COMMUNICATION SUPPORT FOR LEARNERS WITH AUTISM: A CASE OF SPECIAL SCHOOLS IN UMLAZI DISTRICT, KWAZULU-NATAL PROVINCE

by

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DECLARATION

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Communication support for learners with autism: A case of special schools in Umlazi District, KwaZulu-Natal Province.

I declare that the above dissertation is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

I further declare that I submitted the dissertation to originality checking software and that it falls within the accepted requirements of originality.

I further declare that I have not previously submitted this work, or part of it for examination at University of South Africa (UNISA) for another qualification or at any other higher education institute

23 January 2022

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Signature   Date

DEDICATION

This work is dedicated to my lovely husband and my caring children.

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ABSTRACT

The aim of this study was to investigate ways of providing communication support for learners with autism and to determine the challenges the teachers faced in special schools in Umlazi District in the province of KwaZulu-Natal. Some of the learners with autism are non-verbal so communication support is so important for them.

The researcher used the qualitative method to collect data from the two special schools that were sampled. Data were collected through interviews, observations, and document analysis.

The findings of the study were presented according to four themes that emerged from the data that was gathered. It emerged that there were different ways of providing communication support to learners with autism, namely; Augmentative and Alternative Communication, Social Stories and TEACCH

The resources needed were also identified by the teachers and they were of importance in supporting communication to the learners with autism. The recommendations were noted that schools should provide resources for communications support.

Key terms: Autism, communication, echolalia, pivotal response training, augmentative alternative communication, challenges, communication strategies, non-verbal, visual schedules

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LIST OF ABBREVIATIONS

AAC	Argumentative and Alternative Communication
ABA	Applied Behaviour Analysis
ADHD	Attention Deficit Hyperactivity Disorder
ASD	Autism Spectrum Disorder
B.Ed	Bachelor of Education
CAPS	Curriculum and Assessment Policy Statement
DBST	District Based Support Team
DCAPS	Differentiated Curriculum and Assessment Policy Statement
HOD	Head of Department
ICT	Information and Communication Technology
ISP	Individual Support Plan
PEC	Picture Exchange Communication
PECS	Picture Exchange Communication System
PRT	Pivotal Response Training
SASL	South African Sign Language
SGB	School Governing Board
SMT	School Management Team
TEACCH	Treatment and Education of Autistic and related Communication Handicapped Children
UKZN	University of KwaZulu-Natal
UNISA	University of South Africa
US	United States
ZPD	Zone of Proximal Development

CHAPTER 1

BACKGROUND AND OVERVIEW OF THE STUDY

1.1 INTRODUCTION

The chapter one provides the background to the study, rationale for the study, 2statement of the problem, research questions, aims and objectives of the study, limitation and delimitation of the study, definition of the study, and chapter outline.

1.2 BACKGROUND TO THE STUDY

Sharma, Gokulchandran, Sane, Biju & Shetty (2015:31), posit that learners with autism experience significant challenges in communication and social skills. In addition, learners with autism may demonstrate behavioural challenges that can prevent successful participation in school and family activities. Sword (2020) points that communication is important facet of life as the skills to communicate are essential in all spheres of life. Communication is one of the primary areas of difficulty for person with autism. According to the National Autism Society (2016), learners with autism experience the world differently from the way most other learners do. Rue & Pollack (2015:27) maintain that learners with autism may talk to themselves and mumble under their breath in the classroom.

Whiteley, Carr & Shattock (2019) assert that autism is defined as a lifelong neurobiological disorder marked by notable difficulty in communication and relationship. O'Reilly, Lester & Kiyimba (2019) state that learners with autism are unable to develop their spoken language and it is very difficult for them to communicate. In some cases, children will develop echolalia where the child will continuously repeat the words that are said to them. As such, it is very difficult for learners, teachers and the parents to communicate with learners with autism. According to Landsberg, Kruger & Swart (2019), the South African Department of Education issued a framework policy document called the Education White Paper 6: Special Needs Education, Building and Inclusive Education and Training System (EWP6) in 2001. The document was a response to the post-apartheid state of special needs and support services in education and training.

Two main findings from the EWP6 policy document (2001) were that a small percentage of learners with disabilities were receiving specialised education and support and that the education system had generally failed to provide appropriate support for the diverse needs of the learners.

The Department of Basic Education (2014) issued a policy document, The Screening, Identification, Assessment and Support Policy (SIAS) to provide a framework for the standardisation of the procedures to identify access and provide programmes for all the learners who require additional support to enhance their participation and inclusion in school. The SIAS policy (DBE, 2014) is aimed at improving access to quality education for vulnerable learners and those who experienced barriers to learning including:

- Learners in ordinary and special schools who are failing to learn because of barriers of whatever nature (such as family disruption, language issues or poverty); for example, learners with autism have language issues that need to be addressed;
- Children of compulsory school going age and youth who may be out of school or have never enrolled in a school due to disability e.g. autism; and
- Teaching and learning process for the learners who experience barriers to learning of which this is not done to accommodate learners with autism.

Therefore, in a school environment, teachers are expected to support learners who experience barriers to learning due to autism. However, the teachers seem not to have the skills and knowledge required to communicate with children who have autism (Human Rights Watch 2015) Most of the training workshops on communication with learners with autism focused more on theory than on the practical aspects and this left the teachers with little skills to teach learners with autism. Hence, this study investigated the effective ways of providing communication support for learners with autism and the challenges the teachers face.

1.3 RATIONALE FOR THE STUDY

Murray (2015:68) states that the number of learners with autism is rapidly increasing, and there is a struggle within our education system to meet the needs of these learners

with autism. Equal Education Law Centre states that South African schools are not providing learners with autism adequate levels of support to meet their diverse learning needs. More specifically, learners with autism do not receive the dedicated attention necessary to avoid them being left behind. Some of the learners require high-level support. When they are enrolled by the schools, which is when the teachers discover that they cannot provide necessary support that the learners need as most of them have communication problems. Murray (2015:70) point out that considering that all schools are social environments, learners with autism enter educational system already at a disadvantage when compared to typically developing learners. For this reason, supports need to be in place that will promote the success of the learners with autism both academically and socially. The purpose of this study is to establish and recommend effective ways to provide the communication support needed by learners with autism and help teachers overcome the challenges they face when working with learners with autism.

1.4 STATEMENT OF THE PROBLEM

Learners with autism have social and communication skill difficulties which affect their learning process (Cerbo & Rabi 2019). The Department of Education (DoE) (2001) in the EWP6 policy gives an outline of how the education for learners with disabilities will be supported to overcome the impact of the disabilities. The Education Policy Act (No. 27 of 1996) (Department of National Education, 1996) states that all children between the ages of seven and fifteen are compelled to attend school. Grade R is age four turning five by June in the year of admission. However, learners with autism often register for the first time when they are much older. If there has been no early intervention for the child, and the child cannot communicate, it becomes a huge challenge for the teachers to teach learners with autism. The Kwazulu Natal Department of Education Annual Report (2019) has offered many training workshops to teachers to have more skills and knowledge about autism; for example, the Fish Bowl programme that is run over five days on a regular basis, but despite all the effort, most of the teachers have not fully mastered the required skills to teach learners with autism. Other trained teachers have left the Department taking their skills with them. Lack of teacher

training and awareness of inclusive education and methodologies and the diversity of disabilities affects learners with autism. (Human Rights Watch 2015) A number of National Government Organizations (NGO) providing teacher training in public schools told Human Rights Watch (2015) that teachers are not sufficiently qualified and equipped to teach learners with disabilities such as autism It is from this background that the researcher sought to establish the communication support needed by the learners with autism.

Hodgson & Khumalo (2016.42) argue that ideally the CAPS curriculum should be properly adapted for use at school but, at present, teachers do their best to adapt it as they can while teaching. Learners, however, often struggle with academic curricula and often do not follow or forget lessons taught. Most learners with autism do not fully benefit from the laid-down curriculum.

According to the DBE (2014), at university level teachers are trained according to phases or grades which limits their flexibility to teach in other phases or grades. Most courses include a single module on teaching learners with special needs (Ward, Bristow, Kovshoff, Cortese & Kreppner, 2022:239). Hodgson & Khumalo (2016:46) posit that most of the teachers are not trained to teach in special schools, concluding that the lack of trained teachers compromises the quality of education available to learners. Although many South African teachers are willing to accommodate learners with autism in their classes, they often have limited understanding of the unique combination of character traits of learners with autism.

1.5 THE RESEARCH QUESTION

This study aims to investigate ways of providing communication support for learners with autism and evaluating the teaching challenges the teachers face. The research questions that were formulated for this research problem are:

1.5.1 Primary Research Question

What are the effective ways of providing communication support to learners with autism?

1.5.2 Secondary Research Questions

- What types of communication problems do learners with autism face?
- What are the strategies that teachers use to teach communication to learners with autism?
- What instructional resources can be used for enhancing communication skills of learners with autism?
- What challenges do teachers face when communicating with learners with autism?

1.6 AIM AND OBJECTIVES OF THE STUDY

1.6.1 The Aim of the Study

The main aim of this study is to identify the communication support needed by the learners with autism in special classes and to evaluate the challenges that the teachers face.

1.6.2 Objectives of the Study

The objectives of the study are to:

- identify types of communication problems learners with autism face
- determine the strategies that teachers use to teach communication to learners with autism
- establish instructional resources for enhancing communication skills to learners with autism
- identify challenges that teachers face when communicating with learners with autism.

1.7 RESEARCH DESIGN AND METHODOLOGY

1.7.1 Research Design and Approach

The study adopted a case study design because it aims to achieve an in-depth knowledge and understanding of communication support needed by learners with autism. Harding (2018:35) posits that a case study can take any number of forms. A

researcher may select to study a single person, school or community or a multiple-case design. In both instances, multiple data collection methods are used.

The study used the qualitative approach. Leedy & Ormrod (2015) maintain that qualitative research approach is used to seek in-depth understanding of a phenomenon, situation, problem or event in a naturalistic setting. A qualitative approach was appropriate for this study as the researcher was able to ask questions that cannot be easily put into numbers. More details are provided in Chapter 3.

1.7.2 Data Collection Methods

The researcher used semi-structured interviews to acquire knowledge and first-hand information from class teachers who were teaching learners with autism. The researcher also used in-class observations to gain more knowledge on the communication support needed by the learners with autism. Document analysis was also used in order to get a deeper meaning of the phenomenon. The researcher used different documents to investigate the communication support needed by the learners with autism and the challenges the teachers face. This is dealt with in greater depth in Chapter 3.

1.7.3 Population and Sampling

McMillan & Schumacher (2014:129) define population as a group of individuals from which the researcher draws a representative sample. The study focused on two special schools in Umlazi District. The selected schools were chosen because of their availability and convenience to the researcher. The researcher used the purposive sampling strategy in this study to select the participants as they were likely to give relevant information on the phenomenon of communication problems of autistic leaners and the challenges teachers have in teaching them. Six qualified teachers were selected to participate. More details are provided in Chapter 3.

1.7.4 Data Analysis

The researcher used qualitative data analysis. Data that was collected was read thoroughly. Data was grouped and refined according to similarities of the responses.

Data was broken into smaller chunks. Possible themes were identified. More details are provided in Chapter 3.

1.8 TRUSTWORTHINESS

Korstjens & Moser (2018), postulate that the quality criteria for qualitative research are credibility, dependability, transferability and confirmability. These criteria were used by the researcher to ensure the trustworthiness of the study. More details are provided in Chapter 3.

1.9 ETHICAL CONSIDERATIONS

The researcher applied and sought permission from the Ethics Committee in the College of Education (UNISA), the Circuit Manager for Umlazi District and the principals of the two sampled schools. The permission was granted to the researcher. Any research study involving human beings must respect participants' right to privacy (Leedy & Ormrod, 2015:120). The participants' right to privacy was protected all the time.

1.10 LIMITATION AND DELIMITATION OF THE STUDY

The researcher is aware that the data covering the main issues for discussion in this study cannot be collected from all the schools in Umlazi District of Education. As a result, this study focused on only two schools, which might provide limited information on how other schools in the same area experience the challenges of teaching autistic children. Because of the small size of the sample for the study, the results cannot be generalised beyond the specific population from which the sample was drawn. The researcher found it difficult to source funds for the project since various instructional resources were needed. The participants were not a randomly selected sample. The researcher was affected by the time to do observations. Since autistic learners sometimes do not want to communicate, this was a problem. Also, the learners could have behaved differently when the researcher was there observing.

1.11 DEFINITION OF THE KEY CONCEPTS

1.11.1 Autism Spectrum Disorder

Landsberg, Kruger & Swart (2016) assert that autism and Asperger syndrome, as well as other autistic-like conditions, are presently referred to as Autism Spectrum Disorder (ASD), a developmental disorder characterised by difficulties in social interaction and communication and by restricted or repetitive patterns of thoughts and behaviours. The term ASD is used in this study to refer to the learners who have autism as well as those that have Asperger's syndrome, Rett syndrome, Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS) and childhood disintegrative disorder.

1.11.2 Communication

Landsberg et al. (2016), state that communication comes from the Latin word *communicare,* which means "to share or make common". Communication is therefore any act by which one person gives or receives, from another person, information about the person's needs, desires, perceptions, knowledge or feelings. For the purpose of this study, the term is used to convey messages using signs, symbols or pictures.

1.11.3 Echolalia

Rudy (2020) explained that echolalia generally falls into three categories: immediate, delayed and mitigated. Immediate echolalia occurs when the child repeats what someone says immediately after the speaker. Delayed echolalia occurs when the child repeats something heard earlier in a new context. Mitigated echolalia can be either immediate or delayed, but the child changes the original utterance slightly. In this study, it means repetition of speech or phrases by the learners with autism because of lack of communication. They struggle to express their own thoughts.

1.11.4 Pivotal Response Training

Suhrheinrich, Chan, Melgarejo, Reith & Stahmer (2018:2) explain that Pivotal Response Training (PRT) is an intervention that integrates principles of child's development with

those applied behaviour analysis procedures. In this study, it means an approach used for treating learners with ASD.

1.11.5 Augmentative and Alternative Communication

Nune (2015) explains that "Augmentative and Alternative Communication [AAC] is an umbrella term that encompasses the communication methods used to supplement or replace speech or writing for those with impairments in the production or comprehension of spoken or written language". In this study, it means communication strategies used to supplement speech of the learners with autism who find it difficult to talk or write.

1.12 CHAPTER OUTLINE

This study aimed to investigate ways of providing communication support for learners with autism and the challenges the teachers face. The study is presented in five chapters.

Chapter 1 informs the reader on the overview of the study with the aim to introduce the study. An in-depth discussion of the background of the study was stated, followed by the rationale, problem statement, research questions, aims and objectives, research methodology, trustworthiness, ethical considerations and the definition of key terms.

Chapter 2 presents an overview of the literature. Focusing mainly on the literature on communication support needed by the learners with autism and the challenges the teacher face, the chapter first explains what autism is and the types of communication problems the learners with autism have. The literature also focuses on the communication strategies and resources needed for the learners with autism. Furthermore, the literature on the challenges the teachers face in teaching learners with autism is presented.

Chapter 3 presents the research design and the methodology of this study. The study used an interpretive case study approach to enquire in depth the kinds of communication support needed by the learners with autism. A qualitative approach was used to help discover new thoughts and individual views of the teachers teaching

learners with autism. Qualitative design was also used in the study research paradigm. The research methodology, the sample selection process, data collection tools and data analysis are discussed. The issue of credibility, transferability, dependability and confirmability are discussed. Lastly, the limitations of the study are also highlighted.

Chapter 4 presents the data and the analysis generated from interventions, observations and document analysis. The findings are presented in four themes.

Chapter 5 presents the discussions of the findings using the four themes identified. A summary of the study, limitation, recommendation and recommendation for the future research is provided.

1.13 CHAPTER SUMMARY

Chapter one provided the introduction to the study on the communication support needed for the learners with autism. The background and rationale to the study was also discussed with the main focus on the learners with autism. The rationale of the study was also discussed. The chapter ends with a summary overview of the five chapters. A literature review on the communication support for the learners is presented in the next chapter.

CHAPTER 2

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 INTRODUCTION

In this chapter, the literature and theoretical framework related to the communication support needed by the learners with autism are discussed. The first section covers the literature on autism and the challenges the teachers face when teaching learners with autism on communication. The strategies and resources needed are also highlighted. The second section provides the theoretical framework for the study.

2.2. LITERATURE REVIEW

2.2.1 DEFINING AND UNDERSTANDING AUTISM

Landsberg, Kruger & Swart (2019) define autism as a complex variable, neurologically based, pervasive developmental disorder that influences both the development and functioning of the brain. Autism is a lifelong neurodevelopmental disability that affects how the brain areas linked to social interaction and communication develop (Centre for Disease Control and Preventions, 2015). According to Wearmouth (2016:91), people with autism have difficulty in relating to people and social situations from early life, marked by profound failure to use language fluently to communicate and anxious and obsessive desire to maintain sameness

Pawlett (2017) points out that the steady increase of learners diagnosed with autism, it is important for teachers and support teams to know how to support these learners with autism. Pawlett (2017) further allege that teachers need to employ effective practices and strategies such as visual aids, multimodal intervention and strategies for challenging behaviour so that the learners receive the education that is most suited for them. Learners with autism have difficult with communication and socialization and may have a narrow range of interest (Teaching Young Children, 2016).

Sala & Valios (2019) allege that learners with autism master visual and spatial abilities they use visual language to organize, understand and give meaning to the world.

2.2.2 COMMUNICATION

Wearmouth (2016.89) states that communication is a vital tool in everyday life; however, for learners with autism, communication can be a challenge. Landsberg et al. (2016) describes the main function of communication as to transfer messages from one person to another which controls situations or experiences. Communication, according to Velentzas & Broni (2014), is the process of transmitting information from one person to another to develop understanding. Communication occurs through various means, both verbal and non-verbal.

Savage & Adreon (2017), point out that learners with autism may experience spoken language and communication challenge. Some learners have difficulty interacting with others and may feel isolated or disliked. There are some learners with autism that will be able to develop good speech but, in some cases, they will still have trouble knowing how to use language and communicate. Although learners with autism sometimes use gestures to request assistance in obtaining an object, they rarely use gestures to engage in someone's attention or to express support or concern (Landsberg et al, 2016) Others remain mute, even those who develop verbal skills in the normal range.

Wearmouth (2016.89) argue that communication is crucial for social and emotional development. People communicate with each other for a variety of reasons; for example, to express our emotions and feelings, to share information, to learn from others and for social interaction or pleasure. For learners with autism it is very difficult to for them to communicate.

On the other hand, Mahajan (2015:36) posit that effective communication is the most important tool to achieve the desire purpose. Each and every step of people's life, whenever people need to communicate verbally or non-verbally on daily basis to convey our ideas, thoughts and emotions. Understanding the basics of communication will help teachers and parents to better cope with the situations in which communication has broken down.

2.2.3 TYPES OF COMMUNICATION PROBLEMS AMONG CHILDREN WITH AUTISM

Topal, Samurcu, Taskiran, Tufan & Semerci (2018) assert that difficulty with social communication is present in varying degrees in all people with ASD. According to Lucas (2018), there are two broad areas involved in communication: literal verbal and non-verbal skills. People with ASD have problems that include (at a minimum) the non-verbal areas including the difficulty with their desire and ability to use language in a social context.

2.2.3.1 Literal verbal / spoken communication skills

Holtz, Ziegert & Baker (2015:4) posit that learners with autism may have difficulty with spoken language or recognizing that their thoughts and feelings can be shared or communicated with another, some will have limited speech, while others may use communication devices, sign language or written language to communicate. Children with ASD may have a literal understanding of language but they may not understand teasing language and become very aggressive (Lucas 2018). When there is a lack of knowledge of how much speech a person with autism understands, it may lead to frustration for the parties concerned.

Savage & Adreon (2017:8) state that learners with autism have difficulty to understand the many abstract concepts that present themselves in conversation, including different meanings of the same word. Therefore, the teacher needs to be clear with the instructions. When this technique is applied to learners with autism, however, they will tend to repeat the whole sentence perfectly (echolalia) and this may give the wrong impression that their ability to comprehend verbal communication is high. (Holtz, Ziegert & Baker 2015:5). This will result in situations where the person with autism is given instructions which are beyond their level of understanding and, as such, the learner becomes confused, fails and takes out their frustration on themselves or their environment.

2.2.3.2 Non-verbal/ non-spoken communication skills

Nordquist (2020) states that non-verbal communication also called manual language is the process of sending and receiving messages without using words, either spoken or written. They may fail to make eye contact when speaking with someone. The learners with ASD may not pick up on social cues from body language. They may present awkward body posture.

Landsberg et al. (2019) state that, in addition to the difficulties that learners with ASD experience on a social level, the teachers also face challenges of being able to both understand as well as use language that the learners understand because it follows a different developmental pattern.

Antia, Lederberg, Easterbrooks, Schick, Branum-Martin, Connor & Webb (2020:335) assert that a typical early sign that a child has a problem with communication is that the child is suspected to be deaf but when closer examinations are done, they will show that the child is normal but just does not want to talk. The child will show a lack of interest in interacting and will not respond to the speech of others and, at times, will just show an indifference to their name being called out (Savage & Adreon 2017:9). In some instances, children with ASD may start to utter some words before they reach the age of two, but these words will eventually disappear and the child becomes mute. According to Steffenburg, Steffenburg, Gillberg & Billstedt (2018) mutism includes a range of behaviours from periods of total silence to the production of meaningless sounds. Most if not all children with autism process through a period of mutism. Some learners with autism remain mute all their lives.

Ben-Nun (2015:114) posits that communication patterns vary as a function of child's cognitive level and severity of autism. Some learners with autism display disruptive behaviour such as aggression and tantrums to communicate. In the absence of understanding how to communicate in conventional ways, learners with autism use a range of positive and negative behaviours to communicate their needs and feelings. According to Raisingchildren.net.au (2015), laughter is communication; a temper tantrum is communication; smiles are communication; and running away is

communication for learners with autism. The challenge is to figure out what the learner with autism is trying to communicate through this behaviour.

Savage & Adreon (2017:10) claim that learners with autism have difficulty understanding the meaning behind the social and emotional communication of others. They easily misinterpret the meaning of the messages making incorrect associations between a person's non-verbal communication behaviour and the context. Savage & Adreon (2017:10) further argue that learners with autism react without thinking which may lead to problem behaviours.

2.2.4 TEACHERS' CHALLENGES WHEN DEALING WITH LEARNERS WITH AUTISM

The biggest challenge the teachers face when dealing with learners with autism is how to provide communication support in class. Landsberg et al. (2019), state that learners with autism experience difficulties relating to others and they feel isolated. Three typical signs of inappropriate social interaction were identified by Wing (1995:4) in Landsberg et al. (2019) as aloof and indifferent, passive behaviour and active but odd.

2.2.4.1 Challenges Regarding Social Interaction

2.2.4.1.1 Aloof and indifferent behaviour

Every learner with ASD is unique and their needs will be reflected differently. Challenges experienced interacting socially and communicating with others are common with learners with autism. These challenges can lead to levels of stress, anxiety and depression. Badiah (2018) mentions that learners with autism may experience difficulties with social skills and social interactions. This is very difficult for the teachers to deal with.

The learners may also use people in a mechanical manner exclusively to meet their own needs. If they are self-sufficient, they will not seek help or permission and will help themselves to whatever they want or desire; for example, taking another learner's lunch box (Landsberg et al., 2019).

2.2.4.1.2 Active but odd behaviour

Myburgh, Condy & Bernard (2020:243) point out that social challenge may include limited interactive communication skills, restricted eye contact during social interaction, limited sharing and being aggressive. Conversations of learners with autism are only one-sided. Social rules and over polite behaviour are usually applied by rote and applied without regard to the situation

One of the reasons why learners with ASD interact differently on a social level is because they experience severe problems in understanding the mental state of others; for example, what other people think. Wearmouth (2016:93) points out that learners with autism may appear to behave strangely or inappropriately and may prefer to be alone. Difficulties in social communication mean that learners with autism find it hard to understand the meaning of gestures, facial expressions or tone of voice. The learners often find it hard to understand and interpret other people's thoughts (Wearmouth 2016). Learners with autism have difficult in predicting the behaviour of others; they become stressed, confused and anxious, according to Wearmouth (2016).

Learners with autism have other non- social deficits which include inability to show facial expressions and empathy, verbal intonation and looking through and beyond a person (Daou, Ven & Poilson, 2014). These learners with autism find it difficult to show empathy and express themselves emotionally; for example, crying or laughing when jokes are told.

2.2.4.1.3 Passive behaviour

Learners with autism display complicated behavioural manners due to the possible manifestation of anxiety disorder (Adams, McDonald & Keen 2019). Some learners will participate in activities only when assisted or encouraged to do so. When the activity has stopped and other learners have lost interest, the learners with autism may attempt to keep the activity going. The learners sometimes find it difficult to occupy themselves meaningfully and in extreme cases, they will remain passive. They may end up spinning objects, rocking themselves, lining up, tapping or throwing objects (Landsberg et al, 2016)

2.2.4.2 Challenges Regarding Communication and Language

Saggers (2016) states that learners with ASD have challenges with both the ability to understand and to use language to communicate because ASD follows a different developmental pattern from non-autistic learner development. Classrooms are social environments that rely heavily on being able to interact, socialise and communicate with others effectively. This can intensify the stress, anxiety and depression learners may experience.

Autism includes problems with joint attention, social reciprocity, behavioural and emotional regulation, and language and cognitive deficits which include, but are not limited to, problems with communication, symbolic play and executive functioning (Prelock, 2021). Learners with autism often have speech delays or communication deficits (Schlosser & Wendt, 2008).

Rudy (2020) asserts that speech may often be echolalic; for example, the immediate repetition of sentences or phrases they have heard or repetition of phrases they have heard in the past (delayed echolalia); for example, the teacher may ask a learner "Do you want bread?" and the learner will reply "Do you want bread?" Also, pronouns are often reversed; for example, using "I and you" ", "she or he", "we and you" (Denworth, 2018)

Some of the learners show little interest in using their language and communication skills. Landsberg et al. (2019) assert that most learners have severe difficulty in selecting, initiating and maintaining appropriate topics of conversation. The lack of eye contact which is a form of non-verbal communication is also common.

2.2.4.3 Challenges Regarding Imagination and Social Understanding

Moreno & O'Neal (2018), state that learners with autism have difficulty abstract and conceptual thinking and behaving in a flexible manner. They have restricted and obsessional/ repetitive play, imagination and interest. Some learners with autism develop special interests which can become obsessional. They also experience difficulty in adapting to new situations as well as to changes in their routines (Bornman

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& Rose, 2017). Since learners with autism do not have a consistent and effective communication system, these difficulties may lead to challenging behaviours.

Because changes are resisted, it is also difficult to anticipate future events. Learners perform poorly when they need to plan something or to organise themselves; for them, there is only a here, now and immediate world. This normally leads to a rigid dependence on routines because they prefer sameness. Moreno & O'Neal (2018) point out that any change of plan, including either being late or early, could lead to feelings of frustration, powerlessness, anger and anxiety.

2.2.4.4 Attention and Concentration Challenges

Healis Autism Centre (2020) states that learners with autism find it difficult to attend to more than one thing at a time but are able to focus more on things they want compared to the learning task. According to Raisingchildren.net.au (2021), it was noted that learners with autism have difficulty paying attention to and focus on things that do not interest them. Learners with autism can pay attention on things they like.

2.2.5 TEACHING STRATEGIES FOR TEACHING COMMUNICATION TO LEARNERS WITH AUTISM

Murray (2015) claims that learners with have poor social and communication skills that can limit their communication to others. Murray (2015:67) further reiterate that for learners who lack effective social and communication skills, nearly every aspect of their lives will be rather limited. Education, vocational, recreation and adult relationships will be adversely affected by the lack of communication. Some basic teaching strategies for teaching communication to learners with autism are discussed in the following sections.

2.2.5.1 Pivotal Response Training

Suhrheinrich, Chan, Melgarejo, Reith, & Stahmer (2018:2) define Pivotal Response Training (PRT) is an intervention that integrates principles of child development with those applied behaviour analysis (ABA). ABA provides opportunities for language training within the natural environment of the child. This approach is child-centred; .

According to Sharma, Gokulchandran, Sane, Biju & Shetty (2015:161) maintain that, PRT is specifically designed to increase a child's motivation to participate in new skill. Procedures are used to structure the environment to teach these pivotal skills so that broader areas of social and communicative functioning are improved. Suhrheinrich et al (2018:8) point out pivotal areas to be targeted include motivation, joint attention, responsibility to multiple cues, self-management, self-initiation and empathy. Motivation refers to finding the items the child is interested in; this will help the child to communicate if they choose something that they enjoy most. Farrell (2016) argues that motivation is also increased through turn-taking, giving the child choices and reinforcing attempts to carry out tasks (not just successful task completion). This is expected to enable the child to respond to day-to-day opportunities to learn and interact.

ABA is an effective communication strategy that gives the child a sense of control over their environment by being able to make simple choices in everyday routines and activities (Farrell, 2016). Suhrheinrich et al (2018) affirm that PRT is useful in classroom as this is a natural setting for children with autism. PRT provides support during completion of homework. It allows a child to choose the location for the work and how they want to complete the work, and this will facilitate cooperation (Koegel & Koegel 2019) For example, learners can practise spellings using the names of their favourite cartoon characters. This will help learners to participate more in class.

2.2.5.2 Augmentative and Alternative Communication

Bedwani, Bruck, Costley & Wang (2015) assert that children diagnosed with autism spectrum disorder often have restricted verbal communication. For the children who do not use functional speech, augmentative and alternative communication (AAC) devices can be an important support. Bedwani et al (2015) further argue that augmentative and alternative communication strategies (AAC) and devices help to bridge this gap from a life where thought, feelings and needs are suppressed to a life where interaction, expression and learning are possible.

Logan, Iacono & Trembath (2016) state that AAC intervention have been shown to be effective in supporting learners with autism to communicate, particularly to request

preferred items and activities. Speaking is how people normally communicate with those around them, but this option is not easy for learners with autism. As a result, these learners are often labelled as non-verbal and, even though they may know a lot of things which they would want to communicate with those around them, they will not be able to utter the words. Brady, Bruce, Goldman, Erickson, Mineo, Ogletree, Paul, Romski, Sevcik, Siegel & Schoonover (2016) point out that learners with autism have the right to communication.

Douglas & Gerde (2019) allege that augmentative and AAC is used to describe any form of communication that a child can use; for example, pictures, gestures, sign language and visual boards. Most of the children with autism are visual learners: they understand what they see rather than what they hear. Therefore, using visual support with spoken language helps them to understand what we say. Visual support can be in the form of pictures, picture symbols and hand gestures.(Pansegrouw & Boda 2015) Visual supports help children with ASD to process language and organise their thinking (for example, when you just say "your hand", they might not grasp what you mean, but if you use an accompanying picture or gesture, this has a more lasting effect on learning).

 Nunes (2015:102) identify two types of AAC approach: aided messages that require an external aid or device; for example, real objects, photographs, line drawings, devices with speech output; and unaided messages that require only the body; for example, gestures, manual signs and finger spelling.

2.2.5.2.1 Unaided systems

Unaided systems include vocalisation, gestures, pointing and signs. Unaided systems do not need any equipment (Raising Children Network, 2017). Farrell (2016) adds that unaided communication involves the child making a movement or vocalisation that does not necessitate a physical aid or other device.

AAC unaided approach may include direct involvement of a person or objects to communicate for example a learner and pull a teacher to the door indicating that he/she wants to god outside (Ganz., 2015) Some children with little or no functional speech and their communication partners develop their own unique sets of gestures to communicate

specific concepts (Beukelman & Light, 2020). Gestures work effectively to communicate a few basic concepts.

Unaided systems with linguistic features, according to Pansegrouw & Boda (2015), include natural speech, sign language and alphabet-based signs such as finger spelling. According to Bell (2021) the use of sign language in public schools has increased dramatically over the past decade. Sign language is used by the deaf community. A sign language such as South African Sign Language (SASL) is a fully fledged, official language with its own grammar rule and syntax which means that it has the same expressive ability as any other language although it uses signs to express. May (2019) assert that the use of sign language in learners with autism and special needs who fail to acquire spoken language is well documented as a communication modality.

When using aided communication for individuals with little or no functional speech, interventions do not focus on teaching them sign language. Rather some signs from sign language are used within the sentence structure of a spoken language. The strategy is referred to as key word signing, which means that within a particular sentence only the key concepts and not all the words are signed while the speaker is speaking.

Landsberg et al. (2016) indicated one advantage of unaided systems is that the learner does not have to carry anything around. All signs are portable compared to a communication book that might have been left in the classroom. Signing is also useful when teaching learners who are experiencing challenging behaviour to replace that behaviour with something more appropriate. Some learners with little or no functional speech find it easier to learn the meanings of manual signs as opposed to graphic symbols.

Unaided systems however have their disadvantages: the major problem is when learners have to communicate with their peers who do not understand the signs. Landsberg et al. (2016) added, however, that inclusion is paving the way for learners with little or no functional speech to have access to many different communication

partners as they become part of the community. Most of their communication interactions involve a limited number of people and most of these will be adults.

Signing also requires some degree of motor control; for example, if a learner with cerebral palsy who is unable to use hands cannot sign, they will also find it difficult to make gestures. Signs are also dynamic and sometimes changeable. Learners also have to remember what the sign looks like and how to sign.

2.2.5.2.2 Aided systems

The Raising Children Network (2017) points out that aided systems can be low tech or high tech. Low tech systems use equipment like cards, boards or books with photographs or pictures that represent tasks, action or objects. Learners with autism learn to use these tools to understand what people are saying, ask for what they need, and answer other people's questions. PEC and visual timetables are example of this kind of system.

High tech systems include speech-generating devices (SGD). Learners with autism are very good at visual processing: they might be able to combine this ability with SGD to improve their communication.(Nunes, 2015:99).Aided systems representation includes the visual, auditory, or tactile presentation of communicative messages, symbols and code from which individual select (Beukelman & Mirenda, 2013). Most technologies use aided symbols with visual display of pictures, alphabet, pictorial symbols or cards.

An aided system, according to Landsberg et al. (2016), includes orthographic systems such as traditional orthography or print as well as techniques that represent traditional. Orthography refers to alphabet letters that are used to encode the language of the particular community in written form. Aided systems provide a way of participation for learners with little or no functional speech with a variety of communication patterns. Many of the pictures used are easy to understand. Learners do not have to remember how to make the symbols in order to reproduce them. When using a communication board or book, it might also be difficult to expand the system because there may not be sufficient space to add symbols (Landsberg et al, 2019)

2.2.5.3 Social Stories as a Strategy for Teaching Communication

According to the Raising Children Network (2017) "social stories" are "stories to explain social structures to children with autism spectrum disorder (ASD) and help them learn socially appropriate behaviour and responses". They were developed for use with children with ASD. The social stories concept was developed in 1991 by Carol Gray, a teacher working with young children with ASD.

Sha'arani & Tahar (2017:140) point out that social stories are short descriptions of a particular situation, event or activity. Farrell (2016) argues that social stories are intended to help learners understand the social environment and how to behave suitably in it focusing on a desired outcome. Sha'arani & Tahar (2017) also state that social stories use empirically supported components including repetition, practice, and feedback. The main goal of the story is to increase the child's understanding of the situation and to become more comfortable in the situation. Appropriate responses to the situation are also explained.

Vaughn, Bos & Schumm (2018) indicate that social story interventions are based on the premise that children with ASD are unable to interpret the social context or imagine the perspectives of others during social interactions. Social interactions may evoke challenging behaviour because they are unpredictable and possibly aversive to students with ASD.

Savage & Adreon (2017:59) defines a social story as an individual short story designed to clarify a particular social context, and to individuals of varying abilities and lifestyles. In other words, a social story provides "information on what people in a given situation are doing, thinking or feeling, the sequence of events, the identification of significant social cues and their meaning and the script of what to do and say". Social stories, according to Vaughn et al. (2018), usually use role play, modelling and feedback immediately before the target social situation in order to facilitate acquisition and generalisation.

Benefits of social stories, according to Rymanowicz (2015) are that they:

- Address the perspectives, thought and emotion of others.
- Present information on a social situation in a structured and consistent manner.
- Give direct contact with social information (picture and text).
- Provide opportunities for the child to practise skills.

2.2.5.4 The TEACCH Approach

Heslop & Mophosho (2021:24) maintain that TEACCH (Treatment and Education of Autistic and related Communication Handicapped Children) approach is a structured and aims to develop an individualized program for the child in order to meet the child's specific needs. According to Mesibov, Howley & Naftel (2016), TEACCH was developed by the Division of Treatment and Education of Autistic and Related Communication Handicapped Children of University of North Carolina. The TEACCH approach is based on visual presentation.

According to Raising Children Network (2017), TEACCH is for the people with autism of all ages and skill levels. The TEACCH programme is used to promote learning and development, in particular, communication and social skills, independence, coping skills and skills for daily life. The way TEACCH is used depends on the age of a person. TEACCH is based on the knowledge that people with ASD are largely visual learners and it incorporates ways to use this strength in different intervention strategies (Huckvale & Riper, 2016)

Huckvale & Riper (2016:42) describe TEACCH as a structured teaching approach which involves organising the classroom to reduce visual and auditory distractions, thus helping the child focus and ensuring that the teaching process and teaching styles are suitable for pupils with autism. Deolinda (2021) on the other hand, describes TEACCH as a structured form of teaching that focuses on the child's development needs, interests and their skills to develop child's autonomy. Visual information is used to assist meaning and encourage learning and independence. The main purpose is to increase independence and skills of learners with autism. Four components of structured teaching are physical structures, daily schedules, work systems and visual structure and information.

Allen (2015) states that daily schedules, shows the big picture for the day and is generally not specific. Schedules may be presented in an object, a picture, a photo, symbol or written format. Work systems help the learners to organise each specific activity, to learn and to work independently and also to work in pairs or small groups.

According to Landsberg et al. (2016), visual structure and information means that each task should be usually organised and structured to minimise anxiety and possible failure. Visual instruction of what needs to be completed must be shown. This approach will benefit learners at home and in an inclusive environment. It advocates organising the learning environment and producing autism-friendly atmosphere.

2.2.5.4.1 Visual schedules

Allen (2015) defines visual scheduling is a powerful strategy to help children with ASD to learn to transition and adapt from one activity to next. It provides consistent visual cues about the child's daily routines and helps them anticipate what will happen next, thereby reducing anxiety between transitions. A visual schedule is an aided strategy that uses symbols. The symbols must be able to meet child's level of representation as understood by the child. Visual schedules should be used in the home and school environment to ensure consistency. McDonald, Trembath, Ashburner, Costley, Keen (2018) assert that visual schedules are used to orientate learners and provide predictability within the classroom by informing learners of the anticipated sequence of events using a picture. Most teachers have the same way of indicating their classroom routine, but more often than not present it in written form making it incomprehensible for learners who are unable to read.

In the classrooms, schedules using aided symbols can be displayed to indicate the activities the learners will be carrying out on that day. Learners with autism benefit from such schedules (Bornman & Rose, 2017). When drawing up a schedule, the teacher needs to start by writing down in a chronological order, the classroom timetable, and identifying the type of aided symbol that will be used to represent the activities. When implementing a schedule, it should be displayed at an appropriate eye level where all

learners can see and access it. It is important that teachers look for indicators that learners understand the schedule.

2.2.6 INSTRUCTION RESOURCES FOR ENHANCING COMMUNICATION

2.2.6.1 Picture Exchange Communication System

McCoy & McNaugton (2018) assert that Picture Exchange Communication (PEC) has been used to help the learners and youth with ASD develop a system for communication with teachers and peers. PEC was initially developed at the Delaware Autistic Programme as an AAC system and has since been demonstrated in literature to promote speech development. Khoiriyah (2021:113) allude that PEC is important strategy for overcoming communication problems and learning difficulties among learners with autism.

Huckvale & Riper (2016:41) allege that learners use picture or icons to make request, alleviating frustration with their verbal deficits with guided use of PECs, individuals with communication delays or deficits can make requests and correct using these symbols.. PEC method can be a reference method used to train expressive communication for learners with autism (Goa & Derang, 2017) With PEC learners are taught to give a picture of a desired item in exchange for the real item or object. PEC is a system of communication.

There are six phases of PEC instruction according to Zager, Cihak & MacDonald (2017:175). The phases include the following:

- Teaching the physical assisted exchange;
- Expanding spontaneity;
- Simultaneous discrimination of pictures;
- Building sentence structure;
- Responding to "what do you want"; and
- Commenting.

Putri, Hastati & Adi (2018:180) maintain that PEC can be used to make demands and can be extended to other communicative functions, for example, labelling and questioning, and to other contexts, for example, at home.

While any professional, parent and caregiver may use PEC procedures. It is very important for teachers also to be trained. PECs can be implemented anywhere communication is needed at home, school or community.

The inclusion of PEC has helped the children with autism to communicate better with others (Soomro & Soomro, 2018). Researchers have shown that PEC is effective in preschool and elementary children across a range of home, school and community settings. Farrell (2016) also highlight that "Good practice in early stages involves not pre-empting the child's attempts to communicate by volunteering for him the anticipated communication". It is better to wait for the child to hand over the picture conveying the request. Later, the learner is taught to construct sentences and to use pictures to offer comments.

Macintyre (2016:5) maintain that PEC is a gentle method of communication that leaves the children in control of selecting images or symbols to express their needs. Once an adequate number of desired reinforcers has been identified and gathered, the pictures are made. The pictures will vary for each individual, but the aim is to provide enough choices for each learner. Cards can be made using drawing pictures taken with a camera. PEC should be used across the board to assist learners in creating a functional communication system.

2.2.6.2 Communication Picture/Symbol Book

In the early phases of instruction only a few pictures/symbols are used. It is important to have a designated communication book in which commonly used pictures/symbols are stored. Huckvale & Riper (2016) recommended using small three-ring binders with Velcro strips, placed on the cover and inside the file for attaching pictures organised by themes making it as functional as possible

Narayanan (2019) state that the communication books includes multiple pages of symbols, often grouped by category for example food, toy, places with familiar vocabulary to the individual whom it belongs to. Many learners with autism struggle with abstract thinking (Knight & Sartini, 2015) but often have visual strengths therefore communication picture books helps the learners to understand better.

2.2.6.3 Technology Resource for Teaching Communication (Speech-Generating Devices)

2.2.6.3.1 High technology

May (2019) explain that a learner touches picture communication symbols, photographs or written words on the display screen of the device, and the device will say out loud the word, phrase or sentence that the individual intends to express. Having a speech output device with a natural sounding voice enables interaction with a variety of communication partners and increases the learner's motivation to communicate as they view themselves as having a voice (Zager, Cihak & MacDonald 2017)

Savage & Adreon (2017:65) note that computer, phones, tablets and specialised adapted equipment, and many other technological tools and devices support learners with autism in both assistive and instructional ways.

According to Family Online Safety Institute (2010) about 20% to 30% of children with autism are unable to communicate verbally. This challenge can be a constant source of stress for the child if they are unable to express themselves or communicate their needs. In these challenges with poor communication, assistive technologies provide alternative mode of communication. The use of touch-based speech-generating devices (SGDs), speech-generating keyboards and software can help learners with autism (Landsberg et al 2016).

Using technology can improve playing skills, decrease challenging behaviours, provide video models and help with speech for students with autism (Kim & Clarke, 2015). SGDs clarify vocalisation and gestures that the child uses but are not well understood

by others. The sound of voice on the device encourages the child to copy and use their own speech.

The synthesised (computer-generated) voice can be adapted to sound like a boy or a girl or a man or woman. The teacher can also record their own voice or someone else's voice and this is referred to as a "digitised" voice recording. Landsberg et al. (2016) stated that the majority of devices with synthesised speech output also have word prediction, which means that when a letter is typed, a small screen appears with a number of possibilities. SGDs help children with ASD to make choices and make requests. It encourages mutual attention and turn-taking.

2.2.6.3.2 Types of devices

- Dedicated SGDs are devices that have been developed to be used as a communication tool, for example, Big Mack and Super Talker. These devices are generally more expensive but there is a wide range of devices available (Landsberg et al. 2019)

- Non-dedicated SGDs are devices that have been developed for other functions but can be used as a communication tool; for example, cellphone, smart phones, computers, audio recorders, iPads, tablets and iPods (Savage & Adreon, 2017)

According to Landsberg et al. (2019), high technology has its advantages in that the output can be either printed or spoken. Learners can listen to a lecture without reading; however, high technology devices cannot make a person a communicator. Synthesised speech output devices are not available in nine of the eleven official South African languages and even English is not available in the South African accent. In addition, some people do not like the quality of the computer-generated voice. High technology cannot be used in all environments.

2.2.6.3.3 Low technology

Landsberg et al. (2016), states that low technology refers to any systems that do not use a computer chip or integrated circuit and typically refers to all pen-and-paper-based systems. Low technology options can be used as personal expressive communication

systems; for example, communication board or books. Low technology can be used to support organisation and receptive language at home or in the classroom. A communication board displays pictorial symbols on paper, posters, board or other suitable surfaces.

Landsberg et al. (2016) claimed that low technology is easy and quick to develop and communication partners require little training in using them. Low technology can be used effectively as a tool to enrich and expand language. Low technology is also essential as backup system when high technology system fails. According to Nrayaan (2019) low technology has its own disadvantages. It impacts negatively on eye contact (as both the learner and communication partner have to look at the system) and the majority of low technology options lack voice output. Another disadvantage is the fact that people have to be close in order to see what the learner is trying to communicate. It is also difficult to work in a group.

2.3 CONCEPTUAL FRAMEWORK

2.3.1 Cognitive Development

The study is guided by Vygotsky's cognitive development as its conceptual framework with a focus on two main concepts of scaffolding and ZPD. Diehl (2021) maintain that Vygotsky's theory of cognitive development put emphasis on the importance of social interactions as the key ingredients for how humans understand the world. Vygotsky's theory of cognitive development focuses on the relationship of the learner with their teacher, as well as sharing information through language. The Vygotsky's theory of cognitive is relevant to the study as the main aim is to identity the communication support needed by the learners with autism in special classes and to evaluate the challenges the teachers face.

One of Vygotsky's main contributions, according to Eloff & Swart (2018:135), was showing how language plays a central role in cognitive development. Language includes spoken and written language as well as sign language, mathematical language and other symbol systems. Eloff & Swart (2018) further state that language contains

the cumulative social constructions of any community of people. It is a very powerful carrier of values, information and world-views. Language is also the main way in which people communicate in their social interaction. Most of the learners with autism need a range of strategies for communication. Since language is the way in which people communicate with each other (Nel et al., 2016:43). Through language people gain knowledge and experience regarding values, information and world view.

The main aspects of the theory are the role of social context, language and mediation (Donald, Lazarus & Moolla, 2014:77). According to Donald et al. (2014:77), the central point of Vygotsky's theory is the idea that cognitive development takes place through social interaction. From infancy onwards, children construct shared meanings through their social interactions with people such as parents, teachers, peers and others. Children progressively develop new knowledge and meanings and adapt old ones as they bridge the gap between what they currently understand and what confronts them in social interactions.

2.3.2 Vygotsky's Definition of Scaffolding and the Zone of Proximal Development

The two major components of Vygotsky's theory of cognitive development that are important for this study are the Zone of Proximal Development (ZPD) and Scaffolding.

Kurt (2020) asserts that Vygotsky created the concept of the ZPD which came to be a central part of his theory of cognitive development. Language is the way that a child communicates with others and they continue to learn by interacting with those around them (Kurt 2020). For the learners with autism they have communication problems. The researcher has, chosen this theory of cognitive development for this study main aim is to identify the communication support needed by the learners with autism and evaluate the teaching challenges the teachers face.

According to Wearmouth (2016:26), Vygotsky ZPD posits that it is through interacting with others, especially a more knowledgeable other (MKO) that learning occurs and is developed. Vygotsky states that social interaction changes the way people create meaning In relation to this study it was important to explore how teachers interact with learners with autism to improve communication skills so that they will make sense of

what is being learnt in class. Good, functional communication with learners with autism will result in good interaction. Social construction of knowledge, according to Nel, Nel and Hugo (2016:40), it is important for the teacher to know that learner-centred activity based teaching approach is the key to success. On the other hand McLeod (2021) point out that Vygotsky's concept of ZPD also known as zone of potential development is based on the idea that when teaching a child new skills, learners learn best from situations where they can almost complete a task on their own but are not quite there.

According to Vygotsky, mediation through proximal social interaction is the engine that drives development. In other words, mediation is the process through which the child appropriates or takes possession of the cognitive tools that makes the construction of knowledge possible (Donald et al., 2014:79). The child cannot do things on their own but needs the assistance of the parent, teacher, school counsellor or peer. The ZPD is that critical space where a child cannot understand something on their own but through a teacher and through collaboration and interaction, accomplishes the task. Given this indication, learners with autism, as has been mentioned earlier, have a brain developmental disorder which affects their major areas such as a communication disorder, social interaction and behaviour (Landsberg et al 2019). The learners with autism find it difficult to be independent in class compared to normal learners. The best solution is for the teacher to provide guidance and support in the class. The concept of ZPD simply shows how important it is to engage the child in that critical space of potential development.

According to Lantolf, Thorne & Poehner (2015:8) the ZPD is not only a model of the development process, but also a conceptual tool that teachers can use to understand aspects of learners emerging capacities that are in early stages of maturing. Every learner comes to the classroom with their personal cognitive development which is built on previous experiences and existing knowledge (McLeod 2021). This study sought to explore assistance that the teacher gives to learners with autism in supporting the communication skills.

Learners with autism depend on the teacher and support from other stakeholders such as therapists, parents and teacher assistants Therefore it is teacher to ensure that the

gap between what learner know and what the learner can potential achieved is closed through scaffolding. Diehl (2021) posits that scaffolding refers to how MKO tailor their support to meet the needs of the learner. A learner might need very little help with a new task or idea, or need more concrete guidance compared to another classmate. Learners with autism need concrete objects and visual support when teaching (see section 2.2.5.2), so scaffolding is suitable for the study as the study main aim is to identify the communication support for learners with autism and evaluate the teaching challenges the teachers face. On the other hand Kurt (2020) explains that to help learners achieve independence, Vygotsky outlined scaffold as the tool for growth. Learners with autism complete small, manageable steps in order to reach the goal. Learners can achieve their learning potential with guided instruction from their teacher. McLeod (2021) states that teacher's role is to identify each individual's current level of development and provide them with opportunities to cross their ZPD.

A crucial element in this process of cognitive development, is the use of what latter became known as scaffolding, the way in which the teacher provides learners with frameworks and experiences which encourage them to extend their existing schemata and incorporate, new skills, competences and understanding (McLeod 2021). During scaffolding the support offered by the adult (or more knowledgeable other) gradually decreases as the child becomes more skilled in the task.

2.3.3 Influence of Vygotsky's Theory of Cognitive Development in the classroom

Vygotsky's concept of the ZPD is based on the idea that development is defined both by what a child can do independently and by what the child cannot do when assisted by an adult (McLeod, 2021). Both levels of Vygotsky's ZPD are useful for teachers as they help the teacher to know at which level the child is operating. According to Vygotsky, for the curriculum to be developmentally appropriate, the teacher must plan activities that encompass not only what the children can do but what they can learn with the help of others (Karpov & Haywood, 1998). This gives the teachers the opportunity to understand the learners with autism weaknesses and strengths. This theory is appropriate because it also helps the teacher when they are drafting their lesson plans.

Kurt (2020) affirms that Vygotsky's theory of cognitive development focus on the social aspect of learning and the need for support in the learning process. Snice the focus of this study was to identify communication support needed by learners with autism therefore the theory of cognitive development was helpful in supporting the learning process of learners with autism who need communication support and also requires specialised teachers who can provide relevant support to the learners. Vygotsky's theory of cognitive development is beneficial in that it helps teachers to plan their instruction. It helps them to think about the knowledge and skills that their learners are expected to master and determine the order in which to teach.

Since language also plays a central role in Vygotsky's theory of cognitive development and is essential to the development of thinking, the teachers need to teach communication strategies to the learners with autism so that they develop language skills (Kurt, 2020). Vygotsky's theory of cognitive development was an attempt to explain consciousness as the end product of socialisation (Vygotsky, 1978) in Kurt, 2020. For example in the learning of language, the first utterance with peers or adults is for the purpose of communication but, once mastered, utterances become internalised and allow inner speech. Initially, this behaviour begins as a meaningless grasping motion; however as people react to the gesture, it becomes a movement that has meaning. This applies to the learners with autism as they use gestures to communicate (see section 2.2.5.2).

2.4 CONCLUSION

Chapter two was presented in two sections. The first section is the literature review that was focused on autism and the communication support that is needed for learners with autism. The researcher first described what communication is and what types of communication problems learners with autism have. Teachers' challenges with dealing with learners with autism were also highlighted. Various strategies for communication support were discussed such as PRT, AAC, social stories and the TEACCH approach. The researcher also highlighted the instructional resources for enhancing communication which are PEC, Communication Picture books and technology resources for teaching communication.

The second part dealt with the theory of Vygotsky's (1978) cognitive development and the main concepts of the ZPD and scaffolding. Teachers need to be familiar with the theory because it will help them to plan their teaching to accommodate the level of development of the learner. The following chapter deals with the research design and methodology of the study.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

The chapter begins with an account of the research design, research approach and research paradigm used in this study. The population and sampling procedures are explained, followed by an explanation of the data generation process, data collection strategy and data analysis methods. The chapter also discusses the ethical considerations.

3.2 RESEARCH DESIGN

The term research design is used in this literature to encompass all the decisions involved in planning and executing the research project from identifying the problem through to reporting and publishing the findings (Punch & Oancea 2014:142). Harding (2018:34) state that the research design represents a practical plan for the methods to be used incorporating sampling, data collection and data analysis which is drawn up in accordance with the decisions that have been made about methodology. The research design indicates the general plan, how the research is set up, what happens to the participants and what methods of data collection are used. Sileyew (2019) on the other hand posits that research design is intended to provide an appropriate framework for a study. Therefore, the research design is a plan to answer the research questions. This study adopts a case study design because it aims to achieve an in-depth knowledge and understanding on communication support needed by the learners with autism.

According to Kumar (2019:208), a research design is the road map that a researcher decides to follow during their research journey to find answers to a research question as validly, objectively, accurately and economically as possible. Therefore, a research design is a plan of what the researcher decides and communicates to others regarding how they will collect information and analyse data and how they will communicate their findings. In this current study, the researcher explored multiple case designs.

3.2.1 Case Study

The study adopted the multiple case study approach. Cohen, Manion & Morrison (2017) assert that a case study provides a unique example of real people in real situations, enabling readers to understand ideas more clearly than simply by representing them with abstract theories or principles. Harding (2018: 35) notes that a case study can take any number of forms; for example, a researcher may choose to study one school, prison, maternity unit or social network. The researcher used a multiple case study to determine in depth the kinds of communication support needed by learners with autism and the challenges the teachers face.

There were two special schools involved. The special schools were similar because they both catered for learners with autism and had same teaching and learning approaches. In this study, the unit of study was classroom teachers of learners with autism in Umlazi District of Education. This study aimed to investigate ways of providing communication support for the learners with autism and the teaching challenges the teacher faces

3.3 RESEARCH APPROACH

The study used the qualitative approach. Leedy & Ormrod (2015) maintain that qualitative research approach is used to seek an in-depth understanding of the phenomena, situation, problem or event in a naturalistic setting. In addition, Pathak, Jena & Kalra (2013) assert that qualitative research gives voice to the participants and enhances the involvement of everyone related to the study. Harding (2018:17) describes qualitative research as visiting one particular site and getting to know about it in detail. He further suggests that qualitative research often takes a longitudinal approach, which involves collecting data at several points in time, in order to build up a holistic picture. The researcher collected data through interviews, observations and document analysis.

According to Bhandari (2020), qualitative research involves collecting and analysing non-numerical data to understand concepts, opinions or experiences. It can be used to gather in-depth insights into a problem or generate new ideas for research. Therefore,

the researcher chose to observe teachers while they were teaching the learners and also to interview the teachers directly to be able to obtain the most relevant data. Qualitative research also allows the researcher to ask questions that cannot be easily put into numbers. In this study, the researcher's main aim was to find out what was happening in the classroom of learners with autism especially communication with non-verbal autistic learners.

3.4 RESEARCH PARADIGM

In this current study the researcher used the interpretivist paradigm with the purpose of seeking the actual reality of a specific situation (Cohen et al. 2017). Therefore, this is specific way of perceiving the world (a worldview) that shapes how we seek answers to research questions. Cohen et al. (2017) further add that an interpretivist paradigm is more concerned with the understanding of the subjective world of human experience.

The interpretivist researcher relies upon participants' views of the situation being studied and recognises the impact of the research on their own backgrounds and experiences (Creswell, 2014). In the current research, the researcher collected data through interviews, observations and document analysis. There was first-hand information on the communication support needed by the learners with autism. The participants who were classroom teachers of learners with autism were observed by the researcher. The research was not conducted in the school where the researcher teaches so this approach gave the researcher the opportunity to understand the communication support needed by the learners with autism.

3.5 POPULATION AND SAMPLING

McMillan & Schumacher (2014) define population as a group of individuals from which the researcher draws a sample to enable the researcher to generalise the results of the research. This sampled group is also referred to as the target population. The focus of this study was two special schools in Umlazi District of Education as mentioned above.

Johnson & Christensen (2014) describe sampling as the process of drawing a sample from a population. Cohen, Manion & Morrison (2018:202) suggest that there are two

main methods of sampling. The researcher must decide whether to opt for a probability (random sample) or a non-probability sample (also known as a purposive sample). Purposive sampling strategy was used in this study because the participants were selected purposely to give the relevant information on the study. Crossman (2020) states that purposive sample is non-probability sample that is selected based on characteristics of the population and the objective of the study. Purposeful sampling applies to both individuals and sites. Johnson & Christensen (2014) claims that in purposive sampling the researcher specify the characteristics of a population of interest and then tries to locate individuals who have those characteristics.

Purposive sampling is used in order to access knowledgeable people for example those who have in-depth knowledge about a particular issue (Cohen, Manion & Morrison, 2018:203).For the purpose of the current study, six qualified teachers from the two selected schools from Umlazi District of Education. The teachers have three-year teacher education qualification and teaching experience of at least two years teaching learners with autism. Purposive sampling was the most cost effective sampling method to use since the participants were chosen from the nearby school not far away from where the researcher teaches, so it is not expensive on travelling. Two special schools in Umlazi District of Education were selected in the study because they were available and convenient and represented the characteristics the researcher seek to study, which were the learners with autism and their teachers.

3.5.1 The site

McMillan & Schumacher (2014:326) note that site selection determines the best sites to gather data. Two schools were chosen in Umlazi District of Education which the researcher named Sipho School for the deaf and Greenside Special School, for anonymity. Umlazi is a township on the east coast of Kwazulu-Natal Province South Africa located south west of eThekwini Municipality. It is the fourth largest township in South Africa.

3.5.2 Brief Description of the Sample Schools

3.5.2.1 Sipho School for the Deaf (Pseudonym)

Sipho School for the deaf is situated in Chatsworth in Umlazi District of Education. The school has 83 learners of which 23 learners are autistic and the others are deaf and hard of hearing. The teaching staff comprises nine qualified teachers and four teacher assistants. The school has a unit of autism and three teachers are employed to teach learners with autism. The school uses IsiZulu and South African Sign Language as their language of teaching and learning. Although the school is situated in Indian area, most of the learners come from Umlazi Township. The school comprises of Black African and Indian teachers. The running of the school is governed by the SGB and the School Management Team (SMT).

3.5.2.2 Greenside Special School (Pseudonym)

Greenside Special School is situated in Umlazi District of Education. The school is under the public school act (South Africa Act No 84 of 1996d; Section 28).The school has 600 learners and teaching staff of 40. The school has a unit of autism which has six classrooms with six teachers and six teacher assistants. The home language at the school is English. The school comprises of Whites, Indians and Black African teachers. The school is governed by the SGB and the SMT. The school has a speech therapist that assists in the teaching of the learners with autism.

3.5.3 Profile of Participants

There were six teachers, three from each sampled school who were involved in this study. The teachers were chosen because they were the ones that taught learners with autism and they had knowledge and experience in teaching learners with autism. The teachers were supportive and willing to participate in this study. The participants were asked to give the researcher brief information about themselves before the interview.

3.5.3.1 Profile of participants at Sipho Special School

The profile of the interviewees is presented in Table 3.1

Table 3.1: Sipho Special School Interviewees

Participant	Gender	Qualification	Teaching experience	No of years teaching learners with Autism	No. of learners in class
Teacher A	Female	B.ED Foundation Phase, Hands-on Autism	5 years	5 years	10
Teacher B	Female	B.ED Foundation Phase	4 years	3 years	14
Teacher C	Female	B.ED Foundation Phase, Makaton Training	5 years	5 years	11

Teacher A was a female teacher who has taught for ten years in Grade one, and with five years of experience in teaching learners with autism. Teacher A had a teacher assistant who helped in her class. She indicated that out of ten learners in her class, nine of them had a problem of communication, which means they were non-verbal. One of the learners was able to communicate although it was one word or just a phrase.

Teacher B was a female teacher who has taught for fourteen learners with three years of experience in teaching learners with autism. From the fourteen learners in her class, ten were non-verbal and experienced communication problem, they could only say one word or a phrase. The learners could not sit together so she spaced them to avoid disruption in the class. She also had a teacher assistant to help her in classroom.

Teacher C was a female teacher who has taught Grade three and with eleven learners. All the learners were non-verbal and had communication problems. She indicated that some of the learners had a challenge of writing and they did not want to write at all; they only wanted to play.

3.5.3.2 Profile of participants at Greenside Special School

The profile of the interviewees is presented in Table 3.2

Table 3.2: Greenside Special School Interviewees

Participant	Gender	Qualification	Teaching experience	No of years teaching learners with Autism	No of learners in class
Teacher D	Female	BED Psychology, Honours BED Inclusive Education, Masters in Inclusive Education	12 years	7 years	26
Teacher E	Female	Diploma in Primary Education, Honours in Waste Management, Certificate in Inclusive Education	21 years	9 years	7
Teacher F	Female	Junior Primary Teaching Diploma, Honours BED Inclusive Education, Advanced counselling	26 years	6 years	7

Teacher D was also a female teacher teaching a class with learners learning at different level. She had an experience of seven years in teaching learners with autism. She grouped her learners in three groups and put them in level one, two and three. It was very difficult for her to manage the class because the learners operated at different levels for example some learner are slow learners and others are fast learners. Most of her learners are non-verbal and sometimes uses body language to communicate. She highlighted that she has a problem in communication in her class.

Teacher E was also a female teacher teaching Grade 2 class. The teacher had nine years of experience in teaching learners with autism. She had also attended autism

training workshops to improve her skills of teaching learners with autism. She was also involved in support group for autism. She helped parents with learners with autism with more information on autism. There were seven learners in her class with a teacher assistant assisting in the teaching and learning of learners with autism. She highlighted that her first time teaching learners with autism was very difficult especially on communication. But with time and workshops she attended she managed to get communication support for the learners with autism. She was the one who was assisting other teachers with her expertise.

Teacher F was also a female teacher with six years teaching experience with autism. She had seven learners in her class and six of them were non-verbal. She attended several workshops for autism to gain skills in teaching learners with autism. She also intended to study further on autism.

3.6 DATA GENERATION PROCESS

3.6.1 Interviews

This current study used semi-structured interviews as a method of generating data. Harding (2018:65) states that semi-structured interviews are likely to be appropriate in many research situations and are recommended for the new research because as their name suggests they provide some structure and guidance. According to Kumar (2019:281) in structured interview the researcher asks a predetermined set of questions, using same wording and order of question a specified in the interview. The researcher prepared interview schedule which had a written list of questions to interview the teacher (see Appendix G). A predetermined number of questions were asked which focused on the communication support needed by the learners with autism.

Johnson & Christenson (2014) defines interview as a data collection method in which an interviewer (the researcher or someone working for the researcher) ask questions of an interviewee (the researcher participant). Johnson & Christenson (2014) further claim that qualitative interviews consist of open-ended questions and provide qualitative data. The researcher asked several types of questions such as yes or no and open-ended questions. The interviews were conducted face-to-face between the researcher and the

participants. In this current study, the researcher had to seek an understanding of how much the teachers knew about communication support needed by the learners with autism.

Sileyew (2019) argues that an interview is a loosely structured qualitative in-depth interview with people who are considered to be particularly knowledgeable about the topic. Six teachers three from Sipho Special School and three from Greenside Special School who were teaching learners with autism were interviewed on the communication support needed by the learners with autism and the challenges the teachers faced. All the interviews were recorded in order for the researcher to listen later afterwards on their responses. The researcher also took notes. The interviews were conducted at each school premise in the teachers' classroom after teaching hours so as not to disturb teaching and learning. All the interviews took between thirty minutes and an hour. Each teacher was interviewed using the interview guide questions on one to one basis. English was used as a medium of communication during the interviews.

3.6.2 Observations

In this current study the researcher used observation as a way of collecting primary data. Kumar (2019:274) alleges that observation is a way of watching and listening to an interaction or phenomena as it takes place. Kumar (2019:274) further adds that there are two types of observation participant observation and non-participant observation. Participant observation is when you as a researcher you participate in the activities of the group being observed in the same manner as its members with or without their knowing they are being observed. Non-participant on the other hand is when you, as a researcher do not get involved in the activities of the group but remain a passive observer, watching and listening to the activities. The researcher was a non-participant in the classes that she observed. The researcher had an observation checklist that she was using to observe the lesson being taught, which highlighted how the teachers interact and teach the learners with autism. The observation checklist is attached on the appendix F

Cohen et al. (2018:542) allege that observation is a process of systematically looking and noting people, events, behaviours, setting and routines. The researcher took a close monitor on how teachers communicate with their learners with autism and the support they give to the learners. The researcher took notes during the class activities. Six teachers were observed in their classrooms for five days. The researcher observed each teacher conducting daily activities. The researcher was particularly checking on the resources the teachers were using for supporting learners with autism for communication and how they were used. Observation was conducted during the class activities during the day and the researcher was sitting alone a bit far from the learner so as not to disturb the learners.

3.6.3 Document Analysis

Document analysis is an effective way of gathering data. The researcher used the document analysis to collect more useful data. Leedy & Ormrod (2015) points out that document analysis sheds significant light on the phenomena that is being investigated. On the other hand, Harding (2018:46) notes that a key advantage of using documents is that they are often easy to access and save much time that is usually associated with data collection. The documents were obtained by seeking permission from the principals of the sampled schools. The teachers were willing to share their documents with the researcher.

The researcher viewed documents such as lessons plans, Curriculum and Assessment Policy document (CAPS), Policy on Screening, Identification, Assessment and Support Department of Basic Education (SIAS), Individual Support Plan (ISP) to see how the teacher implemented these documents in supporting communication to learners with autism. The documents provided more evidence on answering research questions posed in this current study. The researcher looked at each document and took notes from the documents.

3.7 DATA ANALYSIS

3.7.1 Introduction

Qualitative data analysis concerns the researcher's move from data to understanding, explaining and interpreting the phenomena in question (Cohen et al., 2018:643). In this study, there was large quantity of data from interview, observation and document analysis that was analysed, interpreted and summarised.

3.7.2 Identification of Themes

Bhatia (2018) maintains that the research will start by reading the data several times to get familiar with it and start looking for basic observation or patterns. This also includes transcribing the data. In the current study the researcher used thematic analysis and put data into themes. The researcher read, sorted and organised the notes according to the research questions in order to identify and establish the themes in the study. The data from semi-structured interviews, observation and document analysis was first coded into meaningful units, then cluster to categories and then group into themes. In the current study the data was collected and supported by the information from the participants through interviews, observations and document analysis.

Before listing the identified themes the following steps were followed. The researcher used the guidelines of Creswell (2014). Data collected was read thoroughly and different responses were taken. Data was grouped and narrowed according to the similarities of the responses. Data was then broken into smaller groups. Possible themes were identified

The following themes were identified by the researcher:

- effective ways of providing communication support to learners with autism and the communication strategies
- resources needed to enhance communication skills to the learners with autism
- collaborations with others in helping learners with autism in communication
- challenges teachers face in teaching learners with autism.

The second stage was coding. Harding (2018:107) asserts that coding involves attaching labels to data in a manner that captures the meaning while reducing the amount of content.

3.8 TRUSTWORTHINESS

Korstjens & Moser (2018), postulate that the quality criteria for qualitative research are credibility, dependability, transferability and confirmability. According to Guba (1981) cited in Nieuwenhuis (2016:123) trustworthiness refers to the way in which qualitative research works makes sure that transferability, credibility, dependability and confirmability are evident in their study. Trustworthiness or rigour of a study refers to the degree of confidence in data, interpretation, and methods used to ensure the quality of a study (Polit & Beck 2014)

3.8.1 Credibility

Polit & Beck (2018:295) allege that credibility is the truth value of data and its interpretation. While Kumar (2019:315) argues that credibility in qualitative research refers to a situation where the results obtained through qualitative research are agreeable to the participants of the research. Furthermore, Trochim, Donnelly & Arora (2016) assert that credibility is like internal validity and refers to how the study's results represent the research participants' perspectives. Therefore, the researcher ensured that the relevant information was collected through observation and interviews with the teachers who are teaching learners with autism and also through document analysis. After transcriptions were done the researcher returned to the participants to check if they were true reflection of what they had said. The use of audio recording during interview also enhanced credibility.

3.8.2 Transferability

Pilot & Beck (2018:296) argue that transferability is the extent to which findings have applicability in other settings or groups. On the other way, Kumar (2019:315) notes that transferability refers to the degree to which the results qualitative research can be generalised or transferred. On the other hand, Cohen et al. (2018:248) describe

transferability as the degree to which the results can be generalised to the rest of the population. The design of the study consists of multiple cases, (two special schools who enroll learners with autism were selected to conduct the study), three data generation were used (interviews, observation and document analysis). The findings from the two schools can be applied to other special schools that have learners with autism although schools differ some of the findings will be useful to the learners.

3.8.3 Dependability

Korstjens & Moser (2018:121) claim that dependability refers to evidence that is consistent and stable over time and different conditions. On the contrast, Polit & Beck (2018:297) assert that dependability involves participants' evaluation of the findings, interpretation and recommendations of the study so that these are supported by the data as received from participants of the study. The researcher made sure that the research was consistent through interviews, observations and document analysis through checking on every stage of the study and did not change during the process. All information collected to be relevant, the class visits to be consistent. All information collected to be audited as to confirm the accuracy of the findings and to ensure the findings are supported by data collected.

3.8.4 Confirmability

Holloway & Galvin (2016:309) assert that confirmability refer to objectivity while Polit and Beck (2018:296) confirm that confirmability involves the extent to which the study results are derived from the characteristics of the participants and the study context, not from the researchers' biases. It is the degree to which comparable results could be obtained by the other researcher following the same research process. The effect of the body language and non-verbal communication will take into consideration. Confirmability was addressed by making the methods and process of the study transparent to the participants. The researcher documented the procedures for checking and rechecking data collected throughout the study. The researcher also did audit that examines the data collection and analysis procedures.

3.9 ETHICAL CONSIDERATIONS

Ethical consideration is very important before collecting data. Leeroy & Ormrod (2015:120) posit that most ethical issues in research fall into one of four categories; protection from harm, voluntary and informed participation, right to privacy and honesty with professional colleagues. Therefore, the researcher applied and sought permission from the Ethics Committee in the College of Education at UNISA and the principal of the two schools chosen. The permission was granted to the researcher. The researcher visited the schools to inform the principal and the teachers who were participants about the nature of the study. The researcher clearly stated purpose and aim of the study. The researcher gave participants consent forms which they completed and signed they participated in the study. The participants were also informed that they had a right to withdraw from the research at any time if they felt uncomfortable. The letters were also drafted and sent to the parents to agree that their children would be observed in the classes.

Any research study involving human beings must respect participants' right to privacy (Leedy & Ormrod, 2015:120). The researcher ensured the anonymity and confidentiality of the participants by informing the participants that their real names are not going to be used. The researcher used pseudonyms such as teacher A, teacher B and so on. It is important to ensure that the privacy of research participants is protected at all times.

3.10 CONCLUSION

In this chapter the research design which is the case study was discussed that involves an intensive study of a relatively small number of learners and the research approach which is the qualitative research was discussed and is suitable for the study. The research paradigm was also discussed. The study used the interpretive paradigm. The purposeful sampling method was used in the study. Six qualified teachers who were teaching learners with autism from two schools in Umlazi District of Education and their learners were selected to participate in the study.

Data collection instruments were stated as the interview, observation and document analysis. Then the process of data collection was also explained, and data analysis was

discussed. Furthermore, the trustworthiness of qualitative research was discussed as the credibility, transferability, dependability and confirmability. Ethical consideration was also stated in this chapter. The next chapter presents the data and the analysis.

CHAPTER 4

PRESENTATION AND ANALYSIS OF FINDINGS

4.1 INTRODUCTION

The previous chapter outlined the researcher's methodology adopted in the current study. Chapter 4 focuses on the presentation and analysis of data per themes. The data generated from the interviews, observations and document analysis are presented. Furthermore, the main research question which is about the effective ways of providing communication support for learners with autism and the challenges the teachers face is discussed. Cross-references to the literature are used in the discussion of the themes.

4.2 PRESENTATION AND ANALYSIS OF FINDINGS

The data from the interviews, observation and document analysis were grouped into four themes identified in Chapter 3 as follows:

4.2.1 Theme 1: Effective Ways of Providing Communication Support for Learners With Autism and the Communication Strategies.

The communication strategies used with the learners with autism fall under three broad categories: the Augmentative and Alternative Communication (AAC); the TEACCH approach; and Social Stories

4.2.2.1 Augmentative and Alternative Communication (AAC)

Wearmouth (2016:95) argues that AAC is used to describe any form of communication that a child can use; for example, pictures, gestures, sign language and visual boards. Below are teachers' responses when they were asked about communication strategies they use when teaching learners with autism:

Teacher A: "I cut and stick pictures in that way the learners understand the concept better."

Teacher B: "I do use AAC. I communicate using pictures and posters in my class so that the learners understand."

Teacher C: "Learners with autism are visual so I use pictures and word match in my class."

Teacher D: "When am teaching I use sign language and body language in my class."

Teacher E: "I prefer using charts with pictures when teaching my learners."

Teacher F:" My learners enjoy cutting and pasting pictures and in this way they will be learning new words."

From the responses above, it is clear that teachers from Sipho Special School use pictures, gestures, sign language and visual boards to communicate with learners with autism. The teachers from Greenside Special School, on the other hand, said that they used the AAC aided and unaided approach.

Most noticeable from the observations (Appendix F) were the picture cards. From Sipho Special School, story books with pictures were common in most of the classes. For example, on the issue of Covid-19 for the learners to understand on the social distancing and sanitisation, the teachers and learners had to draw pictures for the learners to understand better. Learners had to draw their masks in their books. Most of the learners with autism are visual learners: they understand what they see better than what they hear. If a word or a topic is accompanied by a picture the learners tend to understand more.
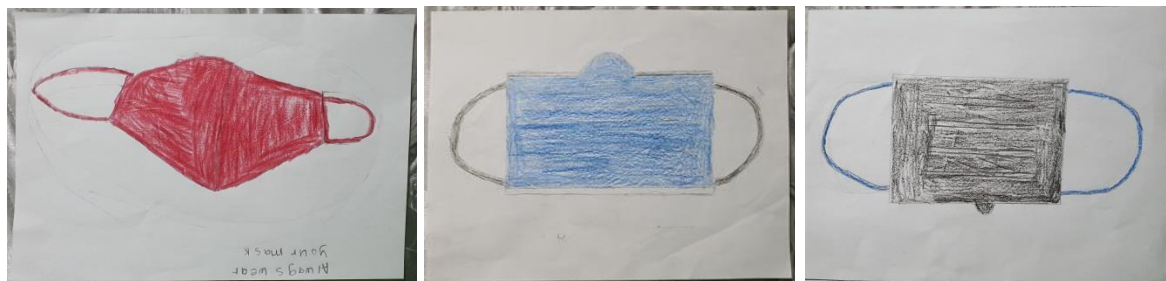
Figure 4.1: Masks drawn by the learners

It was noted from the observation in the classrooms that teachers from Greenside Special School also used pictures to communicate with the learners with autism. Other learners used gestures when requesting something from the teachers which the teacher sometimes failed to understand. Sometimes the learner held the teachers' hand and went to where the thing was. When the teachers were teaching, they used visual support for the learners to fully understand the concept. AAC was most used in the classroom as a teaching strategy by the teachers from both participating schools to support communication to learners. Some of the learners pointed to the things they wanted from the observation that was done by the researcher. Tullio (2021) emphasises that body language is the use of physical behaviour, expressions and mannerisms to communicate non-verbally. The researcher observed teachers from Sipho Special School that if they asked their learners something, the learners would shake their heads to show something they disliked or did not agree with. The gestures included direct involvement of a person or using an object to communicate. The researcher also observed that use of AAC devices or signing for learners using these supports was encouraged in all situations, and the learners were not denied access to their communication systems by the teachers.

Teachers that were observed from both participating schools use Makaton as a way of communicating with the learners with autism. Makaton is a language that uses a combination of speech, signs and graphic symbols as a communication aid for people who have difficulty speaking (Makaton South Africa 2013). The teachers taught the learners how to sign, for example, cup or toilet, so when the learner wants to go to the toilet, they would sign the word toilet to the teacher. Most of the learners preferred using sign language or just pointing to something they needed.

Teachers at Greenside Special School used the Differentiated Curriculum and Assessment Policy Statement (D CAPS) for the learners with autism. The Differentiated CAPS is based on the mainstream CAPS but is adapted for special needs learners such as learners with autism. Although some learners with autism are gifted they can be disadvantaged in using Differentiated Curriculum which is for learners who have Severe

Intellectual Disability. Teachers at Sipho Special School planned for individual learner because some learners grasped the concept easily and some needed more time. The instructional methods reflected the unique needs of learners. Teachers at both participating schools stated the communication support they use in their lessons plans. Learners especially with autism learn at different levels so the teachers had to plan for each individual learner.

4.2.1.2 The TEACCH approach

The teachers were asked about the communication strategies they used when teaching learners with autism. Below are the teachers' responses:

Teacher A: "In my class I have a workstation which shows the learners what they are expected of doing. I always draw a picture to show what work the learner need to do. My learners respond very well, and they finish their tasks."

Teacher B: "I have a workstation which has limited distraction. I provide my learners with a visual structure that shows the learner what they are expected to achieve."

Teacher C: "In my class, my learners have their own desk which has two baskets, the one with work to do and the other one to put finished work. All the work is indicated by a picture for the learners to understand."

Teacher D: "I use TEACCH approach when teaching my learners. It helps them to understand better. After I give them oral instruction I also emphasise with the use of concrete and visual objects. It's a good way of communicating with learners with autism."

Teacher E: "TEACCH approach has worked very well in my class. When we are doing project, I always show the learners the picture of the finished product so that they will understand how the project is going to be like."

Teacher F: "My learners understand better their routine in the class because the routine is structured with pictures"

The interviews revealed that teachers employed different ways of communication strategies; for example, TEACCH. Teachers from both participating schools try to communicate with their learners using pictures or real objects and it was very helpful for the learners to understand. Teachers used a routine with pictures. Deolinda (2021) describes TEACCH as a structured form of teaching that focuses on the child's development needs, interests and skills to develop their autonomy. Teachers said that learners had to look at their visual schedule to see what they were required to do.

Data collected from the observations at both participating schools showed that the visual supports were at the correct level of symbolic functioning, and were used to enhance predictability, facilitate transition and help convey expectations. The material and furniture in the classroom were appropriate for the learners with autism. The researcher also noted that in each of the six classrooms, the daily classroom schedules were posted at learners' level, were visible and appropriate for the learner's level of symbolic functioning and were used throughout the day. Most of the learners with autism were able to follow the daily schedule. The daily schedule had pictures so that the learners understood better. The researcher observed that teachers at Sipho Special School used visual schedules and activities reflected an appropriate distribution of the curriculum for the age, level and individual needs of the learners in the classroom. Learners with autism benefitted from schedules because they had pictures to look at and follow what they needed to do next.

Data generated from the Differentiated CAPS document showed that workstations with visuals were important to the learners with autism. The DCAPS document showed the teachers how they could support their learners with autism in communication at both participating schools.

4.2.1.3 Social stories

Social stories mean using stories to explain social structures to children with ASD and help them learn socially appropriate behaviour and responses (Raising children network, 2017). Below, are the teachers' responses when they were asked on the communication strategies they use when teaching learners with autism:

Teacher A: "My learners they do not enjoy using social stories in teaching them. They get bored listening to the story."

Teacher B: "My learners sometimes they do not understand the skill that you are trying to teach using social stories."

Teacher C: "I have a challenge with my learners. They do not pay attention when I am trying to tell them a story in teaching a certain skill."

Teacher D: "I use social stories when teaching my learners. It helps the learners to understand better and follow instructions through social stories"

Teacher E: "I use social stories when teaching learners with autism. It helps them to understand the concepts being taught."

Teacher F: "Social stories help my learners follow rules and understand how their behaviour impacts others."

The interviews at Sipho Special School showed that the teachers had a challenge with using social stories as a communication strategy when teaching learners with autism. The teachers said that the learners did not enjoy the stories and, as a result, the learners did not pay attention. Teachers needed to use short stories. However, at Greenside Special School, the teachers used social stories as a strategy and they helped the learners to understand better and communicate with the learners without autism. For example, when a teacher wants the learner to say good morning, the teacher can say "My friend likes it when I tell her good morning", and the sentence can be accompanied by the picture

The observation at Greenside Special School showed that the teachers used social stories for their learners to understand better any situation that the teacher wanted to emphasise. The researcher also observed the teachers made stories using pictures and words. The learners participated well when they were told the stories. At Sipho Special School teachers had a challenge using social stories. They needed more guidance on how to use social stories.

Data generated from ISPs showed that the teachers at Greenside Special School use social stories to help learners to communicate.

4.2.2 Theme 2: Instructional Resources to Enhance Communication Skills Needed by Learners With Autism

4.2.2.1 Picture Exchange Communication

The main purpose of the PEC is to help communication support for learners with autism. The inclusion of PEC helped the children with ASD to better communicate with others (Soomro & Soomro, 2018). PEC can be used on demand and can be extended to other communicative functions, for example, labelling or questioning, and can also be used at home. The following were the teachers' responses when they were asked about what resources they used to enhance communication skills of learners with autism:

Teacher A: "I make my own pictures which the learners use when they are communicating. I print different pictures then laminate."

Teacher B: "I download pictures using my own data and make flashcards with the pictures. Most of the learners, they understand better the concept if there is a picture."

Teacher C: "I make my own pictures and then laminate for the learners to use. If a learner wants to go to the toilet, they take a picture of a toilet and show the teacher."

Teacher D: "I do my own pictures that are suitable for my learners. The learners show a picture if they want something for example if they want a ball, they show me a picture of a ball."

Teacher E:" I make cards using drawings taken with my camera. The learner will hand over a picture conveying the request."

Teacher F: "I make a variety of pictures for learners to use in exchange for the real item or object and this enhances communication to my learners."

The data showed that teachers from both participating schools used PECs for communicating with learners with autism. Teacher F said that the use of PECs

enhanced communication for learners with autism. Teachers mentioned that pictures helped the learners with autism to communicate effectively. Macintyre (2016:5) stated that the successful PEC was a gentle method that left the children in control of selecting images or symbols to express their needs.

The researcher observed that teachers at both schools used a variety of resources such as picture book to communicate with learners with autism in order for learners to improve the communication skills. The researcher observed the use of PEC in supporting communication skills of the learners. Individual schedules with pictures were at child level and were used correctly. The researcher noted during the observation in the classrooms of teachers at Sipho Special School that the PEC for learners was being used and encouraged in all situations and the learners were not denied access to their communication systems. The researcher also noticed that learners' behaviour problems were minimised by the PEC since the learners were using it by choice.

The lesson plan files showed that written lesson plans were available stating the content and the resources the teachers in both participating schools used to enhance communication with the learners with autism. Teachers stated that they needed more resources and activities to enhance communication skills to learners with autism at both participating schools. The teachers at Greenside Special School used the Action Autism document and the PEC in their ISPs.

4.2.2.2 Communication picture book

With the Covid-19 pandemic most of the picture books were pictures of sanitisation, social distancing and wearing of masks.

Figure 4.2: Extracts from communication picture book

In response to the question on what instructional resources can be used to enhance communication skills, the teachers' responses were as follows:

Teacher A: "I google pictures with my own data that are relevant with the topic then make communication books for the learners to communicate properly."

Teacher B: "I make communication books for each learner to use although its time-consuming and it makes it easy when communicating with the learners."

Teacher C: "My learners understand better when using pictures, so I make communication books for them to use but sometimes I fail to find suitable pictures."

Teacher D: "I make communication books for my learners sometimes the learners bring the pictures."

Teacher E: "Our school purchased the communication books to use, if a learner requires anything they can open the book and point at the thing they need."

Teacher F: "We have communication books that we use when communicating with learners with autism."

Teachers from both participating schools indicated that they had great interest in helping learners with autism to communicate. Teachers at Greenside Special School had communication books that the school purchased. At Sipho Special School, the teachers used their own data and googled pictures and made their own communication books. Teachers at Sipho complained that it was time-consuming making the communication books. Learners with autism enjoyed using the communication books with pictures.

With the use of observation checklist, the researcher observed that the teachers from Sipho Special School made the communication books. Learners with autism took the communication books home to use. The researcher observed that the learners with autism preferred to use communication books when requesting something. Most noticeable from the class observation were communication books, charts and picture

cards which the teachers from both participating schools used in enhancing communication skills of learners with autism.

Teachers from both participating schools were given guidelines using the Differentiated CAPS Document on how to make communication books and how to use them in improving communication skills to learners with autism. The document helped the teachers with ideas on how make communication books although the teachers from both schools did not follow the guidelines shown in the document very well.

4.2.2.3 Technology resources for teaching communication (speech-generating devices)

Using technology can improve playing skills, decrease challenging behaviours, provide video models and help with speech for students with autism (Kim & Clarke, 2015). Below are the direct responses from the teachers in response to the question about how they use technology to support teaching and learning to their learners with autism:

Teacher A: "Besides the pictures we use videos songs, using my personal phone as a resource for communication."

Teacher B: "I download my videos at home using my own wifi and play to my learners with autism and learners will sing along the songs."

Teacher C: "We have few resources to use at our school, so we have to make our own resources. I use my IPad with music video so as the learners will sing along. They will improve their communication skills."

Teacher D: "We have three tablets for three subjects that the school bought. When a learner presses the picture the computerised voice speaks for the learner and this will improve the communication skills. The tablets are not enough for the learners. We have to share with other teachers."

Teacher E: "The learners watch stories from the television. After watching the story, I will ask my learners to retell the story. In retelling the story, the learners with autism will improve the communication. In my class other learners are verbal. They can retell the story properly."

Teacher F: "I use my smart phone to play stories and videos since we have few resources to use at school."

The use of technology was mentioned by the teachers from both participating schools. Teachers from both schools commented that learners with autism were visual learners, which means they learned well from visual media. Thus, technology was a valuable tool in learning. The teachers indicated that devices like tablets and other hand-held devices were useful tools because they were flexible. The teachers also noted that technology made visual images more accessible to the learners with autism. Some teachers from Greenside Special School mentioned that learners with autism had difficulty with fine motor skills making handwriting difficult. Some learners were unable to write but with the use of technology they could type their work. Teachers at both participating schools had a concern that the resources were insufficient and sometimes they used their own devices.

At Greenside Special School, the researcher observed that the school had a computer room that the learners used to do their work on the computer. It was observed that technology helped reduce the frustration the learners had in writing. From the researcher's observations, learners were very happy and eager to learn using technology. Beals (2017) states that individuals on the autism spectrum often found computerised environments less stressful than face-to-face communication. The researcher observed the teachers using tablets which had visual schedules that helped the learners to complete tasks and work that they were given. Teachers gave learners pictures to look at and learners did their work.

From observations, teachers from Sipho Special School used smartphones to do video modelling; for example, the teachers took a video to show the learners the steps required for hygiene; for example, for brushing their teeth. The learners watched these videos many times and this helped them to learn important life skills included in the Life Skills curriculum on the topic of Health.

In their lesson plans, teachers at both participating schools stated that technology was one of the resources they used to enhance communication skills for learners with

autism. The teachers stated that they could use devices such as the television to watch their social stories. Other teachers at Greenside Special stated that they used computer for the learners to write answers.

4.2.3 Theme 3: Collaboration With Others in Helping Learners With Autism in Communication

The SMT is responsible for the professional management of the school which includes all activities that support teaching and learning. The teachers indicated that they interacted with and obtained support from the following people: Principal and head of department (HOD), School Management Team (SMT), support from other teachers, therapists, psychologists and parents and the District Based Support Team (DBST).

4.2.3.1 Support from the principal and head of department

Teachers were asked the question on the extent to which their Principals and HOD (SMT) support them. Below are the teachers' responses:

Teacher A: "I get support from the principal but on the resources, it's still a problem."

Teacher B: "I do have support from the SMT we always have one-on-one with the SMT and this helps us to ask help on the teaching communication skills to learners."

Teacher C: "I have full support from the SMT although I need more resources to use."

Teacher D: "I have full support from the SMT. Principal always sent us to workshops to get more information on teaching learners with autism. We also have staff development workshop."

Teacher E: "Our principal supports us although we do not have enough resources. Our school pays us for the workshops to attend relating to autism."

Teacher F: "I get full support from the principal. We are sent for workshops relating to autism to acquire more knowledge although we still need more training. We work as a team."

The above responses of the teachers at both schools indicate that the SMT members play a vital role in supporting learners with autism. Teachers noted that the SMT played a major role in providing resources for teaching communication skills to learners with autism. However, some teachers at Greenside Special School highlighted that the resources were insufficient, and they used their own laptops. Teachers spoke about their good relationship with the SMT.

The researcher observed at both schools that the HOD in the Autism Unit provided guidance on the teaching of learners with autism. The HOD at Sipho Special School worked with the teachers on the resources needed to support learners with autism. The researcher noticed that the HODs at Greenside visited the teachers and encouraged them to use their communication books in communicating with learners with autism.

4.2.3.2 Support from other teachers

In response to the question on the extent to which other teachers in their school supported them in providing communication support to learners with autism, teachers' responses were as follows:

Teacher A: "I get full support from the other teachers. We work together as a team."

Teacher B: "I work with other teachers. We normally sit together and do lesson plans and share ideas on how to deal with learners with autism."

Teacher C: "We sit together and do our lesson plans and give ideas on how to provide communication support for learners with autism."

Teacher D: "We have a school-based team so we work together. My teacher assistant is more familiar with learners with autism and helps me a lot."

Teacher E: "We work with other teachers and my teacher assistant helps a lot especially when it comes to discipline."

Teacher F: "We work as a team and help each other in making teaching and learning material aids for the learners. Other teachers are more experienced so they give ideas on communication support to the newly qualified teachers."

The above responses show that teachers from both participating schools work together with other teachers in the school in providing communication support to the learners with autism. Eloff & Swart (2018:281) posit that educators interacting professionally and sharing their knowledge enhances learners' academic outcomes. When educators work closely together, they build mutual trust which enhances both teacher commitment and retention.

The researcher observed that the teachers from both participating schools sat together and made their resources together to use in supporting communication to learners with autism. Landsberg et al. (2016) posit that a classroom teacher assistant is a person who enjoys working with learners with disabilities and function as an aide to the teacher in classroom to assist with all the learners. From the observation in the classroom from both schools for the learners with autism, the researcher noted that the teacher assistants helped the teachers in the teaching and learning of learners with autism. The teacher assistants were of help in the making of the resources of communication support needed by the learners with autism. Books with pictures on the current Covid-19 were made by the teachers and their teacher assistants at both participating schools in order to emphasise on the use of masks, social distancing and use of sanitisation.

Document analysis showed that the teachers at both participating schools had an ISPs that were being used. The teachers had to do the lesson plans according to the individual needs of the learners with autism. They also used the Differentiated CAPS Document designed by the DBE for learners with autism to improve on communication. The Differentiated CAPS Curriculum is based on the mainstream CAPS curriculum but is adapted for special needs learners such as learners with autism. The teachers were also given a document to use by Action Autism South Africa. The document also helped in designing teaching materials for the learners with autism. Some of the teachers did not use it effectively as they used the same materials for all learners instead of making appropriate resources as indicated in the guidelines.

4.2.3.3 Collaborate with therapists, audiologists and parents

According to Mauro (2018), therapists working with children typically use techniques and routines that seem like play. In reality, they are designed to target areas of delay and difficulty. Therapists support a learner's ability to participate in desired daily school activities.

Some of the teachers mentioned that they involved their school speech therapist if they need help. At Sipho Special School they had speech therapist while at Greenside Special School there were student audiologists from UKZN.

In the interviews, the teachers were asked on how they collaborate with others as therapist. Below are the teachers' responses from Sipho Special School:

Teacher A: "We have a speech therapist who assists the learners with speech on one-on-one basis."

Teacher B. "We have a therapist who always helps with doing social stories to assist the learners. The therapist assists in the class and gives activities to the learners."

Teacher C: "We have only one speech therapist at the school. The therapist helps the learners on one-on-one and helps with the behaviour challenges especially when the learners with autism have a meltdown."

Teachers from Sipho Special School mentioned that they had assistance from speech therapists. The teachers noted that the speech therapists assisted in the communication support to the learners with autism through their play activities to help with interaction and communication. Teachers also noted that therapists assessed the learners and were able to arrange special lessons. The speech therapists had a structured programme that was suitable for learners with autism. Speech therapists helped learners with autism who were non-verbal to communicate with others. They helped learners to understand how to initiate communication with other learners.

As the researcher observed in the six classrooms of the participating schools, teachers were not working alone but in collaboration with speech therapists and student

audiologists. It is important to involve other professionals within the school in order to work out more ways of communication support for learners with autism. At Sipho Special School, the researcher observed they had a school-based speech therapist working at the school to support the teachers with their expertise.

Teachers at Sipho Special School indicated in their lesson plans that they used the speech therapists. The teachers from Greenside Special School stated that at their school they had fourth-year student audiologists from University of KwaZulu-Natal (UKZN) that came to their school to assist with learners with autism especially with communication. Here are the teachers' responses when they were asked on how they collaborate with others:

Teacher D: "We have fourth-year audiologist students from UKZN who come to our school to do practical at our school and also give us advice on the teaching of the learners with autism on communication skills."

Teacher E: "Audiologist students from UKZN visit our school and assist us with making teaching and learning materials for communication to use. The students do a lot of activities with learners for example basic life skills. The learners learn through play activities and it help to improve in their communication skills."

Teacher F: "We have advantage of having audiologist students from UKZN who always come to school on Thursdays and assist us with the learners. The students help us with the assessment plan that helps the learners to improve on their speech and improve in their communication skills."

The teachers from Greenside Special School (Teacher D, Teacher E and Teacher T) indicated that the audiologists played the most important role in assisting learners with autism in communication since most of the learners were non-verbal. The audiologists assessed the learners and derived modified assessment plans. The teachers indicated that the audiologists helped in the teaching of learners by providing many suitable activities. Audiologists enhanced communication support to the learners with autism.

At Greenside Special School, the researcher noted that the audiologists and teachers worked together to design the ISP. Although the support provided by an audiologist is different to that provided by a Speech Therapist, audiologists provide specialist communication support to learners with autism.

Parents also played an important part in providing communication support to the learners with autism. Eloff & Swart (2018:303) posit that it is important for the school to cultivate a welcoming environment for parents and create a warm, inviting and inclusive atmosphere where parents feel comfortable. The South Africa Schools Act No 84 of 1996 and the Education White Paper 6: Special Needs Education Building an inclusive education and training system (Department of Education, 2001) acknowledge the rights of parents and the important role they play in the education of their children. From the interviews at both participating schools, it emerged that the parents also supported the teaching and learning of learners with autism. Here are the teachers' responses when they were asked about how they collaborated with parents:

Teacher A: "Some of the parents are really good but other parents are not willing to help their children at home to improve their communication. We have given our learners communication books that parents can assist their children at home when communicating so that there is a continuous communication. Some parents do not take it seriously."

Teacher B: "We have some good parents who are also willing to assist their children with homework and they use the communication books that we give the learners to use in the communication at home."

Teacher C: "We invite parents from time to time to be part of their children's educational programme, [but] some parents do not attend the meeting."

Teacher D: "We work with parents most of the time and they do help in the communication support needed by their children."

Teacher E: "We sometimes call the parents to explain to them the progress of their children even explain to them on the resources to use to improve their communication

skills. Most of the parents complained that their children are non- verbal and it is very difficult to communicate with their learners."

Teacher F: "We have very good support from the parents although some parents do not come and attend meetings."

Both participating schools demonstrated the importance of involving parents to improve communication support for learners with autism. Schultz, Able & White (2016) posit that parent-professional collaboration is critical for the educational success of the students with ASD. In the interviews, teacher mentioned that some parents assisted their learners at home while others had a challenge in communicating with their learners. Teachers mentioned that parents attended meetings on the progress of their children.

The researcher observed that the teachers at both schools gave their learners the communication books that they used at home together with the homework. Some parents signed to show that they had assisted their children, but some parents did not check their children's homework. It is very important for parents to assist their learners and reinforce what have been taught in their lessons. From the observations, the partnership between school and the home not only helped parents but also encouraged the learners to be positively and actively involved in their learning.

The researcher checked the homework books from both participating schools to see the work the learners were given and saw some parents' signatures to show that they had seen and helped their learners in the communication support for example reading cards with pictures that they are given to read at home. Some parents did not sign which showed that they did not help their children. It could be because they lacked knowledge on how to communicate with their children.

4.2.4 Theme 4: Challenges Teachers Face in Teaching Learners With Autism

This theme focused on the challenges that teachers face in teaching learners with autism. The theme is discussed and teachers' responses are presented verbatim.

4.2.4.1 Non-verbal

Most of the learners with autism are non-verbal. Below are the teachers' responses after asked on what communication problems learners with autism faced:

Teacher A: "Of the ten learners that I have in my class, nine of them are non-verbal. If they want something, they use gestures to request a thing."

Teacher B: "Most of my learners are non-verbal. They say one word or a phrase. Most of the time they point at things they want."

Teacher C: "Most of my learners are non-verbal and it is a challenge when communicating."

Teacher D: "My learners are non-verbal and they use body language and sign language to communicate."

Teacher E: "My learners are non-verbal and it's a barrier for learning."

Teacher F: "Most of the learners are non-verbal and it is very difficult to communicate with the learners."

The above responses from both schools show that most of the learners were non-verbal and it was very difficult to communicate with the learners. Some of the learners did not want to use their communication book. It was a challenge to the teachers as the learners did not want to talk and remained silent.

The researcher observed at both schools that most of the learners were non-verbal. They only uttered one or two words or just a phrase and they preferred to use gestures when communicating. It was a challenge to teachers because sometimes they did not understand what the learners wanted or sometimes they had to guess. The researcher observed at both schools that some of the learners with autism did not want to use communication books or pictures, making it more difficult to understand their request. The learners just pointed at things they wanted; for example, a book or water to drink.

4.2.4.2 Disruptive behaviour

According to Ridderinkhof, de Bruin, Blom, Singh and Bögels (2019), autistic children behave in challenging ways because they have trouble understanding what is happening around them; for example, what other people are saying or communicating non-verbally. Below are the teachers' responses when they asked on challenges they face when dealing with learners with autism:

Teacher A: "I have two of my learners that are aggressive they end up hitting others."

Teacher B: "Some of my learners have disruptive behaviour, melting down and this ends up disturbing other learners."

Teacher C: "Some of my learners have a problem of throwing things when they are angry."

Teacher D: "One of my learners – if he hears so much noise – he runs around flapping his hands."

Teacher E: "Some of my learners bite themselves and scream."

Teacher F: "Three of my learners have a problem of throwing tantrums."

Teachers interviewed at both participating schools indicated that most of their learners had disruptive behaviour and others threw tantrums. Teacher E had a concern that some of the learners ended up hurting themselves, such as biting their own hands.

The researcher observed in both schools that some teachers had a problem with learners who had disruptive behaviour. The teachers tried to discipline the learners who were disturbing other learners when teaching and learning was taking place. The teachers struggled with learners who were walking or running around the classroom unnecessarily disturbing others.

The researcher noted that teachers from Sipho Special School had an observation book where they described the learners' behaviour, while at Greenside Special School the teachers had a file containing a behaviour monitoring schedule for learners where they

recorded the learners' bad behaviour. If a learner improved, teachers rewarded the learner. That helped the learners to improve their behaviour

4.2.4.3 Attention and concentration challenges

Every learner with autism is unique and their needs will be reflected differently. Landsberg et al. (2016) also state that learners with autism find it difficult to attend to more than one thing at a time. In answer to a question on the challenges they faced when dealing with learners with autism, some of the teachers from Greenside Special School commented as follows:

Teacher D: "My learners have a problem of attention and concentration when I am teaching especially when I am doing morning ring."

Teacher F: "My learners have a shorter attention span and they easily get bored."

From the interview Teacher D and Teacher F mentioned that the learners had attention and concentration challenges. Teachers at Sipho Special School did not mention the attention and concentration. Teacher F mentioned that learners with autism easily became bored.

Data generated from observation from Greenside Special School showed that Teacher D and Teacher F struggled with learners with autism because they had a short attention span and did not listen or follow instructions. With the use of the observation checklist, the researcher noted that teachers created many opportunities for spontaneous use of communication skills and fostered communication through a variety of instructional strategies; for example, the use of TEACCH approach.

Data from lesson plans showed that teachers at Greenside Special School commented in their lesson plan after teaching that most of the learners had problems with attention and concentration challenges. Teachers, however, need to make their lessons interesting for the learners.

4.2.4.4 Challenges with social interaction

Children with autism have difficulty with social interactions including establishing and maintaining relationships (LaGasse 2017). Here are some of the teachers' responses when asked on the challenges they face when dealing with the learners with autism:

Teacher B: "Some of my learners have problem in social interaction even if you take them to the playing area, they keep to themselves. The learners find it difficult to understand and interpret other people's thoughts."

Teacher C: "My learners like to play on their own with their own toys. They do not want to socialise with others [or] even me. They answer you while looking down."

Teacher F shared the same sentiment as Teacher C. She said some of her learners did not want to socialise.

The responses above show that Teacher B, Teacher C and Teacher F clearly stated that learners with autism have a problem with social interaction. Teachers said that the learners preferred to play on their own. The teachers stated that the learners with autism found it hard to understand and interpret other people's thoughts. Other teachers did not mention challenges with social interaction.

From the observations at both participating schools, the researcher noted that when the teachers called learners by their names, the learners sometimes did not respond; they kept on doing whatever they were doing. The learners were unwilling to make direct contact with their teachers. The researcher observed that teachers tried to make learners who were playing alone to work together with others, but the learners soon moved away from others and isolated themselves.

The Action Autism document gives guidelines on how teachers can deal with the learners that have challenges with social interaction. The guidelines suggest that the teachers should organise games and group activities in which the learners will participate. Teachers, however, need to read the guidelines as it seems that they were unaware of them.

4.2.4.5 Reading and comprehension

The learners cannot comprehend what they have read. The US No Child Left Behind Act (2002) suggests that teachers should provide scientifically based reading instruction for all the learners including those with disabilities such as autism.

Teachers were asked about the challenges they faced with the learners. Here are some of the teachers' responses:

Teacher B: "Some of my learners have a problem of reading and understanding when you are asking the questions after reading the story, they just repeat your question."

Teacher C: "My learners have a problem of reading and comprehend, they read the story perfectly but when you ask them questions, they fail to give correct answers."

It emerged from the data generated from interview that two teachers (Teacher B and Teacher C) at Sipho Special School showed that the learners with autism have problems with reading and understanding. Teachers mentioned that learners with autism need help in understanding when reading.

From the observations at Sipho Special School, the learners with autism were reading but when the teachers asked questions the learners could not respond appropriately. Learners with autism usually develop decoding skills but have difficulty with reading comprehension. The learners can identify words relatively more easily than understanding what they have read.

4.3 CONCLUSION

This chapter deals with the presentation and analysis of data in response to the main research question on the ways of providing communication support for learners with autism. The interviews, observations and document analysis carried out by the researcher showed that there are many ways of providing communication for the learners with autism such as AAC, TEACCH and Social Stories. The researcher identified four themes, namely: Theme 1: effective ways of providing communication support to learners with autism and communication strategies which teachers noted as

Augmentative and Alternative (AAC) and TEACCH approach; Theme 2: the resources needed to enhance communication support by learners with autism such as the PEC, Communication Picture book, Technology resources for teaching (SGDs); Theme 3: collaboration with the others in helping learners with autism; and Theme 4: the challenges teachers face in teaching the learners with autism.

Most of the participants noted that teaching learners with autism present some challenges, especially communication problems. Some of the challenges were that most of the learners are non-verbal and it was very difficult to communicate with them. The learners with autism also have disruptive behaviour; they also have challenges with social interaction, have problems in reading and comprehension and have difficulty with fine motor skills.

The final chapter of this study provides findings, summary and conclusions of the findings. Recommendations arising from the findings are presented.

CHAPTER 5

DISCUSSIONS OF FINDINGS, SUMMARY AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter concludes the study by discussing the main research findings according to the themes. It also summarises the key research findings by relating them to the research aim and questions. Lastly, it discusses the limitations of this study and makes recommendations for further research.

5.2 FINDINGS OF THE STUDY

The findings of this study are presented according to the four themes that emerged from the data. These themes were: effective ways of providing communication support for learners with autism and communication strategies; resources to enhance communication skills needed by learners with autism; collaboration with others in helping learners with autism; and challenges teachers face in teaching learners with autism

5.2.1 Effective Ways of Providing Communication Support for Learners With Autism and Communication Strategies

The findings of this study indicated that teachers use different ways of providing communication support to the learners with autism. The interviews that were carried out showed that the participants used AAC pictures, gestures, sign language and visual boards to communicate with learners with autism. Participants from Greenside Special School mentioned that they used different AAC aided and unaided approaches. This corresponds with the study of Wearmouth (2016:95) who says that ACC is used to describe any form of communication that a child can use; for example, pictures, gestures, sign language and visual boards.

This study found that teachers had to make picture books in which they used to communicate with the learners (Section 4.2.1.1). From the observations, the participants were always busy googling and printing pictures to use. The participants

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from Sipho Special School complained that the schools did not provide ready-made picture books. Most of the time was being used by the participants especially in the afternoon making picture books. Some of the participants used gestures and sign language when communicating with the learners (Section 4.2.1.1). The researcher observed that when learners wanted something, they would note their heads in agreement.

It also emerged from the study that the participants used Treatment and Education of Autistic and related Communications Handicapped Children (TEACCH) Approach as one of the communication strategies needed by the learners with autism. The participants indicated that the TEACCH approach worked very well in their classes (Section 4.2.1.2). Participants from both participating schools stated that their learners understood their routine in class better because the routine was structured with pictures. That was determined from the document analysis conducted by the researcher (Section 4.2.1.2).

According to the participants' views another communication strategy was the use of the social stories. Some of the participants at Greenside Special School argued that social stories helped the learners with autism to understand better. However, participants from Sipho Special School mentioned in the interview (Section 4.2.1.3) that they had a challenge in using social stories in teaching.

5.2.2 Resources to Enhance Communication Skills to the Learners With Autism

The participants from both participating schools revealed that they used Picture Exchange Communication Systems (PECs) for communicating with learners with autism. The participants used PECs in supporting communication with the learners. The learners were able to follow their routines because of the use of the individual schedules with the pictures. The findings of the study showed that most of the participants used PECs in their classes. The learners exchanged pictures to real object. The participants in the interview mentioned that if a learner needed something, they would hand over the picture conveying the request (Section 4.2.2.1).

Participants from both participating schools indicated that they had great interest in helping learners with autism to communicate. At Greenside Special School, the school purchased some of the communication books to use, while at Sipho Special School, the participants themselves had to google the pictures then print and make communication books. One of the participants from Greenside Special School complained that she ended up using her own data and that it was time-consuming when she was interviewed. The communication books were used both at home and at school. From observations at both schools, the researcher also noted that learners with autism preferred to use communication books (Section 4.2.2.2).

5.2.2.1 Technology resources for teaching communication (speech) generating devices

Technology was seen by the participants from both participating schools as one of the best resources to use for communication with learners with autism (Section 4.2.2.3). The findings of this study showed that participants from both participating schools used technology. Participants mentioned that the using of devices such as tablets, computers and television helped the learners in communication. The observations carried out by the researcher showed that participants from Greenside Special School allowed learners who were unable to write to use computers to type (Section 4.2.2.3).

Some of the participants from Sipho Special School also used their smartphones to play stories and videos because they had few technological devices to use at their school and that helped to improve the communication support to the learners with autism (Section 4.2.2.3).

5.2.2.1 Collaboration with others in helping learners with autism to communicate

The findings of the study further revealed that the School Management Team (SMT) played a vital role in supporting learners with autism. Participants from both participating schools stated that the SMT supported teachers by sending them to workshops to gain more skills in working with learners with autism although sometimes they did not provide enough resources (Section 4.2.3.1). The findings of this study also revealed that the participants worked together with teacher assistants in making resources and teaching communication skills to the learners with autism.

Participants worked together with other professionals such as therapists who helped the learners with speech and audiologists who had expert knowledge and skills in the field of autism. The findings of the study showed that participants from Sipho Special School worked with speech therapists who had expertise in the field of autism. The speech therapists assisted in providing communication support to the learners. The researcher noted that the participants from Sipho Special School relied on the speech therapists in helping the learners with autism to develop their speech, communication skills and in developing the ISPs.

Participants at Greenside Special School worked with fourth-year student audiologists from UKZN that assisted them (Section 4.2.3.3). The study showed that the audiologists played an important role in assisting learners with autism in communication since most of the learners were non-verbal. The audiologists provided communication strategies that could be used to ensure the best communication possible. The audiologists screened the learners to determine whether hearing loss was contributing to the learners' communication difficulties. The findings, therefore, emphasised that participants needed more professional development and support from both the speech therapists and the audiologists. All the participants agreed that working as a team was necessary to improve the learners' communication. As indicated in Section 4.2.3.3, that participants from both schools that participated in this study worked together making resources and giving each other some ideas on how to develop the ISPs.

Furthermore, participants from both schools that participated in this study said that it was beneficial to work hand-in-hand with the parents of the learners with autism. Participants stated that some of the parents were willing to help their children at home to improve their communication skills by using the communication books the teachers gave them to use at home (Section 4.2.3.3).

5.2.3 Challenges Teachers Face When Teaching Learners With Autism

The aim of the study was also to find out the challenges the teacher faced in dealing with learners with autism. The findings of the study revealed that learners with autism are non-verbal and it is very difficult for teachers to communicate with the learners

(Section 4.2.4). Some of the participants indicated that their learners displayed disruptive behaviour and they were aggressive and ended up not doing their work. The study also revealed that participants had challenges when dealing with learners with autism such as attention and concentration as the learners could not concentrate for a long time. Moreover, the findings confirm the frustrations that the participants faced in dealing with the learners. Other challenges revealed by the teachers were social interaction. Some participants in both schools mentioned that some of their learners had a problem in socialising with other learners as they kept to themselves (Section 4.2.4.4). The other challenge that was noted by the participants was reading and comprehension where learners cannot comprehend what they read.

5.3 SUMMARY OF THE STUDY

The study aimed to investigate ways of providing communication support for learners with autism and the challenges the teachers faced. The findings indicated that communication strategies and specific resources are needed to support learners with autism.

The objective of the study was to answer the following secondary research questions as they appear in Section 1.5.

5.3.1 What Are the Strategies for Teaching Communication to the Learners With Autism?

The findings of this study indicated that there are different ways of providing communication support to learners with autism. Communication strategies that were identified by the participants of both participating schools were Augmentative and Alternative Communication (AAC), TEACCH approach and Social Stories in providing communication support to the learners with autism. Participants indicated that learners with autism improved communication through the communication strategies used. Participants also mentioned the resources that were needed by the learners with autism which were Picture Exchange Communication, Communication Picture book, Technology resources and collaboration with others in helping learners with autism in communication.

5.3.2 What Instructional Resources Can Be Used for Enhancing Communication Skills to the Learners With Autism?

The findings of this study confirmed that learners with autism needed support resources to enhance their communication skills. The researcher concludes based on the findings that learners with autism need to follow routines with the use of individual schedules with pictures. The findings showed that most of the participants used PEC in the classes. Technology such as computers, laptops, tablets, television and smartphone helped to address the communication skills needed by autistic learners. However other participants complained that there were few resources to use at their school, which is a concern since autistic learners learn better with the use of the resources (Section 4.2.2). The findings further confirmed that the SMT, teachers, teacher assistant, parents, speech therapists and audiologists work hand and hand in supporting communication skills to autistic learners. (Section 4.2.3)

5.3.3 What Challenges Do Teachers Face When Communicating With Learners With Autism?

The findings of this study revealed that some learners have disruptive behaviour and are aggressive and refuse to do their work. Moreover, the findings of the study revealed that some learners have attention and concentration challenges. Lastly, other challenges revealed by the participants were social skills and reading and comprehension. The participants had challenges when dealing with learners with autism because they kept to themselves and could not work in a group. Since the learners with autism could not pay attention for a long time, it was difficult for the participants to teach the learners reading and comprehension. Learners failed to understand what they had read (Section 4.2.4)

5.3.4 What Type of Communication Problems Do Learners With Autism Face?

The findings of this study were that some learners with autism are non-verbal and it is very difficult for the teachers to communicate with them. The participants from both schools stated that the learners keep to themselves and if they needed anything, they just pointed (Section 4.2.4)

5.4 LIMITATIONS OF THE STUDY

- The study was conducted in one district in KwaZulu-Natal Province and only two special schools were sampled. This limited the researcher from identifying information from other districts on the communication support needed by learners with autism.

- Only three teachers per school were interviewed and this could not be generalised to the whole province. The sample size excluded the voices of the majority of the teachers.

- The study was affected by the Covid-19 pandemic and the schools were closed, making difficult for the researcher to collect data in time. The researcher had to wait for schools to be opened. Collection of data was done in accordance with Covid-19 regulations.

5.5 RECOMMENDATIONS

As shown in this study, participants at the participating schools were making every effort to improve communication with learners with autism. However, more could still be done and below are some of the recommendations based on the findings of this study:

- During teacher training, awareness of autism should be emphasised to teachers so that every teacher is knowledgeable as to how to deal with learners with autism.

- Schools should provide resources for communication support to teachers to use in all schools with learners with autism such as laptops, computers, communication books, picture books and SGDs.

- Integration of technology is necessary, and teachers need to be taught skills on how to use the technology such as SGDs, laptops, videos and smartboards.

- Specialist staff such as speech therapists should be employed in order to assist teachers with support in teaching communication skills to autistic learners.

- Parents need to be workshopped on communication support needed by the children.

- To reduce the number of challenges that teachers face, the SMT should support teachers in preparing an ISP for each learner based on their unique challenges.

5.6 RECOMMENDATIONS FOR FUTURE RESEARCH

The following recommendation for future research is made:

The study was conducted in one district in KwaZulu-Natal Province and only two special schools were sampled. A similar study could be conducted in other districts of education in the province.

5.7 CONCLUSION

The study focused on the communication support needed by learners with autism and the challenges the teachers faced. In this chapter, the discussions and findings of the study were discussed indicating effective ways of providing communication support to the learners with autism. The important resources needed in supporting communication to the learners with autism were also identified by the participants. The study also found that collaboration with others in helping learners with autism to communicate is essential. The findings of the study also revealed that teachers faced challenges in dealing with learners with autism.

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APPENDIX A: PROOF OF REGISTRATION

UNISA | university of south africa

0446

CHINYANGA G S MRS
14 CALSI GARDENS
11 SUNNYSIDE LANE
PINETOWN
3610

STUDENT NUMBER : 53951900

ENQUIRIES TEL : 0861670411
           FAX : (0)12)429-4150
eMAIL : mand@unisa.ac.za

2021-02-20

Dear Student

I hereby confirm that you have been registered for the current academic year as follows:

Proposed Qualification: MED (INCLUSIVE EDUCATION)   (98443)

					PROVISIONAL EXAMINATION	
CODE	PAPER	S NAME OF STUDY UNIT	WEIGHT	LANG.	EXAM.DATE	CENTRE(PLACE)
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Study units registered without formal exams:
  DFIED95   MEd - Inclusive Education   0.867   E
@ DFIED95   MEd - Inclusive Education   0.867   E
@ Exam transferred from previous academic year

You are referred to the "MyRegistration" brochure regarding fees that are forfeited on cancellation of any study units.

Your attention is drawn to University rules and regulations (www.unisa.ac.za/register).
Please note the new requirements for reregistration and the number of credits per year which state that students registered for the first time from 2013, must complete 36 NQF credits in the first year of study, and thereafter must complete 48 NQF credits per year.
Students registered for the MBA, MBL and DBL degrees must visit the SBL's ESOnline for study material and other important information.
Readmission rules for Honours: Note that in terms of the Unisa Admission Policy academic activity must be demonstrated to the satisfaction of the University during each year of study. If you fail to meet this requirement in the first year of study, you will be admitted to another year of study. After a second year of not demonstrating academic activity to the satisfaction of the University, you will not be re-admitted, except with the express approval of the Executive Dean of the College in which you are registered. Note too, that this study programme must be completed within three years. Non-compliance will result in your academic exclusion, and you will therefore not be allowed to re-register for a qualification at the same level on the National Qualifications Framework in the same College for a period of five years after such exclusion, after which you will have to re-apply for admission to any such qualification.
Readmission rules for M&D: Note that in terms of the Unisa Admission Policy, a candidate must complete a Master's qualification within three years. Under exceptional circumstances and on recommendation of the Executive Dean, a candidate may be allowed an extra (fourth) year to complete the qualification. For a Doctoral degree, a candidate must complete the study programme within six years. Under exceptional circumstances, and on recommendation by the Executive Dean, a candidate may be allowed an extra (seventh) year to complete the qualification.

CREDIT BALANCE ON STUDY ACCOUNT: 120.00-

Yours faithfully,

Prof M S Mothata
Registrar

0100 0 00 0

PRETORIA

University of South Africa

92

APPENDIX B: PERMISSION LETTER TO DISTRICT

UNISA | college of education

College of Education

P O Box 392
Unisa
Pretoria
0003

17 April 2020

Name: The Circuit Manager

Department: Umlazi District

Cell:

PERMISSION TO CONDUCT RESEARCH

Dear Sir/ Madam

I, Grace Sekererayi Chinyanga, am doing research towards a Master's in Education at the University of South Africa, under the supervision of Mr Sifiso Mbelu, a lecturer in the Department of Inclusive Education The study is entitled: Communication Support for learners with autism: A case study of Special Schools Umlazi District KwaZulu-Natal Province

The aim of the study is to investigate ways of providing communication support for learners with autism and the teaching challenges the teacher face Two schools in your District have been selected because the research is only being done in Umlazi District where your school is located, and it was selected randomly without any other criteria

The study will entail observing and interviewing teachers during activities to find out their knowledge and skills towards communication with their autistic learners The participants will be interviewed at an arranged time that will be convenient so that it will not disturb the running of the school A follow up interview will be arranged Observation will be done for five days and recordings will be done The researcher will adhere to confidentiality and anonymity of the school name and participant all the time

The findings will highlight what the teachers know on the communication support for learners with autism. There will be no potential risk. There will be no reimbursement to

any incentives for participation in the research Feedback procedure will be provided to the participants on the findings

Thanking you in advance

Yours sincerely

Grace Sekererayi Chinyanga

Cell 071 097 2763

Email 53951980@mylifeunisaacza

Supervisor details

Dr. Sifiso Mbelu (Lecturer)

Department of Inclusive Education

University of South Africa

Tel No: 012 481 2933

APPENDIX C: PERMISSION LETTER TO PRINCIPAL

UNISA | college of education

College of Education

P O Box 392
Unisa
Pretoria
0003

17 April 2020

Name:

Department:

Cell:

PERMISSION TO CONDUCT RESEARCH

Dear Madam

I, Grace Sekererayi Chinyanga, am doing research towards a Master's in Education at the University of South Africa, under the supervision of Dr. Sifiso Mbelu, a lecturer in the Department of Inclusive Education The study is entitled: Communication Support for learners with autism: A case study of Special Schools Umlazi District KwaZulu-Natal Province

The aim of the study is to investigate ways of providing communication support for learners with autism and the teaching challenges the teacher face. Your school has been selected because the research is only being done in Umlazi District where your school is located, and it was selected randomly without any other criteria

The study will entail observing and interviewing teachers during activities to find out their knowledge and skills towards communication with their autistic learners The participants will be interviewed at an arranged time that will be convenient so that it will not disturb the running of the school A follow up interview will be arranged Observation will be done for five days and recordings will be done The researcher will adhere to confidentiality and anonymity of the school name and participant all the time

The findings will highlight what the teachers know on the communication support for learners with autism. There will be no potential risk There will be no reimbursement to

any incentives for participation in the research Feedback procedure will be provided to the participants on the findings

Thanking you in advance

Yours sincerely

Grace Sekererayi Chinyanga

Cell 071 097 2763

Email 53951980@mylifeunisaacza

Supervisor details

Dr. Sifiso Mbelu (Lecturer)

Department of Inclusive Education

University of South Africa

Tel No: 012 481 2933

APPENDIX D: CONSENT LETTER TO THE TEACHERS

UNISA | college of education

College of Education

P O Box 392
Unisa
Pretoria
0003

17 April 2020

TITLE: Communication Support for Learners with autism: A case study of Special Schools Umlazi District KwaZulu-Natal Province

Dear Prospective Participant

My name is Grace Sekererayi Chinyanga and I am doing research under the supervision of Dr. Sifiso Mbelu a lecturer in the Department of Inclusive Education at the University of South Africa We are inviting you to participate in the study entitled: Communication support for learners with autism: A case study of Special Schools Umlazi District Kwazulu-Natal Province

PURPOSE OF THE STUDY

The study is expected to collect important information that could help to improve the communication support for learners with autism. The study aims to investigate the strategies and resources that can be used to enhance communication skills to the learners with autism

REASON FOR INVITATION TO PARTICIPATE

You are invited because you are qualified teacher and have at least more than two years teaching learners with autism I have obtained your contact details from your Principal Six participants will take part in this study

THE ROLE OF THE PARTICIPANT

The study involves semi structured interview and observation during class activities Each participant will be observed throughout the day for about five days, while he/she engages with the learners Every participant will be interviewed for appropriately one hour If there is a need, a follow up interview will be arranged

THE RIGHT TO WITHDRAW FROM THE STUDY

Participating in the study is voluntary and you are under no obligation to consent to participation if you do decide to take part you will be given this information sheet to keep and be asked to sign a written consent form. You are free to withdraw at any time and without giving a reason.

POTENTIAL CONSEQUENCES OR RISKS FOR PARTICIPATING IN THE STUDY

There are no risk or negative consequences associated with participating in this study Questions asked during interviews are not sensitive and neither do they cause discomfort

CONFIDENTIALITY

You have the right to insist that you name will be not recorded anywhere and that no one, apart from the researcher and identified members of the research team, will know about your involvement in this research Your name will be not be recorded anywhere and no one will be able to connect you to the answers will be given a code number or pseudonym and will be referred to in this way in the data , any publication, or other research reporting methods such as conference proceeding Data collected from this study may also be used for other purposes such as research report and journal articles, however, in such instances, participants' privacy will be protected and individual participant will not be identifiable Your answers may be reviewed by people responsible for making sure that the research is done properly, including the transcriber, external coder, and members of the Research Ethics Review Committee Otherwise, records that identity you will be available only to people working on this study, unless you give permission for other people to see the records

PROTECTION AND SECURITY OF DATA

Hard copies of your answers will be stored by the researcher for a period of five years in a locked cupboard for future research or academic purposes; electronic information will be stored on a password protected computer Future use of the stored data will be subject to further Research Ethics Review and approval if applicable If necessary, hard copies of the information will be shredded and electronic copies will be permanently deleted from the hard drive of the computer by using a relevant software programme

PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY

There will be no payment or incentive for participating in this study

ETHICS APPROVAL

This study has received written approval from the Research Ethics Review Committee of the Unisa A copy of the approval letter can be obtained from the researcher if you so wish Permission will also be obtained from the Principal of your school

FINDINGS/RESULTS OF THE RESEARCH

If you would like to be informed of the final research findings, please contact Grace S Chinyanga on 071 097 2763. The findings are accessible for five years

Should require any further information or want to contact the researcher about any aspect of this study, please contact

Grace Sekererayi Chinyanga

Cell   071 097 2763

Email: 53951980@mylifeunisaacza

Should you have concerns about the way in which the research has been conducted, you may contact Dr. Sifiso Mbelu

Supervisor details
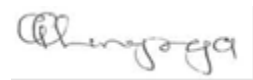
Dr. Sifiso Mbelu

Department of Inclusive Education

Tel 012 481 2933 Cell 082 670 7575

Email mbeluse@unisaacza

Thank you for taking time to read this information sheet and for participating in this study

Thank you

Grace Sekererayi Chinyanga

CONSENT TO PARTICIPATE IN THE STUDY (Return slip)

I,_____, confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation

I have read and understood the study as explained in the information sheet

I have had sufficient opportunity to ask questions and am prepared to participate in the study

I understand that my participation is voluntary and that I am free to withdraw at any time without penalty

I am aware that the findings of this study will be processed into a research report, journal publications and /or conference proceedings, but that my participation will be kept confidential unless otherwise specified

I agree to the recording of the interviews
):
I have received a signed copy of the informed consent agreement

Participant Name & Surname (please print): _____

Participant Signature   **Date**

Researcher's Name & Surname (please print):

Researcher's Signature   **Date**

APPENDIX E: LETTER TO PARENTS

UNISA | college of education

College of Education

P O Box 392

Unisa

0003

Pretoria

Dear Parent

I am undertaking a study entitled: Communication support for the learners with autism: A case study of Special Schools Umlazi District KwaZulu-Natal Province South Africa

I am undertaking this study as part of my Masters research at University of South Africa The purpose of this study is to find ways of improving communication to the learners with autism I wish to inform that your child will not be directly involved in this study; the focus is on the teachers

There are no foreseeable risks to your child by participating in the study Your child will not receive direct benefit from participating in the study; however, the possible benefit to education is the improvement of communication support needed by your child Neither your child will receive any type of payment for participating in this study The researcher will adhere to confidentiality and anonymity of the school name and name of your child at all the time

For any questions regarding this study please ask me or my supervisor

Thank you

Yours sincerely

Grace Sekererayi Chinyanga

Cell   071 097 2763

Email:53951980@mylifeunisaacza

Supervisor details

Dr. Sifiso Mbelu (Lecturer)

University of South Africa

Department of Inclusive Education

Tel No 021 481 2933

Email mbeluse@unisaacza

Your signature below indicates that you have read the information provided above and you aware of the nature of the study You are also aware that the focus of the study is the classroom teacher and that your child is not an active participant of the study

Name of child: ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯

Sincerely

Parent/Guardian name (Print)   Parent/Guardian signature

Researcher's name (Print)   Researcher's signature

APPENDIX F: OBSERVATION CHECKLIST

Classroom/Teacher: _____Date:_____

Teacher Assistant: _____

Observer: _____

Score: 2 = Present and being actively used
        1 = Present, but not being used or partially achieved
        0 = Absent
        N/A = No opportunity to evaluate

Quality Classroom Indicator:	Score	Comments
ENVIRONMENTAL ARRANGEMENT		
Room arrangement has clearly defined visual boundaries for specific activities, allows for supervision of all learners at all times; and prevents or minimizes problem behaviours		
Visual supports are at the correct level of symbolic functioning, and are used to enhance predictability, facilitate transitions, and help convey expectations		
Materials and furniture are age appropriate		
Individual workstations are arranged left-right or top-bottom, and tell how much work, what work, when finished, and what's next Materials in workstations are varied from day-to-day and are educationally and functionally related to learners IEPs		
SCHEDULING, ACTIVITIES, AND INTENSITY		
A staff schedule showing staff and learners assignments, locations, and activities, is prominently posted and being followed		
A daily classroom visual schedule is posted at learner level, is visible and appropriate for learners' level of symbolic functioning, and is used throughout the day		
Schedule and activities reflect appropriate distribution of curriculum for the age, level and individual needs of learners in the classroom		
Visual schedules reflect a variety of learning formats for each learner, including 1:1 instruction, small group, large group, independent work, and social interaction/leisure options		
Individual schedules are at child level and are being used correctly Teacher prepares their teaching resources such as communication books picture cards etc		
Teacher assistant is actively involved with the learners		
Teacher work with other professionals in supporting communication		
Teacher create opportunities to promote communication		

between learners through different communication strategies		
Learners remain actively engaged in learning opportunities throughout observation, with no more than 2 minutes down time		
During 5 minute observation, teacher interacts with each learner at least once to teach or promote learning		
INSTRUCTION AND INTERACTION		
Communication directed to learners is clear and relevant, appropriate to language ability, grammatically correct and presents opportunities for dialogue to cater for non-verbal		
Comments directed toward learners follow a ratio of 7:1 instructive/positive comments to corrective comments		
During instruction, teacher uses pictures, gestures and technology to communicate with learners		
Teacher uses different communication strategies in delivering lessons		
Teacher and teacher assistant are involved in delivering instruction, including during out of-classroom activities (lunch, recess)		
Teacher can state ISP objectives being worked on for each learners when asked		
Instructional methods reflect the unique needs of learners		
CAPS and D CAPS document are being used		
Teacher can state the challenge and communication problems they face		
Written Individual Support Plans are available which clearly state the content and instructional goals		
Communication skills are taught in the context of naturally occurring activities and daily routines		
Learners with slow rates of learning are provided intensive levels of instruction, including daily one-on-one instruction sessions		
Data are collected during instructional activities for each learner; data are tracked, summarized and reported and brought to learners study/IEP meetings		
Daily communication with parents is informative, positive and non-judgmental		
CORE CURRICULUM AREAS		
Teacher create many opportunities for spontaneous use of communication skills, and foster communication through a variety of instructional strategies		
Use of AAC devices or PECS or sign for learners using these supports is encouraged in all situations, and learners are not denied access to their communication systems		
Behaviour problems are minimized by using choices, clear expectations and instructional resources		
Learners displaying behavioural difficulties have an individualized behaviour plan		
Opportunities for meaningful interaction and friendships with non-		

disabled peers are provided Social skills instruction is planned and supported by staff		
Curriculum and schedule reflect an emphasis on the core deficits of autism; activities emphasize social interaction skills with adults and peers, functional communication for all learners, age appropriate engagement, and maximizing independent functioning		

Additional Comments:

APPENDIX G: INTERVIEW GUIDE FOR TEACHERS

Teacher's qualifications

1 What are your qualifications?

2 How long have you been teaching learners with autism?

3 Are there any workshops that you have attended whilst teaching learners with autism?

4 What have you done to improve your special education knowledge on autism?

Classroom organization

1 How many learners do you have in your classroom?

2 What is the teacher to learner ratio in your classroom?

3 How do you arrange your furniture in the classroom?

4 How do you design your work station?

Challenges in the classroom

1 What challenges do you face when dealing with the learners with autism?

2 What communication problems do learners with autism face?

Teaching methods

1 What communication strategies do you use when teaching learners with autism?

2 How do you adapt learning and teaching strategies to meet the individual learners effectively?

3 How would you develop an effective Individual lesson plan to meet the needs for communication skills of all your learners?

4 What activities can you do with your learners to promote communication skills?

5 What documents do you have that help you in the teaching of learners with autism?

Availability of resources that promote communication skills

1 What resources do you use to enhance communication skills to your learners?

2 How adequate are your resources when teaching learners?

3 How do you use technology to support teaching and learning to your learners?

Collaboration with others

1 To what extend does you Principal and Head of Department (SMT) support you?

2 To what extend to do other teachers at your school support you in the teaching and learning of the learners with autism on communication?

3 How do you collaborate with other departments such as therapist, psychologists and parents?

4 How does District Based Support Team (DBST) assist in the teaching and learning of learners with autism in communication skills?

APPENDIX H: ETHICAL CLEARANCE

UNISA | university of south africa

UNISA COLLEGE OF EDUCATION ETHICS REVIEW COMMITTEE

Date: 2020/06/10

Ref: **2020/06/10/53951980/29/AM**

Name: Mrs GS Chinyanga

Student No.: 53951980

Dear Mrs GS Chinyanga

Decision: Ethics Approval from 2020/06/10 to 2023/06/10

Researcher(s): Name: Mrs GS Chinyanga
E-mail address: 53951980@mylife.unisa.ac.za
Telephone: 0710972763

Supervisor(s): Name: Mr SE Mbelu
E-mail address: mbeluse@unisa.ac.za
Telephone: 012 481 2933

Title of research:
Communication Support for Learners with Autism: A case of Special School Umlazi District KwaZulu- Natal Province

Qualification: MEd Inclusive Education

Thank you for the application for research ethics clearance by the UNISA College of Education Ethics Review Committee for the above mentioned research. Ethics approval is granted for the period 2020/06/10 to 2023/06/10.

*The **medium risk** application was reviewed by the Ethics Review Committee on 2020/06/10 in compliance with the UNISA Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.*

The proposed research may now commence with the provisions that:

1. The researcher will ensure that the research project adheres to the relevant guidelines set out in the Unisa Covid-19 position statement on research ethics attached.
2. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

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APPENDIX I: TURNITIN CERTIFICATE

COMMUNICATION SUPPORT FOR LEARNERS WITH AUTISM: A
CASE OF SPECIAL SCHOOLS IN UMLAZI DISTRICT, KWAZULU-
NATAL PROVINCE

ORIGINALITY REPORT

10%	8%	1%	6%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	epdf.pub Internet Source	2%
2	Submitted to University of KwaZulu-Natal Student Paper	2%
3	hdl.handle.net Internet Source	1%
4	inba.info Internet Source	1%
5	Submitted to University of Derby Student Paper	1%
6	uir.unisa.ac.za Internet Source	1%
7	starsautism.org Internet Source	1%
8	Submitted to Stadio Holdings Student Paper	1%

APPENDIX J: LETTER FROM LANGUAGE EDITOR

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Email: jacquibaumgardt@gmail.com

Website: www.jaybe9.wixsite.com/bluediamondsediting

22 January 2022

Declaration of professional edit

COMMUNICATION SUPPORT FOR LEARNERS WITH AUTISM: A CASE OF SPECIAL SCHOOLS IN UMLAZI DISTRICT, KWAZULU-NATAL PROVINCE

by

CHINYANGA GRACE SEKERERAYI

I declare that I have edited and proofread this thesis. My involvement was restricted to language usage and spelling, completeness and consistency and referencing style. I did no structural re-writing of the content.

I am qualified to have done such editing, being in possession of a Bachelor's degree with a major in English, having taught English to matriculation, and having a Certificate in Copy Editing from the University of Cape Town. I have edited more than 300 Masters and Doctoral theses, as well as articles, books and reports.

As the copy editor, I am not responsible for detecting, or removing, passages in the document that closely resemble other texts and could thus be viewed as plagiarism. I am not accountable for any changes made to this document by the author or any other party subsequent to the date of this declaration. The academic content is the sole responsibility of the student.

Sincerely,

Dr J Baumgardt
UNISA: D. Ed. Education Management
University of Cape Town: Certificate in Copy Editing
University of Cape Town: Certificate in Corporate Coaching

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Full Member

Membership number: BAU001
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