framework, autistic students should be included into mainstream schools but there is scant research on the feasibility and practical implementation of this. This study took the form of a qualitative analysis of the perceptions of both mainstream and specialised teachers in terms of the mainstreaming of autistic students in South African schools. Results of the study suggest that neither of the sample groups perceive the South African context ready for mainstreaming of autistic students. They felt that students with Aspergers Syndrome, higher-functioning autism, could be included more successfully. However, on the premise that all autistic students were going to be included, a number of changes would need to be made. These included the provison of paraprofessionals, smaller classes and a stronger emphasis on safety. Teachers would also need to receive extensive training on dealing with behavioural problems that autistic students may exhibit. It was further noted that mainstream teachers are in need of practical exposure to autism and training in this area.

KEY WORDS

Teacher	Autism	White Paper 6
Student	Aspergers Syndrome	Policy of Inclusion
Paraprofessional		

DECLARATION

I hereby declare that this research report is my own unaided work. It has been submitted exclusively to the University of Witwatersrand in partial fulfillment of the requirements for the degree of Master of Education (Educational Psychology).

_____

Julie-Anne Samantha Roberts_____ day of _____ 2007

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"And now these three remain: faith, hope and love. But the greatest of these is love."

- 1 Corinthians 13:13

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INTRODUCTION

In 1996, the National Commission on Special Needs in Education and Training was established with the aim of making recommendations on aspects of special needs and support services in education in South Africa. The findings of this commission were subsequently published in the White Paper 6 in 2001. As a result, South Africa has embarked on a radical restructuring of its entire education system, with the aim of removing barriers to learning and overcoming the divisions caused by a history of apartheid. The inclusion of children with disabilities has been built into the foundations of this policy and is beginning to be implemented (Mittler, 2003).

According to this new framework, autistic students* in South Africa should be included into the mainstream schooling system. However to date, there appears to be a limited number of autistic children that have been successfully mainstreamed in South Africa and scant research on the specific impacts, effects, perceptions, advantages and disadvantages of this process. There are a number of schools in Gauteng that have autistic students but very few mainstream schools with autistic students. South African researchers are relying on research primarily from the United Kingdom and the United States of America to inform us about the mainstreaming of autistic students. It would appear that there is a need for more South African research on this phenomenon so we can understand it better and, in doing so, improve the process and experience of mainstreaming of autistic students for both the students, teachers* and families involved.

MOTIVATION

Research from first world countries has shown that mainstreaming of autistic students is a complex process with a number of factors that need to be taken into consideration. A recent model designed for inclusion of autistic students in the United States of America (ASDICM) - the Autism Spectrum Disorder Inclusion Collaboration Model – highlighted the importance of factors such as environmental and curricular modifications, different instructional methods, attitudinal and social support and co-ordinated team effort. Literature in the field suggest that other factors that need to be taken into consideration include dealing with behaviour that autistic children exhibit (Perko &

* The preferred usage in South African education is “learner(s)” and “educator(s)”. However, international literature refers to “student(s)” and “teacher(s)”. This study will make use of the international standard.

McLaughlin, 2002); socialization (Robertson, Chamberlain & Kasari, 2003) and teaching skills and support (Coffey & Obringer, 2004).

Opinion is divided as to how feasible it is to mainstream autistic students. As early as 1971 Kozoloff demonstrated that autistic students could succeed in typical classrooms on the condition that teachers, curricula and other components of the learning environment were prepared in specific ways. During the 1980s and 1990s a number of studies supported the inclusion of autistic children in regular educational settings (Egel & Gradel, 1988; Handleman, 1984; Handleman, 1991; Romanczyk, 1986). However, there were also studies that yielded less convincing data. Downing (1996) carried out a qualitative case study on inclusion of students with autism, intellectual impairments and behavioural challenges and found that by the end of the study the students were not performing on grade level and were having difficulty interacting socially and controlling their behaviour. Mesibov & Shea (1996) proposed that smaller, highly structured learning environments are still more suitable for some students with autism. In 2001, a study in Scotland (McGregor & Campbell, 2001) revealed that only a minority of mainstream teachers believed children with autism should be integrated where possible.

Bearing these findings in mind, it was felt that there was a gap in research for understanding South African teachers' perceptions of this phenomenon and an exploration of the factors that need to be taken into consideration to understand working with autistic children in mainstream schooling. These ponderings fuelled this study. On a more personal level, the researcher taught autistic students in the United Kingdom and has a special interest and knowledge in working with these children.

RESEARCH OBJECTIVES

The research objectives of this study are two-fold. First, following recommendations of White Paper 6, this study aims to examine the perceptions of two sample groups (Group 1 – specialised teachers with exposure to autistic students; Group 2 – mainstream teachers with limited exposure to autism) and whether they perceive that it is a feasible goal that all autistic students be mainstreamed in South African schools or only mildly autistic (Aspergers Syndrome) students or no autistic students at all that should be included in mainstream settings. The second part of the

research is an exploratory investigation of those factors that Groups 1 and 2 perceive to promote or hinder inclusion of autistic children in South African mainstream schools.

POSSIBLE VALUE OF THE STUDY

It is hoped that the findings will inform future research on the subject and help towards a formulation of a model for the inclusion of autistic students in the South African context. It is also hoped that the research will give teachers a voice regarding this change in South Africa so that we can better understand how they feel about the reform that is happening and make use of their skills and expertise in this area.

CHAPTER OVERVIEW

Chapter 1 introduces the reader to the study at hand, presenting the background, motivation, objectives and value of the research. Chapter 2 presents the relevant literature on autism and mainstreaming of these students. Chapter 3 outlines qualitative research as the selected system of inquiry and basis for assumptions in the present study. Within this chapter, the methodology of the study, including data collection, sampling of subjects and means of analysis, are also explained. Chapter 4 presents a comprehensive record of the study results, whilst Chapter 5 draws these results together in an integrated manner and interprets them within the context of relevant literature and the dominant method of inquiry. This chapter also provides an evaluation of the study and indications for future research on the subject.

CHAPTER 1

LITERATURE REVIEW: AUTISM AND INCLUSIVE EDUCATION

*AUTISM = "**A**lways **U**nique **T**otally **I**nteresting **S**ometimes **M**ysterious"*

"I find people confusing. This is for two main reasons. The first main reason is that people do a lot of talking without using any words. Siobhan says that if you raise one eyebrow it can mean lots of different things. It can mean I want to do sex with you and it can mean what you just said was very stupid… The second main reason is that people often talk using metaphors" (The curious incident of the dog in the night-time: Mark Haddon, p.19).

1.1.1 DEFINING AUTISM AND ASPERGERS SYNDROME

Autism is a diverse and complex developmental disorder which has been found throughout the world in all racial, ethnic and social groups (Perko & McLaughlin, 2002). In South Africa, it is estimated that there are approximately 270 000 autistic/ aspergers children and adults - 1 out of every 158 births. It is four times more common in boys than girls (Autism Society of South Africa).

Autistic Disorder was first identified by the American psychiatrist, Leo Kanner, in 1943 (Comer, 1992). Individuals with autism tend to be extremely unresponsive to others, show poor communication skills, have limited skill at imaginative play and often demonstrate self-stimulatory or self-injurious behaviours (Comer, 1992).

What follows is a verbatim reproduction of the DSM-IV criteria commonly used for diagnosing Autistic Disorder.

DSM –IV-TR Diagnostic Criteria for Autistic Disorder:

Autistic Spectrum Disorder is a triad impairment in SOCIALISATION, COMMUNICATION and IMAGINATION

There has to be a total of six (or more) items from (1), (2) and (3) with at least 2 from (1) and one each from (2) and (3)

(A) (1) qualitative impairment in SOCIAL INTERACTION, as manifested by at least two of the following:

- a) Marked impairment in the use of multiple non-verbal behaviours eg: eye to eye gaze, facial expression, body posture
- b) Failure to develop peer relationships appropriate to developmental ages
- c) Lack of spontaneous seeking to share enjoyment, interests or achievements with other people (eg; pointing out objects of interests)
- d) Lack of social or emotional reciprocity.

(2) Qualitative impairments in COMMUNICATION as manifested by at least one of the following:

- a) Delay in, or total lack of, the development of spoken language
- b) With adequate speech, impairment in ability to initiate or sustain speech with others
- c) Stereotyped and repetitive use of language or idiosyncratic language (echolalia, pronominal reversal, nonsense words)
- d) Lack of varied, spontaneous make-up play or social imitative play appropriate to developmental level

(3) Restricted REPETITIVE AND STEREOTYPED PATTERNS OF BEHAVIOUR, interests and activities as manifested by at least one of the following:

- a) Preoccupation with one or more stereotyped and restricted patterns of interest: abnormal in intensity or focus
- b) Inflexible adherence to specific, nonfunctional routines or rituals
- c) Stereotyped and repetitive motor mannerisms (hand flapping, whole body movements)
- d) Preoccupation with parts of objects

(B) Delays or abnormal functioning in at least one of the following areas with onset prior to 3 years: 1) social interaction 2) language as used in social communication 3) symbolic or imaginative play

(C) The disturbance not better accounted for by Rett's Disorder or Childhood Disintegrative Disorder. (Kaplan & Saddock, 2003, p. 1210)

Although people with autism display many common characteristics, a diagnosis of autism does not mean that all these characteristics will be present. Autistic individuals tend to be highly individualistic in how their symptoms present. A common characteristic is a difficulty with language. Some autistic children may never learn to speak while others may use speech inappropriately and not understand the social conventions of language or the more subtle metaphors and figurative usages. Another characteristic is that most autistic individuals find it hard to deal with change in their environment and need to be prepared for a change in routine. They often comfort themselves by following their own routine obsessively. Daniel Tammet, a 26 year old autistic savant from England, explains how he weighs his cereal every morning to make sure it's between 40 and 45 grams (Hardman, 2005). Some autistic children also show heightened sensitivity to many things, including light, texture and certain food stuff. Furthermore, individuals with autism often have deficits in social attachments, even with family members. They may not show emotion, make eye contact, respond to their name or engage in normal social play with others. When they do play they can become obsessed with parts of objects and attach to these objects more than they do to some humans. As a result, people often percieve autistic children to be "in their own world" (Perko and McLaughlin, 2002).

A year after Kanner's breakthrough paper on autism (see Comer, 1992), an Austrian psychiatrist, Hans Asperger, independently recognised a pattern of abnormal behaviour in a group of adolescents. This later became known as Aspergers Syndrome – a higher form of autism (Aarons and Gittens, 1992). Individuals with Aspergers Syndrome show a sustained impairment in social interaction and restricted repetitive patterns of behaviour, interests and activities. However, there are no clinically significant delays in language, cognitive, self-help skills or adaptive behaviour. Aspergers also tends to have a later onset than autism (American Psychiatric Association, 1994). What follows is a verbatim reproduction of the common criteria for diagnosing Asperger's Disorder:

DSM-IV-TR Diagnostic Criteria for Asperger's Disorder:

(A) qualitative impairment in SOCIAL INTERACTION, as manifested by at least two of the following:

- a) Marked impairment in the use of multiple non-verbal behaviours eg: eye to eye gaze, facial expression, body posture
- b) Failure to develop peer relationships appropriate to developmental ages
- c) Lack of spontaneous seeking to share enjoyment, interests or achievements with other people (eg; pointing out objects of interests)
- d) Lack of social or emotional reciprocity.

(B) Restricted REPETITIVE AND STEREOTYPED PATTERNS OF BEHAVIOUR, interests and activities as manifested by at least one of the following:

- a) Preoccupation with one or more stereotyped and restricted patterns of interest: abnormal in intensity or focus
- b) Inflexible adherence to specific, nonfunctional routines or rituals
- c) Stereotyped and repetitive motor mannerisms (hand flapping, whole body movements)
- d) Preoccupation with parts of objects

(C) The disturbance causes clinically significant impairment in social, occupational, or other important areas of functioning.

(D) There is no clinically significant general delay in language (eg: single words used by 2 years, phrases by 3 yrs).

(E) There is no clinically significant delay in cognitive development or in the development of age-appropriate self-help skills, adaptive behaviour (other than in social interaction) and curiosity about the environment in childhood.

(F) Criteria are not met for another specific pervasive developmental disorder or schizophrenia (Kaplan & Saddock, 2003, p. 1218).

Although the American Psychiatric Association (APA) still officially recognises Kanner's Autism and Aspergers Syndrome as two dichotomous disorders, there has been a recent move towards seeing both these disorders on a continuum referred to as Autism Spectrum Disorder (ASD) (Billstedt, 2000). This continuum takes into account the diversity and complexity of the many facets of autism. On the one extreme of the spectrum there are high-functioning individuals with relatively mild Aspergers-like symptoms while on the other extreme there are non-verbal individuals with severe autism and possible mental retardation. In between these two extremes are a variety of different presentations of autistic disorder (Scheuermann & Webber, 2002).

1.1.2 ETIOLOGY OF AUTISM

"Autism is almost certainly like cancer, many diseases with many distinct causes"
(TIMES, May 29, 2006, p.39).

There are many different theories proposed for the causes of autism. In the 1940's autism was blamed on emotionally absent child-rearing practices but this view has since been discredited. The current trend is more on identifying biological causes, including genetic predispositions, prenatal complications and neurological/structural abnormalities in the brain (Perko & McLaughlin, 2002).

Research has shown autism to have a significant genetic basis (Aarons & Gittens, 1992). Not only do relatives of autistic people stand a greater chance of being autistic, but relatives of autistic people have an unusually high percentage of speech disorders, learning difficulties and other minor cognitive disabilities (Aarons and Gittens, 1992). There are also a significantly increased amount of perinatal and immune complications occurring in infants later diagnosed with autism (Kaplan & Saddock, 2003).

On a structural level, there have been a number of findings of abnormal neurological/biological structures in autistic people. These include enlarged overall brain mass, deficits in the left temporal lobe, disturbed left-hemisphere functioning (which is implicated in verbal functioning) and neurotransmitter imbalances (Comer, 199; Kaplan & Saddock, 2003).

To understand how the autistic brain works, theorists have postulated that autism can be linked to "stimulus overselectivity" in which there is attention to only one dimension of a stimulus (Lovaas in Comer, 1992). Proponents believe that this explains why some autistic people show such remarkable recall and ability to concentrate on certain things so well – to the exclusion of everything else (See Comer, 1992). The development of the "savant syndrome" has also been linked to this theory. In order to understand the difficulty the autistic brain appears to have in deciphering social cues, theorists have also postulated that autistic people may have "mind blindness" – an inability to mind-read or put themselves in another's shoes. Supporters of the "theory of mind" hypothesis believe this is why autistic people find it so difficult to "read" faces or interpret how other people might react in different circumstances (See Comer, 1992).

1.1.3 TREATMENT FOR AUTISM

Although not capable of curing individuals of the core of autism itself, forms of anti-psychotic, anti-depressants and anti-anxiety medication can be used to control many of the common behavioural symptoms autistic people exhibit (Kaplan & Saddock, 2003).

In terms of psychotherapies, play therapy is difficult because of lack of symbolic play (for example the student pretending to be someone or something else or using one object to represent another) in autistic children. The predominant therapy of choice is behaviour therapy. This involves consistent rewards and shaping of socially appropriate behaviour. In more high-functioning autistic patients, insight work (such as establishing motives or reasons for behaviour patterns) can be attempted but pure psychodynamic approaches are generally not recommended (Comer, 1992).

1.2.1 EDUCATING AUTISTIC CHILDREN: AN INTRODUCTION

"Good teachers helped me achieve success. From an early age I was taught good manners and to behave at the dinner table. Children with autism need to have a structured day, and teachers who know how to be firm but gentle" (Dr. Temple Grandin, taken from Aut-Talk, newsletter from autism SA, April 2006, issue 9, p.8. Dr Grandin is assistant professor at Colorado State University and has gained world-wide recognition for her ability to explain her experience as an autistic adult and her humanitarian design for abattoirs).

Autism can involve severe communication and behaviour problems and this can have an impact on the kind of education that is most appropriate for autistic individuals. In fact, autism has been called the *ultimate learning disability* because of its associated language and social difficulties. Autistic children sometimes exhibit unique learning characteristics such as demotivation, unexpected responses to reinforcement and obsessive attention to irrelevant detail (Perko and McLaughlin, 2002). The majority of autistic children score within the moderately retarded range on IQ tests and generally have higher non-verbal than verbal IQs. However, these scores have to be interpreted with caution because these children are often hard to test (Schreibmann, 1988). Furthermore a well-known study showed that 9.8% of their autistic sample displayed extraordinary abilities known as "savants" (Rimland in Comer, 1992). This tends to be a pocket of brilliance out of proportion to the individual's general level of functioning and has been documented in all areas including unusual musical, mechanical, artistic or mathematical skills. Often family members are not aware of where or how their autistic children may have picked up this skill.

Autistic children were only viewed as teachable following Lovaas' demonstration (1963) that severely autistic children could learn through highly structured versions of the same methods used with typical children. Over the years, a number of teaching approaches have been developed. For the past twenty years, the dominant form of therapy has been the ABA approach (Applied Behavioural Analysis) derived from Skinner's behaviourism. The aim of this approach is to promote socially acceptable behavior and discourage inappropriate compulsions and behaviour through highly structured lessons and clear reinforcers (edible, sensory and social). In 1987 Lovaas published a study that showed that autistic children in the sample taught with this method had big jumps in IQ (Wallis, 2006). Many autistic teachers make use of the PECS (Picture Exchange Communication System) which helps non-verbal children to communicate through pictures. Dr Grandin (Assistant Professor at Colorado State University who is also autistic) was schooled with ABA therapy. She believes that this method kept her "brain connected to the world". However, autistic students sometimes struggle to generalise skills learnt in this context. Although ABA therapy remains the dominant therapy for most teachers, Greenspan's (in Wallis, 2006) offering of the DIR method (developmental, individual-difference, relationship-based) is also starting to be accepted. This method is based on early attachment theory and involves training teachers and parents to engage the emotions of the autistic child and understand the message behind the behaviour (Wallis, 2006).

In South Africa there are only a handful of special schools catering for autistic students and some remedial schools have established separate autistic units. Higher functioning autistic students have also been incorporated into general classes at a number of remedial schools while lower functioning autistic students are also taught at schools catering for severe developmental disorders. Parents who have the financial means sometimes pay a paraprofessional to support their autistic child in generalised remedial settings while other parents opt to "home school" their autistic children with trained ABA facilitators.

First world countries such as the United Kingdom, U.S.A, Canada and Australia have had the resources to mainstream autistic children for a longer period and consequently this is where most of the research on this movement hails from. A number of developing countries are now moving towards a more inclusive practice in the classroom, the school and the general education system. Countries where these developments are taking place include Uganda, Lesotho, Vietnam, Lao People's Democratic Republic, Jordan, Palestine, Morocco, Egypt, Yemen, Brazil, India and, of course, South Africa (Mittler, UNESCO). However, due to the fact that it is a relatively new phenomenon, research on inclusion in these countries is scant and the author was not able to locate any official research on the inclusion of autistic children in South African mainstream schools although future government initiatives around this theme will be discussed later in this chapter.

1.2.2 AUTISM AND INCLUSIVE EDUCATION

As early as 1971 Kozoloff demonstrated that autistic students could succeed in typical classrooms on the condition that teachers, curricula and other components of the learning environment were prepared in specific ways. During the 1980s and 1990s a number of studies supported the inclusion of autistic children in regular educational settings (Egel & Gradel, 1988; Handleman, 1984; Handleman, 1991; Romanczyk, 1986). However, there were also studies that yielded less convincing data. Downing (1996) conducted a qualitative case study on inclusion of students with autism, intellectual impairments and behavioural challenges and found that by the end of the study the students were not performing on grade level and were having difficulty interacting socially and controlling their behaviour. The number of individuals involved in the study indicating a negative view of inclusion increased from one to three. Madden and Slavin (1983) found that students with mild handicaps could benefit from placements in regular classrooms but that those students with

more serious learning problems were better suited to special classrooms. After reviewing the literature, Mesibov & Shea (1996) proposed that smaller, highly structured learning environments are still more suitable for some students with autism. In 2001, a study in Scotland (McGregor & Campbell, 2001) revealed that only a minority of mainstream teachers believed children with autism should be integrated where possible. However, specialist teachers and teachers with more experience in autism tended to display a more positive attitude. A study examining parental perceptions towards inclusion (Kasari, Freeman, Bauminger, Marvin, 1999) found that parents of children with autism endorsed part-time mainstreaming.

1.2.3 FACTORS AFFECTING INCLUSION OF AUTISTIC STUDENTS

1.2.3.1 AN OVERVIEW: THE AUTISM SPECTRUM DISORDER INCLUSION COLLABORATION MODEL (ASDICM)

The ASDICM is a recent model developed in United States of America to offer guidelines for the successful inclusion of children and youth with autism and related disabilities (Simpson; de Boer-Ott & Smith-Myles, 2003). The model is based on the assumptions that autistic students and non-disabled students benefit from interaction with each other, that staff endorse the concept of inclusion and are able to take on the responsibility of having autistic students, and that there is a spirit of collaboration in the implementation of this model.

ASDICM has five major components:

1) Environmental and curricular modification, general education classroom support and instructional methods
2) Attitudinal and social support
3) Coordinated team commitment
4) Recurrent evaluation of inclusion procedures
5) Home-school collaboration

These and other factors that emerged in the literature regarding inclusion of autistic students will now be reviewed and elaborated.

1.2.3.2 TEACHERS AND PARAPROFESSIONALS

Numerous studies emphasise the diverse roles that teachers play in order to facilitate the learning and inclusion of autistic students (Bennett, Rowe, DeLuca, 1996; Coffey & Obringer, 2004; Timmons & Breitenbach, 2004). Lerman, Vorndran, Addison & Kuhn (2004) evaluated a model program designed to prepare teachers to work more effectively with autistic students. Results of the study suggested that the model should produce successful outcomes for teachers and students alike. This is supported by Dybvik's research (2004) which showed that the first step towards implementing inclusion properly with autistic children is to train the teachers.

In terms of teaching style, participants in a recent study found that teachers that were firm but flexible would be most effective (Coffey & Obringer, 2004). Bennett, Rowe & De Luca (1996) also point out the importance of the teacher getting to know the autistic student without stereotyping the child because of his/her disability. A recent study (Robertson, Chamberlain & Kasari, 2003) examined the relationship between general education teachers and included students with autism. The results were encouraging in that teachers reported generally positive relationships with included students with autism.

The motivation and attitude of the teacher is another factor to be examined. The case study research "Where there's a will, there's a way" (Schmidt, 1998) concluded that the teacher's commitment to meeting her student's needs was one of the most important factors in helping a six-year old autistic boy become a valued member of a mainstream class (Schmidt, 1998). Nevertheless, if teachers have positive attitudes towards the concept of inclusion, it does not mean that they will be confident; a recent study found American teachers considering themselves to be less than fully capable of serving the needs of autistic students (Spears, Tollefson & Simpson, 2001).

A significant study by McGregor & Campbell (2001) investigated the link between knowledge and training and a more positive attitude in teachers towards integration of autistic children into mainstream schools. Importantly, the more experience and knowledge the teachers had the more confident they were that the process could be successful. Thus, both specialist teachers and mainstream teachers who had experience in autism showed more confidence in the process of integrating autistic children. However, the majority of the mainstream respondents were not

confident that it would work. This study highlights the power that knowledge and practical experience has in changing attitudes and motivation. Reber's study (1995) further illustrated this point when the student teachers who participated in a practicum expressed more positive attitudes towards inclusion in general than those who completed a self-study programe.

Many autistic students have paraprofessionals (one-on-one aides) that provide support. According to Robertson, Chamberlain and Kasari (2003), the role of the paraprofessional is to help keep the student focused on his/her task, to provide any modifications to the environment necessary, to help increase their understanding, minimize social and/or academic frustration, reduce behavioural problems and help the student work in small groups with other students. The presence of a paraprofessional does not appear to affect the quality of the teacher-student relationship (Robertson, Chamberlain & Kasari, 2003).

1.2.3.3 CURRICULUM AND ENVIRONMENT MODIFICATION

Teachers have the vital job of compiling a curriculum that meets the needs of the autistic student. According to Dawson and Osterling (1997), the curriculum content for autistic students should address the ability to attend to elements of the environment, the skill of imitating others, the use and comprehension of language, appropriate play with toys, and social interaction. Furthermore, these skills should be taught in highly supportive teaching environments that are predictable and routinized and employ generalisation strategies. Mesibov and Shea (1996) point out that students with autism require specialised instructional techniques. Due to their extreme sensory sensitivity, they may find the noise and visual stimuli in regular classrooms over-stimulating. Teachers need to structure environmental conditions so that autistic children can attend to, and comprehend, instruction. This may include making use of isolated and visually bare work spaces, physical barriers that separate work and play areas, small groups of individual instruction, and a reliance on visual and gestural communication. Furthermore, autistic children need to be motivated and reinforced through specific techniques (Perko & McLaughlin, 2002). Mesibov and Shea (1996) also emphasise the importance of fostering independence in autistic students. To this end, teachers need to design and organise environments so that students look for and understand routines, visual cues and organisational strategies. In sum, it is vital that autistic students have individualised programs that meet their needs (Schreibman, 1988). Considering all these factors, Mesibov and

Shea (1996) are sceptical of the efficacy of the single classroom model to meet the individualised requisites of all students with autism no matter how innovative teachers may be in modifying it.

1.2.3.4 SOCIAL FACTORS

The impairment of social interactions is a defining feature of autism. Autistic students placed in mainstream schools are likely to encounter difficulties interacting with their peers. Nonetheless, proponents for inclusion of autistic students cite behavioural modelling of normally developing peers as a beneficial factor. Programs such as "circle of friends" (Whitaker, Barratt, Joy, Potter & Thomas, 1998) harness the dynamics of peer modelling and allow the autistic child to learn from more socially adept peers. Strain (1983; 1984) reported that autistic students generalised learned social interaction skills more effectively in integrated, rather than segregated, environments. There remains an element of concern regarding the level of acceptance included autistic children receive from their normally-developing peers. Robertson, Chamberlain and Kasari (2003) found no significant difference between included students with autism and the rest of their classmates in terms of social inclusion (as perceived by the classmates). Ochs, Kremer-Sadlik, Solomon, & Gainer Sirota (2001) found that peers who were aware that the included child was diagnosed as autistic tended to be more supportive. However, they also noted negative inclusion reactions from some peers and the fact that higher functioning autistic students can still be cognizant of these negative reactions despite difficulties in interpreting others' intentions and feelings.

1.2.3.5 BEHAVIOURAL FACTORS

Autistic students can exhibit challenging behaviours in the school environment such as spitting, biting, hitting, throwing objects and self-harming. Challenging behaviours can be detrimental to the learning process and teachers may try a variety of procedures to deal with these (Perko & McLaughlin, 2002). Traditionally approaches have focused on eliminating or reducing problem behaviour through the use of punishment techniques (e.g., time-out). Drasgow (1997) points out that this approach may reduce problem behaviour but does not result in the student learning any alternative acceptable forms of behaviour. Renzaglia, Karvonen, Drasgow & Stoxen (2003) propose an alternative in the form of positive behaviour support. This approach emphasises functional skills development and the importance of constructing environments that make problem

behaviour ineffective. Strategies are developed that meet the unique life skills and circumstances of the student and the student is given the chance to express him or herself through socially desirable means (handing someone a picture, vocalising) instead of through disruptive means. The authors emphasise that problem behaviour usually serves a purpose for the person displaying it and occurs in a dynamic and reciprocal social context. Intervention strategies for addressing problem behaviour should therefore include addressing the function of the behaviour (as determined by a functional assessment), addressing all problem behaviours, be implemented in different settings, consist of multiple intervention strategies and match the skills, values and resources of the person implementing it (Carr, Levin, McConnachie, Carlson, Kemp & Smith, 1994; O'Neill, Homer, Albin, Sprague, Storey & Newton, 1997). It is important that teachers deal with problem behaviour in an effective manner as Robertson, Chamberlain and Kasari (2003) found that a higher rating of behaviour problems in autistic students did lessen the quality of the teacher/ student relationship. Conversely, this study also shows that if a teacher cultivates a positive relationship with her autistic students, the students are likely to display better behaviour.

1.2.3.6 MULTICULTURAL FACTORS

Wilder, Dyches, Obiakor and Algozzine (2004) note that when dealing with autistic students from different cultures, teachers may interpret some behaviour symptomatically rather than culturally. It is recommended that teachers have a cultural framework for dealing with these children and be aware of family norms and expectations. In designing a curriculum for these students, teachers should include elements of different cultural groups, identify cognitive styles influenced by the dominant culture, cater for the student's first language and make use of materials that are culturally sensitive.

1.2.3.7 SUPPORT FROM FAMILY, OTHER PROFESSIONALS AND COMMUNITY

Research also points to the importance of working in a collaborative model with a whole-school approach and open communication and support for families and communities (Coffey & Obringer, 2004; Bennet & Rowe, 1996; Simpson, de Boer-ott & Smith-Myles, 2003)

This section of the study has defined autism and those factors that need to be taken into account when considering including autistic students in mainstream settings. The next section will now look at the White Paper 6 and how this will impact the schooling of autistic children.

1.3 SOUTH AFRICAN EDUCATION

1.3.1 WHITE PAPER 6: THE POLICY OF INCLUSION

"We all need to know that the place of our brothers and sisters or sons and daughters with disabilities should not be in the isolated dark backrooms. They belong with their peers, in schools, on the playgrounds, where they can become part of the local community and cultural life like all other children and be treated with respect and dignity" (Mrs Happy Joyce Mashamba, MEC for Education, Limpopo Province - Address delivered on the occasion of the launch of the Education White Paper 6: Building and Inclusive Education and Training System, 28 September, 2004).

In 1996, the National Commission on Special Needs in Education and Training was established with the aim of making recommendations on aspects of special needs and support services in education in South Africa. The findings of this commission were subsequently published in the White paper 6 in 2001.

The commission concluded that only a small percentage of students with disabilities have been looked after by specialised education and support in the South African education system and that a large amount of this support was racially disproportionate. As a result most students with disability have either fallen outside of the system or been "mainstreamed by default". The commission thus felt that the South African curriculum and education system as a whole has generally failed to respond to the diverse needs of the student population resulting in far too many drop-outs, push-outs and failures (White Paper 6, 2001, p.5).

On the basis of these findings, recommendations were made to develop an inclusive education system in South Africa. The main aim of the policy of inclusion is that it will lead to the incorporation of approximately 280 000 students (with disabilities or learning barriers) who are currently unschooled and out of the system. The policy also aims to establish equity in the accessibility of resources and support services for all South Africans.

Below is a verbatim reproduction of the further characteristics of inclusive education and training contained in White Paper 6.

- Acknowledging that all children and youth can learn and that all children and youth need support
- Accepting and respecting the fact that students are different in some way and have different learning needs which are equally valued and an ordinary part of our human experience
- Enabling education structures, systems and learning methodologies to meet the needs of all students
- Acknowledging and respecting differences in students, whether due to age, gender, ethnicity, language, class, disability or HIV status
- Learning is broader than formal schooling and also occurs in the home and community, and within formal and informal structures
- An emphasis on changing attitudes, behaviour, teaching methodologies, curricula and the environment to meet the needs of all students
- To maximize the participation of all students in the culture and the curricula of educational institutions and to uncover and minimize barriers to learning
- Empower students by developing their individual strengths and enabling them to participate critically in the process of learning

As part of the drive for inclusive education, the commission drafted a national strategy on screening, identification, assessment and support.

Inclusive education marks a change in mindset in the education system. It is based on the principle that ‘learning barriers’ arise from the education system rather than the student. In other words, the onus is on the education system to accommodate the range of learning needs presented. In the past, there has been a focus on the student “fitting” into the system.

Taken from the Draft National Strategy on Screening, Identification, Assessment and Support (2005; p.21-26), below is a verbatim reproduction of the core elements of the strategy to reform this system:

- **Redefining support**: Support is no longer seen as focusing on 'deficits' that have been 'diagnosed' but rather as all activities which increase the capacity of a school to respond to diversity, such as schools reviewing their culture, policies and practices as well as the learning and teaching process.
- **Supporting Curriculum Access:** Modification of curricula is key in this process. Aspects of curricula that need to be addressed include: content; language and medium of teaching; management and organisation of classrooms; learning style and pace; time frames for completion of curricula; materials and equipment available; assessment methods and techniques**.**
- **Systematically moving away from category of disability to level of intensity of support needed:** The range of support needed for each student differs in terms of his/her specific needs as well as his/her context. The following areas need to evaluated when determining the level of intensity of support needed:
    1. *Learning factors: Communication* (Language proficiency; Expressive language, Receptive language); *Cognitive* (Task behaviour; Processing skills; Language Processing; Number skills)
    2. *Behaviour factors:* Social conventions, socio-emotional
    3. *Physical factors:* Motor mobility; sensory; self care (activities for daily living, safety, transport); medical conditions, nutritional needs
    4. *Socio-economic factors:* Family dynamics; transport needs; general socio-economic factors
    5. *Factors in the school and learning environment:* Readiness for inclusion – human rights and school ethos; policies; staffing and staff development; physical factors

A précis of the five levels to determine the intensity of support needed at the school:

Level 1 is full participation of the student with no adapatation required. The levels progress up to 5 in which student participation is extremely limited, and the student requires specialised learning programmes as well as continuous adaptation.

- **Considering contextual barriers:** This refers to the systemic barriers that need to be addressed in order for a school to make the curriculum accessible for all its students. Some of the indicators for determining the level of support needed by a school include socio-economic conditions of the majority of the students, attitudes to difference, culture of school regarding certain stereotypes, flexibility of curriculum/learning programmes, accessibility and safety of the built environment
- **District-based support and programme support:** The task of the District Based Support Team would be to analyse and verify the content and procedures followed at the institutional level in order to plan and advise on the most appropriate support programme to be provided to the school and to the respective student.
- **De-linking support from site:** Once the nature and intensity of support needs have been determined, the main objective would be to design an appropriate support programme with time frames and expected outcomes. Decision making will be around determining what kind of support the student is eligible to receive and where this support programme can be best provided. In view of the broader definition of support, the local ordinary school should always remain the first option.

1.3.2 IMPLEMENTATION AND PRACTICAL PROBLEMS WITH WHITE PAPER 6 ON INCLUSIVE EDUCATION

"No two countries will travel the same path in the process of evolution of its institutions" (Mittler, 2003).

Mittler (2003) points out that each country embracing the policy of inclusion has to work out its own starting point for the inclusion process as each is so unique in its history and culture, as well as in relation to the nature and quality of its educational provision for its children. The Department of Education has identified a number of barriers to learning in the South African context. These include

poverty and under-development; lack of access to basic services; factors putting children at risk (physical, social, emotional and sexual abuse); HIV/AIDS; political violence; inaccessible and unsafe physical environments; absence of support services; lack of parental recognition of disability; domestic violence; substance abuse and teenage pregnancy. In 2003, at one of the project sites (Kwazulu Natal Province), 222 of the 701 schools were without water; 384 without power; 400 without telephones; 124 out of 184 secondary schools did not have a library (Mittler, 2003). With these kinds of barriers to contend with, it would seem that the funds that the government has allocated for its implementation may be less than adequate.

Nevertheless, the inclusive education programme is beginning to be implemented, despite limited resources, in South Africa. In 2003, eight schools and two Early Child Care Centres in Gauteng were involved in piloting the programme and opening their doors to all local children. The schools were well supported by the parent body and local community (Mittler, 2003).

The Minister of Education, Mr Kader Asmal, acknowledged in the White Paper 6 (2001) that the success of the new inclusive system lies with the teachers and managers. Teachers are the primary resource for achieving a successful inclusive system. Therefore the Department of Education is making provision for teachers to gain access to pre-service and in-service education and training. According to the White Paper 6, district support teams and school-based support teams will assist teachers in making adjustments to the content of their lessons, reorganise their classrooms, alter their method and pace of teaching and change their assessment methods. In Gauteng, there is currently a drive towards district support teams facilitating training of teachers on inclusive education in a variety of areas, particularly more rural and poorer districts. The training is focusing on screening, identification, assessment and support of students presenting with difficulties.

Research (Beard, 1990) on the practical implementation of White Paper 6 and teachers' response to it shows that there are loopholes in the system. In 1990, Beard stated that stress felt by teachers and school principals can result from excessive accountability, lack of managerial support and excessive role expectation from the Department of Education.

A recent study (Engelbrecht; Oswald; Swart & Eloff, 2003) investigating teacher stressors relating to the inclusion of students with intellectual disabilities in fifty-five mainstream classes in two South African provinces yielded five main stressors. Teachers were stressed by the administrative issues, support they received, the behaviour of the student, belief in their own competence and lack of interaction with the student's parents.

Scott (2005), who investigated teacher stress in the context of outcomes education and the policy of inclusion, concluded that the type of support identified as necessary to help teachers deal with the challenge of inclusive education has not been adequate. According to her study, teachers felt angry at the way in which the new curriculum training was conducted, how they were made to feel and because they were promised ongoing classroom support and this has not been forthcoming. They feel they are not given solutions. They were also experiencing significant occupational stress and did not have the motivation or energy to deal with the new roles required of them.

1.3.3 IMPLICATIONS AND DEVELOPMENTS OF INCLUSION POLICY FOR AUTISIC STUDENTS

Although it is probable that there are a percentage of undiagnosed children with varying degrees of autism that have been mainstreamed by default in rural and poorer communities, to date the Gauteng Department of Education does not have any official information on mainstream schools that have included autistic students in their system (Gauteng Department of Education records, July 2006). The Transvaal Memorial Institute (Johannesburg) is in the process of setting up a pilot programme of including autistic children in a mainstream school. This will hopefully lead to what appears to be the first official research on the implementation of the inclusion policy with autistic students in the South African context.

As showed earlier in this review, Autism Spectrum Disorder is a complex disorder with varying presentations of cognitive, social and behavioural characteristics. Central to working successfully with these students is an understanding and knowledge of their condition. Currently, the training of teachers on inclusion policy (following recommendations of White Paper 6) tends to follow a generic format without supplying specific training on the different conditions, presentations and problems the teacher may realistically have to deal with in the classroom. As Scott (2005) concludes in her

research: “Adequate provision to ensure success of an inclusive system has been made on paper, but this is not true at school and classroom level with major implications for teachers and students”(p.88). Based on the extant research, the researcher hypothesises that teachers’ belief in their own competence to work with autistic students as well as the amount of motivation, time, resources and quality of training they have available to them will be some of the determining factors affecting the outcome of mainstreaming autistic students.

1.4 SUMMARY

This chapter has defined Autistic Spectrum Disorder emphasising that it is a complex, pervasive developmental disorder with multiple implications for social, cognitive and emotional functioning. Prior to the 1960s autistic children were considered unteachable and this chapter outlined the development of successful teaching methods for autism as well as the debate over the kind of teaching environment best suited for autistic students. Considering inclusion of autistic students into mainstream settings the following factors were elaborated: the role of teachers, paraprofessionals, curriculum, environment modification, social, behavourial, multi-cultural, familial and community support. Finally, the core characteristics of White Paper 6 were outlined as well as the implications of the policy of inclusion for autistic students, and teachers who will be working with these children, in the South African context.

The next chapter provides an overview of the present study’s dominant mode of inquiry and the accompanying methodology, including data collection, sampling of subjects and data analysis.

CHAPTER 2

RESEARCH DESIGN AND METHODOLOGY

2.1 RESEARCH QUESTIONS

The aim of this study is to explore the perspectives of both mainstream teachers as well as remedial teachers who have taught autistic students to establish those factors that they perceive to promote or hinder the inclusion of autistic students in mainstream school settings.

There are two primary questions that the study hopes to address. They are:

1. Do mainstream teachers and remedial teachers who have taught autistic students perceive that it is a feasible goal that all autistic students be mainstreamed in South African schools or only mildly autistic (aspergers syndrome) students or no autistic students at all?
2. What factors do mainstream teachers and remedial teachers who have taught autistic students perceive to promote or hinder inclusion of autistic children in South African mainstream school settings?

2.2 RESEARCH DESIGN

Mouton and Muller (1998) state that researchers can distinguish between at least three methodological approaches or paradigms in empirical social inquiry: - the quantitative, qualitative and participatory / action approaches. They posit that the "differences between these paradigms are not merely at the level of method and technique, but involve fundamental differences about the aim of social research, what constitutes valid knowledge, which features of the social world can be investigated..." (Mouton and Muller, 1998, pp. 2-3).

This study falls within the qualitative research paradigm. Mouton and Marais (1990, pp. 155-156) present qualitative research as those approaches in which "the procedures are not strictly formalized, while the scope is more likely to be undefined, and a more philosophical mode of operation is adopted".

Researchers who favor a qualitative research design aim to gain a holistic view of a phenomenon under study and explicate the ways people in certain settings come to understand and take action in their day-to-day lives (Miles and Huberman, 1994).

In this study, the researcher was personally involved in the research and used her understanding and experience to interpret the data. The context of working in South African schools and the subtleties and nuances of the research design methods were also taken into account when analysing the data (Mouton and Marais, 1990). From this perspective, the focus was on a select group of people's experiences and the rich, multiple meanings that can be deduced from interaction with these people (Henning, 2004).

Denzin (1978) suggested the use of multiple forms of data, methods, researchers and/or theories to enhance the validity of a research project. The researcher aimed to link the experiences of the interviewees with previous research and theory to add clarification and depth to this research.

2.3 PROCEDURE

A letter of approval was received from the Department of Education which granted permission for the research to be conducted in the schools used in the study (Appendix A). The principals of the various schools were also notified of the study. Each teacher was contacted telephonically and the purposes and procedures of the study were explained in full. After obtaining consent from each teacher (Appendix C), a suitable time and place was agreed upon for the questionnaire (Appendix D) to be filled out and the interview (Appendix E) to be conducted. The majority of the teachers were interviewed after school during Term 2 with the rest being interviewed after school in Term 3 or 4 where it was not disruptive to their teaching and curriculum duties. Prior to the commencement of the interviews, written consent was given by all the interviewees for participation in the interview as well as the tape recording of the sessions. Their anonymity and confidentiality was also guaranteed.

It was ensured that the teachers filled in the questionnaires in a peaceful setting and were able to clarify questions they might have had about any parts of the document. The interviews were tape recorded so that the researcher would be able to transcribe the sessions fully as well as being able to take note of non-verbal behaviour.
The results of the study will be made available to all who participated.

2.4 SAMPLING AND SELECTION OF SUBJECTS

Qualitative researchers usually aim for small samples of people, nested in their context and studied in-depth. As a result, qualitative samples tend to be *purposive*, rather than random. Miles & Huberman (1994) list a range of sampling strategies including *maximum variation* sampling (looking for outlier cases to see whether main patterns still hold), *theory based* sampling (finding examples of a theoretical construct and elaborating and examining it), *extreme case* sampling (learning from highly unusual manifestations of the phenomenon of interest) and *typical case* sampling (highlighting what is normal or average).

In this study two groups of pre-primary and primary school teachers were selected. The first group of six teachers (Group 1) all had a minimum of one year experience in teaching autistic children in the classroom first-hand. The second group of five teachers (Group 2) worked in mainstream classrooms and had limited exposure to formal training on autism or special needs. Although not intended, all participants were female. Other than this characteristic, the sample allowed for a diversity of variables including age of participant; level of qualification; type and length of years teaching, role at school and type of teaching environment participants were used to (size of classes; government/private/special unit settings). The sample included one head principal (previously a special needs teacher) and ten pre-primary and primary school teachers.

2.5 DATA COLLECTION

The data for this research was collected using questionnaires (Appendix D) and semi-structured interviews (Appendix E).

2.5.1 Questionnaires

To the best of the researcher's knowledge, a South African questionnaire has not yet been devised to explore teacher's perceptions of inclusion of autistic students into mainstream schooling. Therefore, drawing on previous research and experience, the researcher devised two comprehensive self-response questionnaires for each of the sample groups. Both open ended and close ended questions

were used to get a variety of responses. According to McNiff (1988), questionnaires can be used in order to get specific information and feedback and to compare participants on certain set criteria, as well as in an exploratory fashion to get an idea of trends that may emerge. These questionnaires were devised with both these aims in mind.

2.5.2 Semi-structured interviews

The researcher conducted semi-structured interviews (See Appendix E) with all the participants. This meant that the interviews were guided by a common interview schedule but there was a freedom to pursue interesting avenues that emerged. The advantages of the semi-structured interview are that it facilitates empathy/ rapport between researcher and participant, allows a greater flexibility of coverage of topics and exploration of novel areas and has the potential to produce rich data (Smith, 1995).

The researcher aimed to construct questions for the interview schedule that were neutral, easily understood and "open" to encourage participants to relate and explain their experiences fully (Smith, 1995). All the interviews were audiotaped in order to capture the nuances of the conversation and allow for a more detailed and accurate account of the interaction (McNiff, 1988).

The researcher attempted to elimate bias to the interviews by posing open-ended questions in a set order and limiting the amount of prompting and directive questioning she made use of. However, one cannot always control for other variables such as the kind of rapport that develops and how open participants choose to be in their answering of the questions.

2.6 ANALYIS OF DATA

The data in this study was analysed using thematic content analysis. Content analysis is when a form of communication – oral, written or other – is coded or classified according to a conceptual framework (Babbie & Mouton, 2001). Thematic content analysis is also sometimes known as conceptual analysis (Babbie & Mouton, 2001). According to Palmquist (1993 in Babbie & Mouton, 2001), the process of conceptual analysis comprises a number of related steps. The researcher needs to decide on a level of analysis and how many concepts to code for. Thereafter one decides whether to code for the existence or frequency of a concept and how to distinguish

amongst concepts. It is also important to develop rules for the coding of texts and decide what to do with irrelevant information. In the study, the researcher used Palmquist's approach as a guideline when analysing the data.

According to Boyatzis (1998), when developing codes for understanding the data there are a number of approaches that can be used including theory-driven codes, prior-research-driven codes and data-driven codes. Theory driven codes in this research included the following: teaching style; classroom environment; curriculum modification; teacher's ability to deal with behavioural problems; social integration of autistic children with peers and provision of paraprofessional to help support the teacher. The open-ended questions further yielded a number of data-driven codes for analysis.

The researcher made use of her own judgement and experience when decoding the data. Charmaz (1990 in O'Callaghan, J., 1998) points out that each researcher has a perspective from which he/she actively builds analysis. This was influenced by the researcher's own *personal* and *professional* experience in teaching autistic children for two years as well as the personal process of becoming more sensitised to the *technical* literature on the topic and personal experience of working with the participants and *analysing* the data (Strauss and Corbin, 1990).

2.7 POTENTIAL LIMITATIONS OF THE RESEARCH

Although the study did allow for a certain amount of variability, particular characteristics and the modest size of the sample make it unclear to what extent the perceptions of the participants of this study may be generalised to other teachers of different age, gender (male), race, culture or religion. Thus the hypotheses and conclusions must be interpreted within this (possibly limited) context.

In this study, the researcher acted as a human instrument and participant observer in the process and exerted an influence on the direction the research took during the interviews and subsequent analysis of the data. The researcher is a white female from a previously advantaged group and may also have been interpreted in a number of roles other than an "objective researcher". During the interviews, it was easier to build rapport with some interviewees when compared to others and this would have influenced the results that emerged.

2.8 ETHICAL CONSIDERATIONS

The participants in the research were given assurance that their identities and their respective schools would remain anonymous and that the recordings of the interviews would be destroyed once the study was completed. Furthermore, the participants were given opportunity to review the findings of the study.

2.9 SUMMARY

This chapter gave an overview of the study's dominant mode of inquiry, qualitative research design, and the accompanying methodology including data collection, sampling of subjects and analysis of data.

The results of the study will now be presented in the next chapter.

CHAPTER THREE

RESULTS

3.1 INTRODUCTION

This chapter introduces the study participants and presents the results from the questionnaires and semi-structured interviews. The section is concluded with an integration of the research findings into a definitive list of integrated themes to be discussed in chapter four.

3.2 PARTICIPANT INFORMATION

Table 1 – Biographical information of Group 1: Participants that teach special needs autistic children

Participant	Age Group	Home language	School role	Type of primary school	Years teaching autistic students
Participant A	**20-25**	**English**	**Foundation Teacher**	**Private Remedial**	**1 yr 2 mnths**
Participant B	**45-55**	**English**	**School Principal**	**Private Autistic**	**4 yrs 9 mnths autism (30 yrs – special needs)**
Participant C	**45-55**	**English**	**Foundation Teacher**	**Private Remedial**	**12 yrs 6 mnths**
Participant D	**45-55**	**English**	**Foundation Teacher**	**Private Autistic**	**4 yrs**
Participant E	**45-55**	**Afrikaans/ English**	**Foundation Teacher**	**Government Autistic**	**18 years**
Participant F	**45-55**	**Afrikaans/ English**	**Senior Primary**	**Government Autistic**	**4 years**

Table 1 gives an overview of the biographical information of the participants who have taught autistic children. All 6 participants were female, the youngest being 25 years of age and the oldest 55. The average age was 47 years. Four of the participants were English speaking whilst two were bilingual in Afrikaans and English. One of the participants held the role of the school principal of an autistic school, while four of the participants taught foundation phase to autistic students and the remaining teacher taught senior primary autistic students. Two of the participants taught at private autistic schools, two taught at a government autistic school and the remaining two taught autistic units in private remedial schools. The minimum term of experience in teaching autistic students was approximately one year two months with the longest term of experience being 18 years. The average length of experience was 7 years 5 months.

Table 2 – Biographical information of Group 2: participants that teach mainstream children

Participant	**Age Group**	**Home Lang**	**School role**	**Type: Primary School**	**Years teaching**	**Knowledge of Autism (1- little 5 – very good)**
Participant G	**55-65**	**English**	**Pre-primary Teacher**	**Private**	**16**	**2**
Participant H	**35-45**	**English/ Afrikaans**	**Foundation teacher**	**Government**	**11**	**2**
Participant I	**55-65**	**English**	**Junior Primary**	**Private**	**28**	**2**
Participant J	**35-45**	**English/ S.Sotho**	**Senior Primary**	**Government**	**11**	**4**
Participant K	**20-25**	**English**	**Pre-primary Teacher**	**Private**	**3**	**2**

Table 2 gives an overview of the biographical information of the participants who teach mainstream students and have limited knowledge and exposure to autism. All 5 participants were female, the youngest being 25 years of age and the oldest 56. The average age was 42 years. Three of the participants were English speaking whilst two were bilingual in Afrikaans/English and South Sotho/English respectively. Two of the participants taught pre-primary, one of the participants taught

foundation, another taught junior primary and the remaining participant taught senior primary. Three of the participants taught at private schools whilst two taught at a government school in the Gauteng east. The minimum term of experience in teaching mainstream students was approximately three years with the longest term of experience being 28 years. The average length of experience was 13 years 8 months. Four out of five of the participants rated their knowledge of autism as a two out of five (little knowledge of autistic students) with one participant rating her knowledge as four out of five (good knowledge of autistic students).

3.3 RESULTS FROM QUESTIONNAIRE: SPECIAL NEEDS TEACHERS (GROUP 1)

3.3.1 Should autistic students be mainstreamed?

All six participants were in agreement that only *mildly autistic students* (eg: those with Aspergers Syndrome) should be included into mainstream schools.

3.3.2 Ranking of factors affecting successful integration

The participants ranked the following factors according to their order of importance in affecting successful integration of autistic students (1- most important, 6 – least important).

Table 3 – Tabulation of factors affecting successful integration (ranked according to importance) – Group 1

Factors	Participant						Mean	Ranking
	A	B	C	D	E	F		
Teaching style	4	4	2	4	4	4	3.6	4
Classroom environment	3	5	4	1	2	2	2.8	2
Curriculum modification	2	3	3	6	3	3	3.3	3
Dealing with behavioural problems	5	1	5	3	1	1	2.6	1
Social integration	6	6	6	5	6	6	5.8	5
Provision of paraprofessional	1	2	1	2	5	5	2.6	1

***1- most important, *6- least important**

As presented in Table 3, overall the participants felt that the two most important factors that would affect successful integration of autistic students into mainstream would be the teacher's ability to deal with behavioural problems and the provision of a paraprofessional to support the teacher. Participant A and C were exceptions in that they felt dealing with behavioural problems would be less important (ranked 5) but both these participants previously worked at the same private remedial school where they had more exposure to behaviour modification and therefore did not see it as a particularly difficult area to manage. Participants E and F were also exceptions in that they felt the provison of a paraprofessional was less important (ranked 5) but they both work at a government autistic school where there are more paraprofessionals available than at the average remedial setting and this made it hard for them not to envisage having this help automatically available. The participants ranked the classroom environment as the second most important factor and appropriate curriculum modification as the third. The teaching style was ranked as the fourth most important factor to be taken into consideration whilst the participants were in agreement that ensuring the social integration of autistic students with peers was the least important factor to be considered.

3.3.3 Ranking of environmental factors

The participants were also asked to rank the following four factors on a likert scale (from very important to unimportant) in order to modify the environment to suit the needs of the autistic child.

Table 4 – Tabulation of factors to modify the environment (ranked according to importance) – Group 1

Factors	Participants						Mean	Ranking
	A	B	C	D	E	F		
Limiting noise & stimuli	2	2	1	2	1	1	1.5	3
Bare surfaces & phyical barriers	2	2	2	2	1	1	1.6	4
Small groups	1	1	1	2	1	1	1.16	2
PECS & sign language	1	1	1	1	1	1	1	1

*1- most important, *4- least important

The participants were in agreement that the most important factor in modifying an environment to suit the needs of an autistic child was the use of visual and gestural communication such as Picture Exchange Communication System (PECS), symbols and sign language. Using small groups for instruction was ranked second. Limiting noise and visual stimuli was ranked third whilst making use of visually bare work spaces and physical barriers to separate the different areas was ranked fourth. Nevertheless it should be noted that the mode (most occurring number) showed that even the lowest ranked factor was still considered important by the participants. None of the factors were considered unimportant.

3.3.4. Ranking of elements in modifying curriculum

The participants were further asked to rank the following five factors on a likert scale (from very important to unimportant) in order to modify the curriculum to suit the needs of the autistic child.

Table 5 – Tabulation of factors to modify the curriculum (ranked according to importance) – Group 1

Factors	Participant						Mean	Ranking
	A	B	C	D	E	F		
Attending to social environment	2	2	2	1	1	1	1.5	3
Imitation of Others	1	3	2	1	1	1	1.5	3
Language Skills	1	1	1	1	1	1	1	1
Play with toys/objects	2	2	2	1	1	1	1.5	3
Social interaction	3	1	1	1	1	1	1.3	2

*1- most important, *4- least important

All the participants ranked the use and comprehension of language as the most important element to be included in a modified curriculum for the autistic student. An improvement in social interaction skills was ranked as second in importance. Learning to attend to the environment, imitating others and learning appropriate play or usage of objects were all ranked equal in third place. Once again none of the factors were considered unimportant by the participants.

3.4 RESULTS FROM QUESTIONNAIRE – MAINSTREAM TEACHERS (GROUP 2)

3.4.1 Should autistic students be mainstreamed?

Four out of five of the participants were in agreement that only *mildly autistic students* (e.g., those with Aspergers Syndrome) should be included into mainstream schools. Participant H felt that no autistic children should be mainstreamed.

3.4.2. Ranking of factors affecting successful integration

The participants ranked the following factors according to the degree of ease or difficulty it would take to implement each one based on their own experience of mainstream teaching (1- easiest, 6 – most difficult).

Table 6 – Tabulation of factors affecting successful integration (ranked according to degree of ease or difficulty in implementation) – Group 2

Factors	Participant					Mean	Ranking
	G	H	I	J	K		
Teaching style	2	3	5	2	2	2.8	2
Classroom environment	3	4	6	4	5	4.4	4
Curriculum modification	4	1	4	5	1	3	3
Dealing with behavioural problems	5	5	1	6	6	5.2	5
Social integration	6	6	3	3	4	4.4	4
Provision of paraprofessional	1	2	2	1	3	1.8	1

***1- easiest, * 6- most difficult**

As presented in Table 6, overall the participants felt that the easiest factor to deal with when including autistic students into mainstream would be working with a paraprofessional in the classroom. The second easiest factor would be employing a firm but flexible teaching style. Modifying the curriculum appropriately to suit an autistic child was considered the third easiest factor. The participants felt that helping the autistic child integrate socially as well as rearranging the classroom appropriately were more difficult and these factors were tied fourth. Finally, coping with behavioural problems that autistic students may exhibit was ranked as the most difficult factor to deal with.

3.4.3.Ranking of environmental factors

The participants were also asked to rank the following four factors on a likert scale (from very simple to very difficult) in order to modify their mainstream environments to suit the needs of the autistic child.

Table 7 – Tabulation of factors to modify the environment (ranked according to degree of ease or difficulty) – Group 2

Factors	Participants					Mean	Ranking
	G	H	I	J	K		
Limiting noise & stimuli	4	3	3	3	5	3.6	4
Bare surfaces & physical barriers	4	2	2	1	2	2.2	3
Small Groups	1	3	2	1	1	1.6	1
PECS & sign language	3	2	2	1	2	2	2

***1-very simple, *4-very difficult**

Overall the participants felt that the easiest factor in modifying an environment to suit the needs of an autistic child was the use of small groups for instruction. Using visual and gestural communication such as PECS, symbols and sign language was ranked as second easiest. Making use of visually bare work spaces and physical barriers to separate the different areas was ranked third. The participants were in agreement that limiting noise and visual stimuli would be the most difficult

factor to control.

3.4.4. Ranking of elements in modifying curriculum

The participants were further asked to rank the following five factors on a likert scale (from very confident to no confidence) in terms of how confident they would be in including and teaching these factors in a modified curriculum to cater for autistic children.

Table 8 – Tabulation of factors to modify the curriculum (ranked according to level of teacher confidence) – Group 2

Factors	Participant					Mean	Ranking
	G	H	I	J	K		
Attending to social environment	3	3	2	2	3	2.6	4
Imitation of Others	2	2	2	2	3	2.2	3
Language Skills	1	3	1	1	3	1.8	1
Play with toys/objects	2	3	1	1	3	2	2
Social Interaction	2	3	1	1	3	2	2

***1-very confident, *4-no confidence**

Overall the participants felt most confident about teaching the use and comprehension of language in a modified curriculum for the autistic student. Teaching social interaction skills and appropriate play and usage of objects was ranked second. Participants were less confident about teaching autistic children to imitate others (ranked third) and attend to the social environment (ranked fourth).

3.5 RESULTS FROM SEMI-STRUCTURED INTERVIEWS

3.5.1 The researcher's perception of the interviews

All eleven participants were interviewed in a tranquil setting with no distractions.

Group 1:

Participant A was motivated and enthusiastic. She had not been teaching for a long time but seemed to have gleaned a lot of knowledge and was very task focused in answering the interview questions.

Participant B was the headmistress of a school for autistic students. She had a strong leaning towards inclusive education and was well educated in the field. She was also task orientated in answering the questions but found it difficult to specify particular instances and was more generalised in her answers.

Participant C came across as fairly contemplative and gentle. She took her time in the interview and explained herself carefully. She seemed to enjoy the interview and a good rapport was established.

Participant D came across as very bubbly and enthusiastic. She had good knowledge of the field and was moving to work in the government sector piloting projects with autistic children. She had a strong team-orientated approach.

Participant E worked at a school for autistic children and had good experience in the field. She had gleaned a lot of knowledge from practical experience and had a hands-on, grass-roots approach. She explained herself carefully in the interview and made reference to a number of teaching techniques.

Participant F also had good-hands on, practical experience. She found the interview process very interesting and was particularly good at giving examples of what she was talking about. A good rapport was established.

Group 2:

Participant G came across as a helpful, friendly person who knew a fair amount about autism because they suspected one of the children in her class may be autistic. She was fairly task-orientated in answering the questions and honest and authentic in the process.

Participant H was a foundation teacher at a government school. Her exposure to autism was limited to a friend's autistic son. She was also very honest in the interview and seemed eager to give her views on the subject.

Participant I was a foundation teacher at a private school. She asked a lot of questions about autism and out of Group B appeared to know the least about autism. Due to this factor, she found some of the questions particularly difficult to answer.

Participant J was a senior-primary teacher at a government school who had a good knowledge of autism as she had worked as a nurse at a psychiatric unit where there were autistic patients. She was very talkative and eager to participate and give her views.

Finally, participant K was a young, enthusiastic teacher who taught at a private school. She was very willing to share her views and also wanted to know more about autism.

3.5.2. Results from semi-structured interviews with Group 1

Question 1: What is the most effective teaching style in dealing with autistic students?

Theme: Teacher Traits	**Differentiation: Participant**					
	A	**B**	**C**	**D**	**E**	**F**
Flexible	**1**	**1**			**1**	
Creative	**1**	**1**			**1**	
Attitude; energy		**1**				
Compassion; Intuition		**1**	**1**	**1**		
Firm boundaries		**1**	**1**	**1**		**1**
Skills (ABA)				**1**	**1**	

Half the sample felt that **flexibility, creativity** and ability to show **compassion and intuition** were paramount when dealing with autistic students. More than half the sample felt that teachers need to have **firm boundaries**. Two of the participants pointed out the need to have **professional skills** such as knowledge of the ABA programme. Participant B also mentioned the importance of the **right attitude** when teaching these children.

Question 2: What role do you think a paraprofessional might play in helping an autistic child mainstream?

Theme: professional role	**Differentiation: participant**					
	A	**B**	**C**	**D**	**E**	**F**
Reinforcement / Achievement	**1**	**1**		**1**		
Comfort / Support	**1**	**1**	**1**		**1**	
Teacher relief	**1**		**1**			
Knowledge (of child's problem)		**1**				
Help with sign language						**1**

More than half the sample felt that paraprofessionals can supply **comfort and relief** for the autistic child being mainstreamed. Two of the participants further felt it supplies **relief for the teacher**. It was also suggested that a paraprofessional **reinforces** the child positively and helps give the child a sense of **accomplishment**. Finally one participant felt that a paraprofessional added **knowledge of the child's problem** and could help the teacher with **sign language.**

Question 3: How do you think a teacher in a mainstream environment can help an autistic child fit in socially with his/her peers?

Theme: social integration	Differentiation: participant					
	A	B	C	D	E	F
Buddy system	1					1
Explain to other children		1				1
Encourage natural interaction		1	1	1		
Social stories				1	1	
Support for staff				1		
School ethos against bullying		1	1			

Half the sample felt that **encouraging natural interaction** between autistic children and the other children in the class was the best way to deal with social integration problems. Two of the participants suggested a **buddy system** whilst other suggestions included using **social stories** and **explaining to the other children** that the autistic child needs a little extra care and support. **Support for staff** was also recommended. Two of the participants suggested that an enforced **school ethos against bullying** would also be needed.

Question 4: What are the most effective methods for dealing with behaviour problems autistic children may exhibit?

Theme: behaviour management	Differentiation: participant					
	A	B	C	D	E	F
Time Out	1					1
Flexibility	1		1			
Strategy		1	1		1	
Understanding why?				1		1

Half of the sample felt that it is very important to have a specific **strategy** in place when autistic children exhibit behavioural problems. Two of the participants felt that teachers also need to be **flexible** in their approach, for example changing a lesson structure if it is not working. Two of the participants also felt that teachers really need to **understand why** a student is behaving in this way and address the cause rather than the symptom. **Time out** was recommended as a strategy that could

be used effectively.

Question 5: What forms of behaviour would limit mainstreaming of autistic students?

Theme: limiting behaviours	**Differentiation: participant**					
	A	**B**	**C**	**D**	**E**	**F**
Self-injurious	**1**	**1**	**1**	**1**	**1**	
Hurting others	**1**		**1**	**1**		
Disruptive						**1**

Five of the participants felt that if autistic children were exhibiting self-injurious behaviour (eg: head banging, biting, scratching) they should not be mainstreamed. Half the sample felt that if students were hurting others they should not be mainstreamed. Only one of the participants felt that minor disruptive behaviour (eg: talking repetitively in class) would be enough of a problem to stop mainstreaming.

Question 6: What are the most important aspects to bear in mind when modifying a curriculum for an autistic student?

Theme: curriculum modification	**Differentiation: participant**					
	A	**B**	**C**	**D**	**E**	**F**
Shorter lessons	**1**					
Literal thinkers	**1**					
Physical activities	**1**					
Visually based			**1**			
Low sensory input			**1**			
Slower pace			**1**			
Life skills focus				**1**		
Different outcome standards				**1**	**1**	**1**
Using knowledge		**1**				

Half the sample felt that autistic students needed **different outcome and assessment standards** to non-autistic students. As one participant pointed out: “When they are doing normal maths in the class they are fine but the moment you put them in the test situation they can’t cope”. Other suggestions

on how to modify the curriculum included **shorter lessons**, taking into account that they are **literal thinkers,** using more **physical activities,** a stronger focus on **visual based learning**, **low sensory input, slower pace** for absorbing skills, a stronger **life skills focus** and using **knowledge** to create an appropriate curriculum.

Question 7: How can a mainstream teacher prepare for including an autistic student in his/her class?

Theme: teacher training	**Differentiation: participant**					
	A	**B**	**C**	**D**	**E**	**F**
Courses	**1**		**1**			
Practical exposure		**1**	**1**		**1**	**1**
Reading		**1**				
External consultants				**1**		
Government resource centers				**1**		

More than half the participants (4) felt that **practical exposure** to autistic children (e.g., visiting autistic schools, working with an autistic student) was an effective way for mainstream teachers to prepare for teaching these kind of children. Other suggestions included going on **courses** and **reading** up on the topic. It was also suggested that **external consultants** could be used to give advice and the government could open **resource centres** for more information.

Question 8: What characteristics would the ideal autistic learner display?

Theme: ideal autistic student	**Differentiation: participant**					
	A	**B**	**C**	**D**	**E**	**F**
Less behavioural problems	**1**	**1**	**1**			
Good social communication	**1**	**1**	**1**		**1**	**1**
Generalise abilities			**1**	**1**		
Good cognitive skills					**1**	**1**

Nearly all the participants (5) felt that the ideal autistic student needs to be good at **communicating socially** in order to be mainstreamed successfully. Three of the participants felt that the student

would also present with **less challenging behaviours.** Participants also felt that the student would be able to **generalise abilities** and have **good cognitive skills** in order to deal with the mainstream requirements.

Question 9: What would the ideal mainstream environment to aid inclusion of autistic students look like?

Theme: ideal environment	**Differentiation: participant**					
	A	**B**	**C**	**D**	**E**	**F**
Small classes	**1**		**1**	**1**	**1**	
Awareness: informed group	**1**	**1**		**1**		
Peaceful, structured						**1**

More than half the participants felt that ideal mainstream environment for autistic students would have **small classes.** Half the participants pointed out the importance of an **informed group of people** working as a **team** in the environment. It was also suggested that it should be a **peaceful, structured** environment.

Question 10: What are the advantages of including an autistic student in mainstream?

Theme: advantages of inclusion	**Differentiation: participant**					
	A	**B**	**C**	**D**	**E**	**F**
Awareness	**1**	**1**				
Change mindset		**1**				

*** Blank columns: as this was an open question, some participants chose not to answer this**

Two participants pointed out that there is **increased awareness** from including an autistic student in mainstream and that we learn from each other. As participant A said: “Kids get to learn from other kids that aren’t like them and broaden their own horizons. Inclusion also changes **mindsets.** As participant B said “its understanding differences, embracing diversity and celebrating it”.

Question 11: What are the disadvantages of including an autistic student in mainstream?

Theme: disadvantages	Differentiation: participant					
	A	B	C	D	E	F
Workload for teacher	1					
Self-esteem		1	1		1	
Behaviour	1					
Modelling					1	

*** Blank columns: as this was an open question, some participants chose not to answer this**

Half the sample were concerned about the **self-esteem** of the autistic students if they were placed in mainstream settings. Participant E was concerned about the **modeling** that the autistic student would display for the other children in the class. Participant A was particularly concerned about the **extra workload** for the mainstream teacher who would have to "split herself in half". **Behaviour** of the autistic child was also raised as a concern.

Question 12: What are the gaps in the system if autistic students were to be mainstreamed?

Theme: gaps in system	Differentiation: Participant					
	A	B	C	D	E	F
Untrained paraprofessionals			1			
Pilot studies			1			
Mindset		1				
Teacher motivation	1				1	

*** Blank spaces: as this is a data-driven code, some participants did not address this in the interview**

Participant C was concerned about the **lack of training of paraprofessionals** in South Africa or set criteria to judge them by. Participant C also pointed out the **lack of pilot studies** in the area of inclusion. Participant B was concerned about the overall **mind-set** in South African society with regards to inclusion. Finally, Participants A and E were concerned about general **teacher motivation** in dealing with change in South Africa.

3.5.3. Results from semi-structured interviews with Group 2

Question 1: Where have you had exposure to autism?

Theme: exposure to autism	Differentiation				
	G	H	I	J	K
Home setting	1	1			1
School setting	1		1		
Work settings (Other)				1	
Course work					1

More than half the participants (3) mentioned that they had been exposed to autism in a home setting, for example a friend's child. Two of the participants told of children they had taught who had been suspected of having autism. One of the participants worked in a psychiatric hospital where she worked with patients that had autism. Only one of the participants (the youngest) was actually exposed to autism through her degree and course work.

Question 2: Would you be able to adopt a firm but flexible teaching style in the classroom?

All five participants felt that they, to varying degrees, already used a firm but flexible teaching style in the classroom. They felt they would be able to continue using this style if they had an autistic child in the classroom.

Question 3: How would you feel about having a paraprofessional in your class to support autistic students?

	Differentiation: participant				
	G	H	I	J	K
Positive	1	1		1	1
Negative			1		

Four out of five of the participants were very enthusiastic about having a paraprofessional in the classroom to support an autistic student. As participant K said "it would be great to have someone who knows more in the classroom and has the confidence and training. Participant I, however, was against the idea as she does not like extra people in the classroom.

Question 4: How would you feel about dealing with behavioural problems autistic children sometimes display?

Theme: issues with behavioural problems	**Differentiation: participant**				
	G	**H**	**I**	**J**	**K**
Focus off other children	**1**	**1**	**1**	**1**	**1**
Strain on teacher	**1**				
Modelling		**1**			

The participants were unanimous in their concern on how the **other children would cope** if the teacher's time is taken up with dealing with the behavioural problems the autistic child may exhibit in the classroom. As participant G states: " as soon as you have a situation where discipline is required it takes your focus off the other children in the class". Participant G was also concerned with the kind of **strain** this would put on the teacher. Participant H was also concerned about the kind of **modeling** the autistic child's behaviour would set up for the other children in the class.

Question 5: How would you deal with the behavioural problems autistic children sometimes display?

Theme: dealing with behavioural problems	**Differentiation**				
	G	**H**	**I**	**J**	**K**
Understand why?	**1**				
Reinforce correct behaviour		**1**	**1**		
Normal routine			**1**		
Flexible				**1**	**1**
More training					**1**

Two of the participants felt that they would **reinforce the correct behaviour** with autistic children who acted out. It was also felt that it was important to be **flexible** in your approach. Participant G felt it was important to **understand why** an autistic child was acting out whilst participant I felt she would just carry on with her **normal routine**. Only one participant mentioned that she would need **specialised training** to deal with this area more effectively.

Question 6: What kinds of behaviour would limit successful mainstreaming of autistic students?

Theme: limitation behaviours	**Differentiation: participant**				
	G	**H**	**I**	**J**	**K**
Hurting others		**1**	**1**		**1**
Distracting others	**1**	**1**			
Self-injurious				**1**	**1**

Two of the participants felt that **self-injurious behaviours** would limit successful mainstreaming of autistic students. Participants H, K and I were also particularly concerned about the autistic child **hurting others** and how the parents of the other children would react. Participants G and H felt that **distracting behaviour** would also be a problem.

Question 7: How practical would it be to modify the curriculum to cater for the autistic child?

Theme: issues modifying curriculum	**Differentiation: participant**				
	G	**H**	**I**	**J**	**K**
Influence: other children	**1**				
Space		**1**			
Safety			**1**		**1**
Limiting noise and visual stimuli					**1**
Resources		**1**			
Difficulty with sign language				**1**	

Two of the participants were concerned with the **safety** in the environment to cater for autistic students. Other issues that the participants raised with regard to modifying the curriculum were how

this would **influence the other children** (detract from their progress); whether or not there was enough **space** to include the new additions needed for an autistic child; whether or not it would be practical to **limit noise and visual stimuli**, how they would get hold of the **resources** needed and how they would learn **sign language**.

Question 8: How can you prepare for having an autistic child in your classroom?

Theme: preparation	**Differentiation: participant**				
	G	**H**	**I**	**J**	**K**
Practical training					**1**
Department				**1**	
Reading resources	**1**		**1**		**1**
Initial training		**1**			

Three participants pointed out the importance of **reading** on the subject before-hand if you were going to have an autistic child in your class. Other suggestions for how one could prepare for including an autistic child were **practical training** (on the spot training with a facilitator); more training in the **initial degrees** and provision by the **department** for training on the subject.

Question 9: Would you go on extra training and is it practical?

Theme: issues with extra training	**Differentiation**				
	G	**H**	**I**	**J**	**K**
Time		**1**			
Cost					**1**
Motivation			**1**		
Age	**1**				

***J had no issues with going on training**

All the participants agreed that they **would go on extra training** if they were going to have an autistic student in their class. However, there were a number of factors that would hold them back. These included **age** (too old for extra learning); **motivation** on the topic; **cost** and **time** available.

Question 10: What characteristics would the ideal autistic learner display?

Theme: ideal autistic student	Differentiation: participant				
	G	H	I	J	K
Willingness to learn	1				
Perseverance	1				
Interaction		1		1	1
Age appropriate milestones			1		

Participants H, J and K felt that the autistic student must be able to **interact** fairly well if he/she is going to be mainstreamed successfully. Participant G also suggested a **willingness to learn** and **perseverance** when confronted with difficult tasks. Participant I suggested that the child must have reached **age-appropriate milestones.**

Question 11: What would the ideal mainstream environment catering for the autistic student look like?

Theme: ideal mainstream environment	Differentiation: participant				
	G	H	I	J	K
Space	1				
Paraprofessional	1				
Structure	1				
Small classes	1		1		
Safe		1	1		
Awareness					1
Motivated staff				1	

Two of the participants felt that the ideal mainstream environment catering for the autistic student would have a strong focus on **safety** and **smaller classes**. Other suggestions included enough **space** to include necessary additions; correct **structure,** provision of **paraprofessionals** and a culture of **awareness** and informed group of **motivated** people working together.

3.6 SUMMARY OF RESEARCH FINDINGS

Ideal autistic student to be mainstreamed

- Overall, both Group A (specialised teachers) and Group B (mainstream teachers) believe that only mildly autistic children, ie: those with Aspergers Syndrome can be successfully included into mainstream schools.
- Group A felt that the autistic student to be mainstreamed must present with manageable behaviour whilst both Group A and B believe the student must be able to interact and communicate with others on an adequate level.

Behaviour

- Group A believe that the most important factor to deal with is behavioural problems the autistic child may exhibit whilst Group B rate this as the hardest factor to deal with.
- Group B are concerned about the effect the behaviour would have on the other children.
- Group A suggest a specific strategy in place to deal with behavioural problems whilst Group B did not present with knowledge of specific strategies.
- Both Group A and Group B felt self-injurious behaviour and hurting of others would limit mainstreaming of autistic student. Disruptive behaviour was considered less troublesome.

Paraprofessionals

- Group A also believe that working with a paraprofessional in the classroom is very important and Group B find this the easiest factor to implement and would be content to have paraprofessionals in the class with them.

- Group A believe that paraprofessionals supply comfort and relief for autistic children

Social integration

- Group A believe that social integration is the least important factor to consider when mainstreaming an autistic student and suggest natural interaction for the child to fit in.

Changes to the environment

- Group A felt that the most important change to the environment should be the inclusion of pecs and sign language and small classes and Group B rated these as the two easiest changes to make. Both Group A and B also rated smaller classes as a necessary factor in the ideal environment to include an autistic child.
- Group B suggested that safety in the environment could be an area of concern.

Changes to curriculum

- Group A rated language skills as the most important modification to the curriculum and Group B rated language skills as their most confident area to implement.
- Group A suggested that you need different outcomes and standards when assessing autistic students.

Teaching style

- Group A noted firm boundaries and flexibility as key factors in teaching autistic children whilst Group B believed that they already used this style. Group A also felt creativity, compassion and intuition were important.

Knowledge and Training

- With one exception, Group B had little knowledge of autism. They had not received training on the subject.

- Group A felt that practical exposure to autistic children was most effective way for mainstream teachers to prepare to have autistic children in their class whilst Group B felt reading would be most effective.
- All participants in Group B were willing to go on training.

Problems with mainstreaming

- Group A was concerned about how mainstreaming would affect the self-esteem of the autistic child.

3.7 SUMMARY

This chapter presented a synopsis of the study results. An integration of the findings revealed significant patterns emerging in the following areas: perceptions from specialised teachers and perceptions from mainstream teachers with regards to mainstreaming of autistic students. The connections amongst the factors will be further expanded in chapter four and viewed in the context of the extant literature.

CHAPTER FOUR

DISCUSSION

In this chapter the research findings will be discussed further in the context of the relevant literature and recommendations will be made.

4.1 HYPOTHESES EMERGING FROM RESEARCH FINDINGS

Significant connections between the factors and themes identified in the analysis phase of the research yielded a number of tentative hypotheses.

Overall, the ideal autistic student to be successfully included in mainstream would present with Aspergers syndrome, have manageable behaviour and adequate communication skills.

According to the results of the study, behaviour is of primary concern when considering mainstreaming an autistic student. Mainstream teachers are likely to find the behaviour of the autistic child the hardest factor to control and will need training to have specific strategies in place to deal with the behaviour of the autistic child as well as to deal with the impact this may have on the other children in the class. A word of caution is that autistic children that present with hurting others and self-injurious behaviour should not be considered for inclusion without very firm strategies in place.

The general view is that it is essential to have a paraprofessional for support when an autistic child is being mainstreamed. This is likely to be well-received by mainstream teachers. Paraprofessionals can play an important role in supplying comfort and relief for autistic children being mainstreamed.

In terms of social integration, mainstream teachers are likely to find this the least troublesome factor when including an autistic child and should encourage natural interaction between the autistic student and other children.

An environment well-suited to including autistic students will need to have smaller classes. If teaching autistic students, mainstream teachers will also need to be trained in sign language and gestural communication. Furthermore, the general safety of the environment will need to be taken into consideration.

According to the findings regarding modification of the curriculum, language skills will have to be given top priority and this is likely to be well-received by mainstream teachers. However, teachers may need to consider different outcomes and standards when assessing autistic students.

Mainstream teachers are likely to already be practicing a complementary teaching style – firm but flexible - for working with autistic students. It would appear, however, that the training of mainstream teachers in knowledge of autism in South African schools is not sufficient and needs to be improved. Training could take the form of practical exposure to autistic children and provision of adequate reading material. A good sign is that the level of motivation and openness to extra training amongst mainstream teachers is good and extra training is likely to be well-received.

Importantly, it was noted that the impact of inclusive education on autistic students could damage their self-esteems and this aspect needs to be taken into account when considering whether or not individual students will cope with mainstream.

These findings will now be discussed by drawing further on the relevant literature to explore the various themes.

4.2 MAINSTREAMING OF AUTISTIC STUDENTS – GENERAL

According to the results of this study the majority of mainstream and specialised teachers in the sample perceive only mildly autistic students, ie, those exhibiting Aspergers syndrome, are likely to be mainstreamed successfully. This is consistent with Madden and Slavin's (1983) findings which concluded that students with mild handicaps could benefit from placements in regular classrooms but that those students with more serious learning problems were better suited to special classrooms. Mainstream teachers in Scotland (McGregor & Campbell, 2001) were less enthusiastic when asked their views in that only a minority believed that autistic students should be mainstreamed at all.

However, specialist teachers tended to display more positive attitudes. In this study, the specialist teachers were slightly more optimistic in that the whole sample were predisposed to Aspergers being mainstreamed whilst one of the mainstream teachers felt that no autistic children should be mainstreamed at all.

The results of this study suggest that important criteria that should be assessed when considering mainstreaming an autistic student are his/her ability to communicate and interact with others on a suitable level and an ability to display manageable behaviour.

4.3 BEHAVIOUR OF AUTISTIC STUDENTS

The results of this study suggest that the behaviour of the student is of primary concern when considering mainstreaming an autistic student. Mainstream teachers rated this factor the hardest to control. Findings from Perko & McLaughlin (2002) support the notion that challenging behaviours can be detrimental to the learning process and teachers may try a variety of procedures to deal with these. This study suggests that mainstream teachers will need specific strategies in place (and further training) to deal with challenging behaviours. Positive behaviour support (Renzaglia, Karvonen, Drasgow & Stoxen, 2003) is an alternative form of behaviour support that could be introduced into schools. This study further found that very challenging behaviour (in the form of self-injurious or hurting others) will need very firm strategies and may be part of the criteria for selecting which autistic students would be best suited for the mainstream classroom. Robertson, Chamberlian and Kasari (2003) did find that a higher rate of behaviour problems in autistic students did lessen the quality of the teacher student relationship which is another reason why behaviour needs to be managed appropriately and effectively by the teacher in charge.

4.4 TEACHERS AND PARAPROFESSIONALS

A recent study (Coffey & Obringer, 2004) found that teachers that adopted a teaching style that was firm but flexible would be most effective when dealing with autistic students. The mainstream teachers in this study were of the opinion that they already use this teaching style and thus would find this

aspect of adaptation fairly easy. The specialised teachers in the sample further pointed out the importance of being creative, intuitive and compassionate with autistic children. This is supported by Bennett, Rowe & De Luca (1996) who stressed the importance of getting to know the autistic child without stereotyping his/her disability.

The results of this study found that it is essential to have a paraprofessional for support when an autistic child is being mainstreamed. Furthermore, the majority of the mainstream teachers in this study were open to the idea and felt they would welcome a paraprofessional in their classroom. Robertson, Chamberlain & Kasari (2003) found that the presence of a paraprofessional does not affect the quality of the teacher-student relationship. Robertson, Chamberlain & Kasari (2003) further found that the paraprofessional has a variety of roles in the classroom, including keeping the student focused on his/her task, increasing understanding and reducing behavioural problems. These participants in this study felt that a paraprofessional can supply comfort and relief for the autistic child being mainstreamed.

4.5 SOCIAL INTEGRATION OF AUTISTIC STUDENTS

Although impairment of social interaction is a defining feature of autism, the majority of research favours social integration believing that it allows for peer modeling (Whitaker et al, 1998) and that autistic students generalised learned social skills more effectively in integrated rather than segregated environments (Strain, 1983; 1984). This study is in agreement with these findings in that it proposes that mainstream teachers are likely to find social integration the least troublesome factor when including an autistic child. The majority of participants felt that the teacher should encourage natural interaction between the autistic student and other children and that this would lead to social integration. However, Ochs, Kremer-Sadlik, Solomon & Gainer Sirota (2001) also make a case for educating the other children in the class about autism as they found peers who were aware that the included child was autistic tended to be more supportive.

Neverthless, the majority of the specialised teachers in this study were still concerned about the effect mainstreaming could have on the self-esteem of the autistic student. Taking into account the number of factors that can influence the self-esteem, it shows how important it is to have a whole-person/whole environment approach to the mainstreaming of these students.

4.6 CHANGES TO THE ENVIRONMENT AND CURRICULUM

Mesibov and Shea (1996) are skeptical about the efficacy of a single classroom to meet the needs of all students with autism no matter how innovative teachers may be in modifying it. The sample in this study were more optimistic in modifying the curriculum and environment to cater for the autistic student although specialised teachers agreed that an autistic student will need different outcomes and standards to the rest of the class and this will have to be incorporated into the curriculum. According to Dawson & Osterling (1997) the curriculum content for students should address the ability to attend to elements of the environment, the skill of imitating others, the use and comprehension of language, appropriate play with toys and social interaction. The sample in this study was in agreement that these were all important factors to consider although the use and comprehension of language was ranked as the most important factor to consider. Interestingly, this was also the factor that mainstream teachers were most confident to teach.

Mesibov and Shea (1996) point out that in terms of the environment teachers may need to make use of visually bare work spaces, small groups of individual instruction and a reliance on visual and gestural communication. The sample in this study was in agreement that although these were all important factors, smaller classes were of paramount importance. Mainstream teachers will also need to be trained in sign language and gestural communication. Another factor that was bought up was the general safety of the environment for both the autistic child and the other children interacting with him/her.

4.7 KNOWLEDGE AND TRAINING OF TEACHERS

The mainstream teachers in this study displayed very limited knowledge of autism and, with the exception of one participant, had not received any formal training on the subject.. These findings are supported by Scott (2005) who concludes that training on inclusion has not been implemented at school and classroom level. The majority of the participants in this study expressed an interest in learning more and were willing to go on extra training

The participants further felt that practical exposure to autistic children would be most effective in being trained on how to deal with these kinds of children. Reber (1995) found that student teachers who participated in a practicum on inclusive education expressed more positive attitudes towards inclusion in general than those who completed a self-study programme. This is also supported by McGregor & Campbell's (2001) study that found both specialist and mainstream teachers who had experience in autism showed more confidence in the process of integrating autistic students. It is likely that training will have a number of benefits for teachers including improving knowledge, confidence and attitude about inclusion of autistic students.

4.8 CONCLUSIONS

From the findings of this study, combined with relevant literature on the topic, some contributions can be made towards a possible framework for understanding teachers's perceptions of mainstreaming autistic students in the South African context as well as the kind of criteria and needs that need to be addressed when including autistic children.

It is important to emphasise that a general theory cannot be formulated on the basis of the perceptions of a small sample. However, an analysis of the data, combined with relevant literature, did yield a number of tentative conclusions that are summarised below. It is hoped that these themes will inform future research and contribute towards the building of a more general model concerning the inclusion of autistic students in mainstream school settings.

The results of this study suggest that students with Aspergers Syndrome have the best prognosis of being mainstreamed successfully. This would imply that when evaluating autistic students for suitability for mainstream settings, their ability to communicate effectively and exhibit manageable behaviour are important criteria to be taken into account.

The study further suggests that dealing with the behaviour of autistic students is likely to be the most challenging part of the experience for mainstream teachers. Teachers need to be trained in specific strategies to deal with behavioural problems that may present.

It would appear that a key part of mainstreaming autistic students is the provision of a paraprofessional to support them. This is not a strategy that is catered for presently in mainstream South African schools and is something that should be looked at in future.

This study further suggests that in some areas mainstream teachers are fairly well-prepared for the inclusion of students with Aspergers Syndrome. In terms of dealing with students with full-scale autism, the mainstream teachers have complementary teaching styles and are confident at teaching language skills and modifying their curriculums. However, their general knowledge of autism is limited and many of them feel it would be difficult to change the environment, for example having smaller classes and limiting visual stimuli.

On the whole, it would appear that the general teaching body in South Africa is not fully supportive of the notion of including all autistic children into mainstream settings, only students with Aspergers Syndrome.

Importantly, this study suggests that mainstream teachers would benefit from further training on autism and inclusive education and would be open to receiving this training.

4.9 RECOMMENDATIONS

Based on the results of the study, a number of recommendations are proposed.

It is suggested that when considering mainstreaming an autistic student the following criteria should be taken into account:

- his/her behaviour: the extent to which he/she manifests self-injurious behaviour or hurting others (ie: safety quotient) and the extent to which he responds to behaviour modification techniques
- his/her communication skills: the extent to which he/she can respond and interact with peers and teachers
- his/her self-esteem: how the child perceives him/herself and level of sensitivity amongst others

It is further suggested that mainstream teachers receive specific training on behavioural management techniques of autistic children as a priority.

Regarding the environmental and curricular modifications that need to be taken into account when including autistic students, there are a number that have emerged as a matter of priority. These include the provision of a paraprofessional to support the autistic student, smaller classes, training and use of gestural and sign language, different outcome and assessment methods and improved general safety of the environment.

It is also recommended that mainstream teachers receive compulsory training on autism where they have practicums and are exposed to working with autistic children in supportive settings.

4.10 RECOMMENDATIONS FOR FUTURE RESEARCH

As inclusion of autistic students in mainstream schooling is still a relatively new practice in South Africa, there is still room for a large amount of research on this topic. It is suggested that confirmatory studies, ideally with larger samples, be carried out to confirm, refine or refute the tentative explanations and suggestions proposed in this study. These studies could focus on a number of areas which are discussed below.

A study on a larger scale could be carried out to assess teacher's perceptions of whether autistic children should be mainstreamed in South African school settings. This could also look at to what extent the curriculum and environment needs to be modified to cater for autistic students and whether this is feasible.

It would also be useful to evaluate to what extent the curriculum and environment needs to be modified to cater for students with Aspergers Syndrome and whether this is feasible.

Following on from the findings in this study, a follow up study could evaluate the role effective behaviour management strategies play in mainstreaming autistic students successfully.

Exploratory studies could further examine to what extent extra training affects teachers' perceptions of whether mainstreaming can work and the difference paraprofessionals play in mainstreaming autistic students successfully.

There is also a need to explore how effective current mainstream teaching strategies are for dealing with autistic students.

Researchers can furthermore move towards creating a model for inclusion of autistic students in mainstream South African schools and comparing this with models used in first world countries. A similar model for inclusion of students with Aspergers Syndrome in mainstream South African schools could also be developed.

4.11 LIMITATIONS OF THE STUDY

While the qualitative approach used in this design allowed for rich, "depth" research the study is limited by the extent to which the findings may be generalised to other South African teachers of different age, gender (male), race, culture or religion. The small size and the relatively homogeneous make-up of the sample suggest that the applicability of the hypotheses and conclusions must be interpreted within this (possibly limited) context.

The researcher, as human instrument, exerted an influence on the direction the research took and on the collection and analysis of the data. An attempt was made to minimise researcher bias by carefully recording all data, describing perceptions of the participants and giving a detailed overview of the process of analysis of the data.

4.12 EPILOGUE

This study took the form of an in-depth analysis of the perceptions of both mainstream and specialised teachers in terms of the mainstreaming of autistic students in the South African context. The specialised teachers in the sample had practical experience and fairly extensive knowledge of autism whilst the mainstream teachers had limited knowledge and training in the area.

Results of the study suggest that neither of the sample groups perceive the South African context ready for mainstreaming of autistic students. They felt that students with Aspergers Syndrome, higher-functioning autism, could be included more successfully. However, on the premise that all autistic students were going to be included a number of changes would need to be made. These included the provison of paraprofessionals, smaller classes and a stronger emphasis on safety. Teachers would also need to receive extensive training on dealing with behavioral problems that autistic students may exhibit. It was also noted that mainstream teachers are in need of practical exposure to autism and further training in this area.

It is hoped that this study will inform further research in this field and help in the formulation of a model for understanding inclusion of autistic students in South African mainstream schools. It is also suggested that further studies examine to what extent the environmental and curricular changes would need to be made to cater for students with Aspergers Syndrome.

Hopefully this study has highlighted the complexity and important variables that need to be assessed when considering mainstreaming an autistic student. As Participant C aptly put it: "*There is a school for every child. The school must be open to it and the teachers must be prepared to take it on. We must know the whole child and get the team to work together. It is important to consider whether it is okay to put that child into mainstream – both emotionally and socially"*.

REFERENCES

Aarons, M. & Gittens, T. (1992). *The handbook of autism: A guide for professionals and parents.* London: Routledge.

American Psychiatric Assoc. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Comer, R.J.

Babbie, E & Mouton, J. (2001). *The practice of social research*. Cape Town: Oxford University Press.

Beard,P.N.G. (1990). Strategies for teachers in identifying and overcoming stress. *South African Journal of Education*, 10 (2) 109-113.

Bennett, T., Rowe, V., & DeLuca, D. (1996). Getting to know Abby. *Focus on Autism and Other Developmental Disabilities.* 11 (3).

Billstedt, C.G.E. (2000). *Autism and Aspergers Syndrome: Coexistence with other clinical disorders*. Aacta Psychiatrica Scandinavica, 102, 321 –330.

Boyatzis, R.E. (1998). *Transforming qualitative information: Thematic analysis and code development.* USA: Sage Publications.

Carr, E.G., Levin,L., McConnachie, G., Carlson, J.I., Kemp, D.C., & Smith, C.E. (1994). *Communication-based intervention for problem behaviour: A user's guide for producing positive change*. Baltimore: Brooks.

Coffey, K.M., & Obringer, S.J. (2004). A case study on autism: school accommodations and inclusive settings. *Education Chula Vista*, 124 (4), 632-639.

Comer, R.J. (1992). A*bnormal psychology* (2nd ed.). U.S.A: W.H Freeman & Co.

Dawson, G., & Osterling, J. (1997). Early intervention in autism. In M.J.Guralnick (Ed.), *The effectiveness of early intervention.* (pp. 307-326). Baltimore: Brooks.

Denzin, N.K. (1978). *The research act*. (2nd ed.). New York: Mcgraw-Hill Book Co.

Downing, J.E. (1996). The process of including elementary students with autism and intellectual impairments in their typical classrooms. Paper presented at the Annual International Convention of the Council for Exceptional Children (74th, Orlando, Florida, April 10 5, 1996).

Draft national strategy on screening, identification, assessment and support (2005). Department of Education.

Drasgow, E. (1997). Positive approaches to reducing undesirable behaviour. *Beyond Behaviour,* 8 (2), 10-13.

Dybvik, A.C. (2004). Autism and the Inclusion Mandate. *Education Next*, 4 (1), 42-49. *Education White Paper* – 6 (2001). South Africa: Department of Education.

Egel, A.L., & Gradel, K. (1988). Social integration of autistic children: Evaluation and recommendations. *Behaviour Therapist, 11, 7-11.*

Engelbrecht, P; Oswald,M., Swart,E & Eloff, I. (2003). Including students with intellectual disabilities: Stressful for teachers? *International Journal of Disability, Development and Education,* 50 (3) 293-308.

Fullerton, A. (1994). *Putting feet on my dreams: A program in self-determination for adolescents and young adults.* Portland, OR: Portland State University.

Handleman, J.S. (1984). Mainstreaming the autistic-type child. *The Exceptional Child,* 31, 33-38.

Handleman, J.S. (1991). A specialized program for preschool children with autism. *Language,*

Speech and Hearing Services in Schools, 22, 107-110.

Hardman, R. *Genius who's already greater than Rainman.* The Star, May 17, 2005.

Henning, E. (2004). *Finding your way in qualitative research*. Pretoria:Van Schaik

Kaplan, B.J & V.A & Saddock. (2003). *Synopsis of Psychiatry: Behavioural Sciences/Clincal Psychiatry*. USA: Lippincott Williams & Wilkins

Kasari, C.; Freeman, S.F.N., Bauminger, N., & Marvin, C. (1999). Parental perspectives on inclusion: effects of autism and down syndrome. *Journal of Autism and Developmental Disorders,* 29 (4), 297-395.

Kozoloff, M.A. (1971). *The humanization processes: A social, behavioural analysis of children's problems.* New York: Wiley-Interscience.

Lerman, D.C., Vorndran, C.M., Addison, L. & Kuhn, S.C. (2004). Preparing teachers in evidence-based practices for young children with autism. *School Psychology Review Bethesda. 33 (4), 510-526.*

Lovaas, *I. (1966). Program for the establishment of speech in schizophrenic and autistic children.* In J.K. Wing (Ed), *Early childhood autism: Clinical, educational and social aspects.* London: Pergamon Press.

Madden, N., & Slavin,R. *(1983).* Mainstreaming students with mild handicaps: Academic and social outcomes. *Review of Educational Research, 53, 519 -569.*

McGregor, E., & Campbell, *E. (2001).* The attitudes of teachers in scotland to the integration of children with autism into mainstream schools. *Autism: The International Journal of Research and Practice, 5 (2), 189-207.*

McNiff.J. (1988). *Action Research: Principles and practice.* London: Macmillan Education

Mesibov, G.B., & Shea, *V. (1996). Full* inclusion and students with autism. *Journal of Autism and Developmental Disorders, 26 (3), 337-346.*

Mittler, *P. (2003). International experience in including children with disabilities in ordinary* schools. Paper prepared for a meeting organised by UNICEF on possibilities of inclusion in Tunisia. www.eenet. Accessed 3 March *2005.*

Miles, M.B. & Huberman, A.M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). California: Sage Publications.

Mouton and Marais (1990). *Basic concept in the methodology of the social sciences.* Pretoria: HSRC Publishers.

Mouton, J. & Muller, J. (1998). Tracking trends in theory and method: Past and future. In Mouton, J & Muller, J (Eds.) *Theory and method in South African Human Sciences Research: Advances and Innovations* (p.1-18). Pretoria: HSRC Printers.

O'Callaghan, J. (1998). Grounded theory: a potential methodology. In Clarkson, P. (Ed.), *Counselling psychology: Integrating theory, research and supervised practice* (pp. 204-211). London: Routledge.

Ochs, E., Kremer-Sadlik, T., Solomon, O., & Gainer Sirota, *K. (2001).* Inclusion as social practice: views of children with autism. *Social Development, 10 (3), 399-419.*

O'Neill, R.E., Horner, R.H., Albin, R.W., Sprague, J.R., Storey, K., & Newton, J.S. *(1997). Functional assessment and program development for problem behaviour.* Pacific Grove, CA: Brooks/Cole.

Perko, S. & McLaughlin, T.F. (2002). Autism: Characteristics, causes and some educational interventions. *International Journal of Special Education, 17 (2), 59-68.*

Reber,C.K. (1995). *Attitudes of Preservice teachers towards students with disabilities: Do practicum experiences make a difference*? Paper presented at the Annual Meeting of the American Educational Research Association (San Francisco, CA, April 18-22).

Renzaglia, A., Karvonen, M., Drasgow, E., & Stoxen, C. *(2003).* Promoting a lifetime of inclusion. *Focus on Autism and Other Developmental Disabilities, 18 (3), 10883576.*

Robertson, K., Chamberlain, B., & Kasari, C. *(2003).* General education teacher's relationships with included students with autism. *Journal ofAutism and Developmental Disorder, 33 (2), 123-130.*

Romanczyk, R. *(1986).* Some thoughts on future trends in the education of individuals with autism. *Behaviour Therapist, 9, 162-164.*

Scheuermann, B. & Webber, J (2002). *Autism: Teaching does make a difference.* Belmont, CA: Wadsworth/Thompson.

Schmidt, J. (1998). Where there's a will, there's a way: The successful inclusion of a child with autism. *B.C Journal of Special Education*, 21 (3), 45-63

Schreibman, L. *(1988). Autism.* Beverly Hills, CA: Sage Publications.

Scott, D. (2005). *Teacher stress in the context of outcomes based education and the policy of inclusion*. Unpublished Masters Dissertation. Johannesburg: University of Witwatersrand.

Simpson, R.L., de Boer-Ott, S.r., Smith-Myles, B. (2003). Inclusion of students with autism spectrum disorders in general education settings. *Topics in Language Disorders*, 23 (12), 116- 134.

Smith, J.A. (1995). Semi-Structured Interviewing and Qualitative Analysis. In Smith, JA; Harre, R; Van Langenhove, L (Eds.), *Rethinking Methods in Psychology* (pp.9-26). London: Sage Publications.

Spears, R., Tollefson,N., & Simpson, R. (2001). Usefulness of different types of assessment data in

diagnosing and planning for a student with high-functioning autism. *Behavioural Disorders*, 26 (3), 227-242.

Strain, P. *(1983).* Generalization of autistic children's social behaviour change: Effects of developmentally integrated and segregated settings. *Analysis and Intervention in Developmental Disabilities, 3, 23-34.*

Strauss, A. & Corbin, J. (1990). *Basics of qualitative research.* USA: Sage Publications.

Strauss, A. & Corbin, J. (1997). *Grounded theory in practice*. USA: Sage Publications.

Roopharine, & M. Segal (Eds). *Friendships in normal and handicapped children (pp.* 187-207). Norwood,NJ: Ablex.

Timmons, V. & Breitenbach, M. (2004). A model of teacher support for children with autism: a Prince Edward Island story. *Education Canada Toronto,* 44 (1).

Wallis, Claudia. *New insights into the hidden world of autism*. TIME magazine, 29 May 2006.

Wilder, L.K., Dyches, T.T., Obiakor, F.E., & Algozzine, B. (2004). Multicultural perspectives on teaching students with autism. *Focus on Autism and Other Developmental Disabilities,* 19 (2), 105-113.

Whitaker, P., Barratt, P., Joy, H., Potter, M., & Thomas, G. (1998). Children with autism and peer group support: using "circle of friends". *British Journal of Special Education.* (5 (2), 60-64.

White Paper 6 (2001). Draft national strategy on screening, identification, assessment and support 2005. Department of Education.

White Paper 6 (2001). Special needs education and training systems. Department of Education.

APPENDIX A

GAUTENG DEPARTMENT OF EDUCATION LETTER OF APPROVAL



UMnyango WezeMfundo
Department of Education

Lefapha la Thuto
Departement van Onderwys

Date:	**27 June 2006**
Name of Researcher:	**Roberts Julie-Anne Samantha**
Address of Researcher:	**103 Canterbury Hall**
	241 Oxford Street
	Illovo 2196
Telephone Number:	**(011) 8831395/4478821**
Fax Number:	**(011) 3150877**
Research Topic:	**Autism and inclusion: teacher's perspectives on the mainstreaming of autistic learners**
Number and type of schools:	**15 Primary & LSEN Schools**
District/s/HO	**Johannesburg East, North, West, South & Gauteng North and West**

Re: Approval in Respect of Request to Conduct Research

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

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

1. ***The District/Head Office Senior Manager/s concerned must be presented with a copy of this letter that would indicate that the said researcher/s has/have been granted permission from the Gauteng Department of Education to conduct the research study.***
2. ***The District/Head Office Senior Manager/s must be approached separately, and in writing, for permission to involve District/Head Office Officials in the project.***
3. ***A copy of this letter must be forwarded to the school principal and the chairperson of the School Governing Body (SGB) that would indicate that the researcher/s have been granted permission from the Gauteng Department of Education to conduct the research study.***

Office of the Senior Manager – Strategic Policy Research & Development
Room 525, 111 Commissioner Street, Johannesburg, 2001 P.O.Box 7710, Johannesburg, 2000
Tel: (011) 355-0488 Fax: (011) 355-0286

4. *A letter / document that outlines the purpose of the research and the anticipated outcomes of such research must be made available to the principals, SGBs and District/Head Office Senior Managers of the schools and districts/offices concerned, respectively.*
5. *The Researcher will make every effort obtain the goodwill and co-operation of all the GDE officials, principals, chairpersons of the SGBs, teachers and learners involved. Persons who offer their co-operation will not receive additional remuneration from the Department while those that opt not to participate will not be penalised in any way.*
6. *Research may only be conducted after school hours so that the normal school programme is not interrupted. The Principal (if at a school) and/or Senior Manager (if at a district/head office) must be consulted about an appropriate time when the researcher/s may carry out their research at the sites that they manage.*
7. *Research may only commence from the second week of February and must be concluded before the beginning of the last quarter of the academic year.*
8. *Items 6 and 7 will not apply to any research effort being undertaken on behalf of the GDE. Such research will have been commissioned and be paid for by the Gauteng Department of Education.*
9. *It is the researcher's responsibility to obtain written parental consent of all learners that are expected to participate in the study.*
10. *The researcher is responsible for supplying and utilising his/her own research resources, such as stationery, photocopies, transport, faxes and telephones and should not depend on the goodwill of the institutions and/or the offices visited for supplying such resources.*
11. *The names of the GDE officials, schools, principals, parents, teachers and learners that participate in the study may not appear in the research report without the written consent of each of these individuals and/or organisations.*
12. *On completion of the study the researcher must supply the Senior Manager: Strategic Policy Development, Management & Research Coordination with one Hard Cover bound and one Ring bound copy of the final, approved research report. The researcher would also provide the said manager with an electronic copy of the research abstract/summary and/or annotation.*
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.*
14. *Should the researcher have been involved with research at a school and/or a district/head office level, the Senior Manager concerned must also be supplied with a brief summary of the purpose, findings and recommendations of the research study.*

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

Kind regards

ALBERT CHANEE
ACTING DIVISIONAL MANAGER: OFSTED

The contents of this letter has been read and understood by the researcher.	
Signature of Researcher:	
Date:	29/06/2006.

APPENDIX B

PARTICIPANT INFORMATION LETTER

Dear Teacher

My name is Julie-Anne Roberts, and I am conducting research for the purposes of obtaining a Masters in Educational Psychology at the University of the Witwatersrand. My area of focus is looking at teacher's perspectives on mainstreaming autistic children. My research is looking at those factors that are at play in mainstreaming autistic learners and the relative importance of these different factors. I am also looking at generating possible solutions to problems teachers may have with regards to mainstreaming autistic children. We would like to invite you to participate in this study.

Participation in this research will entail completing a questionnaire and answering a number of questions in a taped interview with the researcher. The questionnaire will take approximately 15 minutes to complete and the interview will take approximately 30 minutes. Participation is voluntary, and no employee will be advantaged or disadvantaged in any way for choosing to complete or not complete the questionnaire. While questions are asked about your personal circumstances, no identifying information, such as your name or I.D. number, is asked for, and as such you will remain anonymous. Your completed questionnaire and interview transcript will not be seen by any person at the university at any time, and will only be processed by myself. Your responses will only be looked at in relation to all other responses. This means that feedback that will be given to the schools involved will be in the form of group responses and not individual perceptions.

Your participation in this study would be greatly appreciated. The research can help to inform our knowledge of autistic learners and how they can best benefit from the new educational policies that are in the process of being implemented in South Africa.

Kind regards

Julie-Anne Roberts

APPENDIX C

CONSENT FORMS FOR BEING INTERVIEWED AND TAPED

1) Consent form for being interviewed

I _____ consent to being interviewed by Julie-Anne Roberts for her study on *Teacher's Perspectives on the Mainstreaming of Autistic Learners*. I understand that:

- Participation in this interview is voluntary.
- That I may refuse to answer any questions I would prefer not to.
- I may withdraw from the study at any time.
- No information that may identify me will be included in the research report, and my responses will remain confidential.

Date: _____

Signed _____

2) Consent form for interview being taped

I _____ consent to my interview with Julie-Anne Roberts for her study on *Teacher's Perspectives on the Mainstreaming of Autistic Learners* being tape-recorded. I understand that:

- The tapes and transcripts will not be seen or heard by any person in this organisation at any time, and will only be processed by the researcher.
- All tape recordings will be destroyed after the research is complete.
- No identifying information will be used in the transcripts or the research report.

Date:_____

Signed _____

APPENDIX D

QUESTIONNAIRES FOR GROUP 1 AND GROUP 2

Questionnaire for special needs teachers (GROUP 1)

Please note: Participation in this study is voluntary, and no employee will be advantaged or disadvantaged in any way for choosing to complete or not complete the questionnaire. While questions are asked about your personal circumstances, no identifying information, such as your name or I.D. number, is asked for, and as such you will remain anonymous. Your completed questionnaire will only be seen by the researcher and other professionals involved in the research. Your responses will only be looked at in relation to all other responses. This means that feedback that will be given to the schools involved will be in the form of group responses and not individual perceptions.

If you are happy with the above, please complete the following questionnaire.

Section A

1) Age: .....
2) Gender: ……
3) Ethnicity……...
4) Please complete the following teaching history:

Type of school (Mainstream/Remedial/Special Ed)	Approx. student profile in your class(mainstream/high/low functioning autism/ other learning diff)	Approx no of students in class	No of years in this position

5) Preparation for teaching autistic children

a) Please list any relevant degree courses/ diplomas/ workshops/ other learning experiences (including governmental initiatives) that have aided in your knowledge of teaching autistic children.

Date	Name of course/workshop/other	Run by

Section B

1) Please tick the appropriate box:

In your opinion, which of the following children should be integrated into mainstream schools?

all autistic children	All autistic children except those that are non-verbal and exhibit challenging behaviours	only mildly autistic children eg: those with Aspergers syndrome	no autistic children

2) a) Assuming all autistic children were going to be integrated into mainstream, please rate the following factors that affect successful integration in order of importance from *1 – 6*:- *1* being most important and *6* being least important.

Number ranked	Factor
	Teaching style
	Classroom environment (Eg: structure, set up)
	Curriculum modification
	Teacher's ability to deal with behavioural problems
	Social integration of autistic children with peers
	Provision of paraprofessional to support teacher

b) Can you think of any other factors that should be taken into consideration? If so, please list them below and elaborate:

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3 a) How important are the following factors in modifying the environment to suit the needs of the autistic child?
(Please tick the appropriate box for each suggestion.)

Limiting noise and visual stimuli

Very important	**Important**	**Slightly important**	**Unimportant**

Making use of visually bare work spaces and physical barriers to separate work and play areas

Very important	**Important**	**Slightly important**	**Unimportant**

Using small groups for instruction

Very important	**Important**	**Slightly important**	**Unimportant**

Making use of visual and gestural communication (eg: PECS, Symbols, sign language)

Very important	**Important**	**Slightly important**	**Unimportant**

b) Can you think of any other environmental factors that should be taken into consideration? If yes, please list below:

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4 a) How important is it to include the following elements in a modified curriculum for autistic children?
(Please tick the appropriate box for each suggestion)

Learning to attend to elements of their social environment

Very important	**Important**	**Slightly important**	**Unimportant**

Mastering the skill to imitate others

Very important	**Important**	**Slightly important**	**Unimportant**

Developing the use and comprehension of language

Very important	**Important**	**Slightly important**	**Unimportant**

Learning appropriate play with toys/ usage of objects

Very important	**Important**	**Slightly important**	**Unimportant**

Improving social interaction skills

Very important	**Important**	**Slightly important**	**Unimportant**

b) Can you think of any other factors that should be taken into consideration when designing a curriculum for autistic children? If yes, please list below.

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5) Any extra comments you would like to add?

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THANK YOU FOR YOUR TIME

Questionnaire for mainstream teachers (GROUP 2)

Please note: Participation in this study is voluntary, and no employee will be advantaged or disadvantaged in any way for choosing to complete or not complete the questionnaire. While questions are asked about your personal circumstances, no identifying information, such as your name or I.D. number, is asked for, and as such you will remain anonymous. Your completed questionnaire will only be seen by the researcher and other professionals involved in the research. Your responses will only be looked at in relation to all other responses. This means that feedback that will be given to the schools involved will be in the form of group responses and not individual perceptions.

If you are happy with the above, please complete the following questionnaire

Section A

1) Age: .....
2) Gender: ……
3) Ethnicity……...
4) Please complete the following teaching history:

Type of school (Mainstream/Remedial/Special Ed)	Approx. student profile in your class(mainstream/high/low functioning autism/ other learning diff)	Approx no of students in class	No of years in this position

5) Knowledge of autistic children

a) Please rate your knowledge of autistic children on a scale of 1 -5
5- excellent knowledge of autistic children
4- good knowledge of autistic children
3- adequate knowledge of autistic children
2- little knowledge of autistic children
1- no knowledge of autistic children
your rating…….

b) Please list any relevant degree courses/ diplomas/ workshops/ other learning experiences (including governmental initiatives) that have aided in your knowledge of teaching autistic children.

Date	Name of course/workshop/other	Run by

Section B

Please first read the accompanying literature on autism and definitions of relevant terminology and then complete the following questions.

1) Please tick the appropriate box:

In your opinion, which of the following children should be integrated into mainstream schools?

all autistic children	**all autistic children except those that are non-verbal and exhibit challenging behaviours**	**only mildly autistic children eg: those with Aspergers syndrome**	**no autistic children**

2) a) Assuming an autistic child was going to be included into a mainstream classroom, the following factors would have to be taken into consideration. Please rate the factors according to the degree of ease or difficulty it would take to implement each one based on your own experience of mainstream teaching. Please rate them on a scale of 1-6, 1 being easiest and 6 being most difficult.

Number ranked	Factor
	Adopting a firm but flexible teaching style
	Changing structure and set up of classroom (eg; limiting visual materials and noise levels, putting barriers between areas, giving autistic student seat near teacher)
	Modifying the curriculum to include social skills training, group work, more creative work and so on
	Dealing effectively with severe behavioural problems

	as evidenced by autistic students (eg: head banging, biting, spitting, acting out)
	Integrating autistic children with peers
	Working with a paraprofessional as extra support in the classroom

b) How do you feel these factors would impact the other children in the classroom?

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3 a) How practical/feasible would it be to modify your classroom in the following ways to suit the needs of the autistic child?
(Please tick the appropriate box for each suggestion.)

Limiting noise and visual stimuli

Very simple	**Relatively simple**	**Relatively difficult**	**Very difficult**

Making use of visually bare work spaces and physical barriers to separate work and play areas

Very simple	**Relatively simple**	**Relatively difficult**	**Very difficult**

Using small groups for instruction

Very simple	**Relatively simple**	**Relatively difficult**	**Very difficult**

Making use of visual and gestural communication (eg: PECS - A communication system involving symbols and behaviour management; Symbols; sign language)

Very simple	**Relatively simple**	**Relatively difficult**	**Very difficult**

b) If these changes were made in your classroom, what effects do you think they could have on the other children in the class?

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4 a) How confident would you be in including and teaching the following elements in a modified curriculum to cater for autistic children?
(Please tick the appropriate box for each suggestion)

Teaching children to attend to elements of their social environment (eg: crossing roads, going shopping)

Very confident	**Confident**	**Lacking confidence**	**Not at all confident**

Teaching children to master the skill to imitate others

Very confident	**Confident**	**Lacking confidence**	**Not at all confident**

Teaching children to improve their usage and comprehension of language

Very confident	**Confident**	**Lacking confidence**	**Not at all confident**

Teaching children appropriate play with toys/ usage of objects

Very confident	**Confident**	**Lacking confidence**	**Not at all confident**

Teaching children how to improve their social interaction skills

Very confident	**Confident**	**Lacking confidence**	**Not at all confident**

b) If you were modifying your curriculum in this manner to cater for autistic children, what effects do you think it could have on other children in the class?

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THANK YOU FOR YOUR TIME

APPENDIX E

SEMI-STRUCTURED INTERVIEWS FOR GROUP 1 AND 2

Semi-structured interview questions for special needs teachers (GROUP 1)

1) **Please give me a bit of background about the school and classroom settings you've worked in and the range of autistic children you've taught.**
2) **Research has shown that the teaching style will affect the autistic child being included into mainstream. What, in your opinion, is the most effective teaching style in dealing with autistic children? (Prompt: What traits should teachers have?)**
3) **a) How important is it to have a paraprofessional (trained helper in the classroom) when mainstreaming autistic students and what role can the paraprofessional play in this process?**

   b) What ratio of paraprofessionals to autistic children ideally?
4) **a) In the knowledge that autistic students model themselves on peers, how could you help the autistic child to fit in socially with his normally developing classmates?**

   b) How would you deal with teasing and bullying?
5) **a) In your opinion what are the most effective methods to deal with the behavioural problems autistic children sometimes display and would a mainstream teacher be able to implement these techniques as effectively?**

   b) Are there any specific behaviours that would really limit an autistic child being mainstreamed?
6) **How important do you think it is for the mainstream teacher to modify the practical side of his/ her teaching eg: classroom set up (as discussed in questionnaire) and curriculum to cater for autistic students and what are the most important aspects to bear in mind?**
7) **a) How can a mainstream teacher prepare for including autistic children in her/his class? (What is the minimum amount of training he/she should ideally receive?)**

   b) What other support do you think the government/community could offer these teachers?
8) **Are there any other suggestions you would make for a mainstream teacher preparing to include autistic children in her/his classroom?**
9) **What would the ideal autistic student being included in mainstream look like (ie: what are the most important criteria to look at?)**

10) **What would the ideal mainstream environment to aid inclusion of autistic students look like?**
11) **Overall what benefits and disadvantages do you foresee by including an autistic student into a mainstream classroom with children from different cultures and backgrounds?**
12) **Any other comments you would like to add?**

<u>Semi-structured interview questions for mainstream teachers (GROUP 2)</u>

Please first read through the accompanying literature on autism

1) **a) Please give me a bit of background about the school and classroom settings you've worked in.**

   b) Do you have knowledge about autism or experience of having interacted with autistic students? (If yes, please elaborate)
2) **Research has shown that a firm but flexible teaching style is what is needed for the autistic child to be successfully included into mainstream. Would it be feasible to employ a teaching style like this in your classroom (if it is different from your current style)?**
3) **a) How would you feel about having a paraprofessional (trained helper in the classroom) to support autistic students?**

   b) Would this be preferable to not having one? (How important do you think this is?)
4) **a) In the knowledge that autistic students model themselves on peers, how could you help the autistic child to fit in socially with his normally developing classmates?**

   b) How would you deal with teasing and bullying? Do you foresee this as being a problem?
5) **a) How would you feel about dealing with the behavioural problems autistic children sometimes display (see accompanying literature). What kind of behaviour management plan would you consider implementing?**

   b) Are there any specific behaviours on this list that you think would really limit an autistic child being mainstreamed successfully?
6) **a) How practical do you think it is for the mainstream teacher to modify the practical**

   side of his/ her teaching and curriculum to cater for autistic students (see accompanying literature and questionnaire).

b) How do you perceive these changes will affect the other students in the class?

7) **a) How do you think a mainstream teacher can prepare for including autistic children in her/his class? (What is the minimum amount of training he/she should ideally receive?)**
8) **b) What other support do you think the government/community could offer teachers in this position?**
9) **c) How would you feel about going on this training? Is it practical? (Energy, time, motivation? Topics – see accompanying literature)**
10) **In your opinion, what are the most important characteristics the autistic student must have in order to be included successfully into mainstream (ie: what are the most important criteria to look at?)**
11) **In your opinion, is the overall mainstream school environment sufficiently resourced and prepared for the successful inclusion of special needs students? (Please elaborate?)**
12) **Overall what benefits and disadvantages do you foresee by including an autistic student into a mainstream classroom with children from different cultures and backgrounds?**
13) **Any other comments you would like to add?**