

**EDUCATING CHILDREN WITH AUTISM SPECTRUM DISORDER (ASD) IN
THE KINGDOM OF ESWATINI**

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

I further declare that I have not previously submitted this work, or part of it, for examination at Unisa for another qualification or at any other higher education institution.



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ABSTRACT

So far, there is dearth of published studies conducted on challenges associated with educating children with autism spectrum disorder in the Kingdom of Eswatini. Therefore, this gap indicates a need of investigation supported by empirical results especially on whether teachers who educate learners with autism spectrum disorder are properly trained, approaches they use to teach in classrooms and monitor learners in school premises as well as whether they interact with parents of the learners. This qualitative research was carried out under the premise of the Bronfenbrenner's ecological model while the Interpretivist paradigm guided it. In this study, data was collected from four parents of learners with autism spectrum disorder and three teachers of learners with autism spectrum disorder who studied in a primary school in the Manzini area, through the use of interviews, questionnaires, and observations. The study pinpoints the value of requisite teacher training on how they ought to educate this particular group of learners as well as the relationships they have with the parents of their learners. Results of the study also exposes disparities in the educating of learners with autism as there were so many other aspects and stakeholders who needed to take part and collaborate with schools, teachers and parents among others. There is a need for other research studies on this subject especially that which would include a larger population of learners, teachers, parents, and schools. The bottom line of the research study highlighted the significance of partnerships and collaborations at different levels of systems influencing the learner be it family or legislation. The research concluded with highlighting the importance of doing further research involving more established parties to determine the roles each stakeholder plays and that way probably arouse interest in collaborations and participation.

Keywords: Autism spectrum disorder, teaching, learning, parents, education, classroom, professionals, collaborations, skills, techniques, strategies, knowledge.

CHAPTER 1: ORIENTATION

1.1. INTRODUCTION AND ORIENTATION

When a child is born, usually each and every parent is filled with joy and celebrate them as a gift. As the child grows, parents form expectations and aspirations about their future and achievements in life. In the Kingdom of Eswatini, when a child reaches the age of three, normally, they are considered ready to attend pre-school. Unfortunately, it at this age that some children experience developmental challenges including being unable to talk or associate with other children. One such developmental challenge comes in the form of autism spectrum disorder [ASD]. ASD is estimated to affect 1 out of 160 children globally (World Health Organisation [WHO], 2019:02) and hinder their ability to achieve their goals. This research focuses on the education of learners with ASD in the Kingdom of Eswatini. It is very important to look at how learners with ASD are handled particularly in a classroom situation, equally important is the need to assess teaching strategies that are used to help them achieve their highest potential. Due to beliefs and in some cases, lack of knowledge, autism is often seen by some parents or teachers either as something that must be cured or as witchcraft. The researcher believes that ASD is highly misconstrued among the general population in the Kingdom of Eswatini and the misconception has implications on how people with autism are treated, be it at school or by the society at large. As a result, discussing how ASD is perceived and raising awareness among the general public is an issue of high importance.

Wonani and Muzata (2019:21) state that autism is classified as an intellectual disability as opposed to being regarded as an independent classification of special needs or a disability like other well-known impairments such as visual, hearing, intellectual and physical impairment. Mngadi (2018:13) views ASD as a complex neurodevelopmental condition. The purported complexity of ASD makes thousands of school going-age learners with neurological disorders lack support from the educational system. They find it hard gaining admission in schools and end up kept in homes with no way to attend school. There is a rise in the prevalence of autism with global cases rising from two per ten thousand in 1990 to between one in fifty and one in eighty-eight children according to

Blumberg, Bramlett, Kogan, Schieve, Jones and Lu (2013:14) and similarly, the Centers for Disease Control and Prevention (2012). This in turn means that in all various institutions of the world, there is likely many people with autism, and this includes the school and or classroom environment.

1.2. BACKGROUND TO THE RESEARCH

This study investigated how teachers educate children with autism in the Kingdom of Eswatini. The focus of teachers was because, along with parents, they play a fundamental role in teaching learners facing difficulties to learning, such as ASD. According to Hill and Taylor (2004:36), parents teach learners various aspects but emphasis is on moral, cultural, religious education, and provision of their child's needs while teachers focus on the academic features of development (Mncube, 2009:95). For this study, the researcher wanted to unearth the nature of the school educational aspect in this subject area. Through using the ecological model, the research was finely posed to expose the implications of how learners with ASD are taught and/or learning in schools. In order to have knowledge on policies of the Kingdom of Eswatini on learners with ASD, the researcher gathered existing information on learners with ASD and information pertaining to how the facilitation of special training for teachers responsible for their education was conducted. The question to ponder upon would be whether the policies and the facilitation lead to sufficient action to sustain not only the learning in class but also inform society as the ecological model shows how every facet of life influences how an individual develops in society, education included. The policy advocates for the right learning environment with regard to the classroom, if properly implemented, however, beyond that, it mentions nothing and the assumption is that outside of the school and home environment there is nothing that can be done for the learner on the autism spectrum disorder.

So far, this area of study is among fewer conducted in the Sub-Saharan region given that only South Africa has made substantial progress in demystifying ASD in learners and learning environments. Many of learners on the spectrum endure throughout their school years simply because most adults do not appreciate the concept of ASD and when they are blessed with children on the spectrum, they usually do not know what to do. In fact,

most activities for such children become a trial-and-error especially learning which sometimes leads to unreported abuses and neglect.

Statistics reveal that across the world, about 0.62% people are on the autism spectrum even though countries have slight variations. According to Piskorz-Ogórek, Ogórek, Cieslinska and Kostyra (2015) and Wee (2017), as much as tens of millions of families are both directly or indirectly affected. An array of unresolved educational matters such as the failure to provide integrative or inclusive teaching, the failure to deliver good programmes, and the lack of staff with sufficient qualifications, have been concerns in this matter. An increase in positive attitudes towards integration has been established through the experience of teaching ASD learners (McGregor & Campbell, 2001; Teffs & Whitbread, 2009). In spite of the above point, the practice of inclusive education is challenging to attain. As stated by Emam and Farrell (2009), areas in the practice of educational inclusivity, learning, and how the teachers experience the whole process, are still to be satisfactorily researched in countries such as Poland. There is need for more research on the facilitation of educational inclusive programs which can accommodate the particularized needs of each learner.

This research explored how teachers can educate learners with ASD from the perspective of three parties in the form of the parent, the teacher, and observing the child in class. Previous research has established areas of interest concerning learners with autism. For example, scholarly studies have assessed factors that influence their successful learning, evaluated how teachers comprehend autism, and how prepared teachers are to meet the needs of autistic learners (Park, Chitiyo & Choi, 2010; Segall & Campbell, 2012). Other researchers have also looked into beliefs, attitudes, and perceptions regarding inclusion of autistic learners, educational procedures, and support in mainstream classrooms (Berry, 2010; Donnelly & Watkins, 2011; Florian & Black-Hawkins, 2011) as well as whether parents participate in the teaching of pupils with ASD. Benson, Karlof and Siperstein (2008:10) cited numerous issues which may play a role in parents' and teachers' participation in the teaching of pupils with ASD. Such issues pertain to how parents could harmonize their work and family obligations as well as the development of undesirable behaviours or perceptions when teachers deal with participation of parents

(Benson et al., 2008:12). Educators feel that parents of learners with autism are not very engaged in educational issues like helping when the children are in class, collaborating with the educators and participating in school meetings (Hoover-Dempsey, Walker, Sandler, Whetsel, Green, Wilkins & Closson, 2005). The reasons may emanate sometimes from the inability of the school to ensure enough chances, care and motivation for parents to discover how parents and educators could collaborate in educating learners with ASD.

A thorough approach to the study in which three of the key stakeholders in the name of parents, teachers, and the school authorities are part of, may be beneficial to literature development as far as who has to do what is concerned. The roles defined in the study may also benefit from this as the research can provide an expose on the expectations and redefining of the respective roles as they know them. Learners spend much of a day's time mostly in and around the classrooms and surrounded by their teachers. Even though these learners are of diverse backgrounds, the responsibility of each individual still lies with their respective teachers. According to Myles, Hagen, Holverstott, Hubbard, Adreon and Trautman (2005) it is crucial for teachers to have a deeper understanding of their learners' differing needs and be able to satisfy those needs so as to positively influence the lives of the learners more so those with ASD. Learners on the spectrum bring unique challenges in the classroom for any teacher. Such problems are however huge opportunities for the teacher to source creative ways which they can use to develop and implement teaching methods that can influence the learner for a lifetime (Myles et al., 2005). Learners on the spectrum are also similar to other learners in that they also have their own particular weaknesses as well as strengths. To facilitate successful learning, there is need for unique strategies when dealing with learners on the spectrum as highlighted above (Myles et al., 2005:2).

A few success factors have been identified and in trying to look at literature that helps us identify what the teacher needs to be able to teach a learner with autism, there is need to scavenge on research on the way education has been provided and how inclusive education in various countries has been experienced. Three main models to help educate disabled students exist; separation in nonresidential specialised schools, incorporation in

mainstream setups in inclusive or special programs, and inclusion in the correct classes in mainstream institutes that provide adequate help according to their age. The disabled children are the ones who need to acclimatize to adapt (Frederickson & Cline, 2002:65). The school system needs to become more responsible (Frederickson & Cline, 2002:65). Research at the international level has indicated there is a difference in approach between teachers in special schools and teachers in mainstream schools, with the former receiving more training in autism issues and even getting more support in comparison with the latter. There are exceptions though as a small number of educators from mainstream education in some countries including the USA think they are well equipped and ready to teach learners with autism (Teffs & Whitbread, 2009).

1.3. THEORETICAL FRAMEWORK

This research dwell on Bronfenbrenner's 1979 Ecological Systems Theory and the model shows that a child's world comprises five systems of interaction: microsystem, mesosystem, exosystem, macrosystem, and chronosystem (Bronfenbrenner, 1979). The philosophy explains that the microsystem is made up of the child's closest milieus such as the home, the school, and peer and religious groups, with the classroom as a main setting of children's microsystem (Bronfenbrenner & Evans, 2000). Academic participation takes place through collaboration with elements within the classroom environment and this may happen between teacher and student, student and peers, student and objects, among others. The quality of interactions has a bearing in children's engagement in learning and affects their academic results (Reyes, Brackett, Rivers, White & Salovey, 2012). In this research, reflections were done by looking at the teachers' skills, roles and responsibilities as well as the views of the parents. More work shall be provided in chapter three of this research with greater detail as this section provided a preface of what to expect.

1.4. DEFINITION OF KEY CONCEPTS

ASD - autism spectrum disorder: The term "autism spectrum disorder" (ASD) and the term autism are equally used and this study on the same pattern (Caronna, Milunsky & Tager-Flusbeg, 2008). According to the DSM-5, ASD needs to have three shortfalls when interacting and communicating socially and a minimum of two symptoms as limited

interests and monotonous actions (American Psychiatric Association [APA], 2013). Added to that, the mentioned symptoms should exist in the initial developing era and must cause clinically substantial impairments in social, occupational or other parts of functioning which are not explainable by a global developmental delay or intellectual disability (APA, 2013).

Autism: It comprises two words originating from Greek, *aut* means self and *ism* means orientation. Therefore, the definition of Autism could be a condition of a person who is engrossed in himself (Reber, as cited in Trevarthen, Aitken, Papoudi & Robarts, 2014:5).

Mild Autism: A learner having a mild level of autism could be very intelligent and able to take care of their daily life. They may pay great attention with topics of interest; they may deliberate on such topics nonstop, though they may face challenges in the social aspect of life.

Moderate Autism: A learner with a moderate level of autism has challenges in communication, planning, and changes in routine. Learners with moderate autism need more assistance compared to learners with a milder form of autism.

Attitudes: It is defined as positive or negative evaluations of objects of thought (Weiten, 2014:409).

Inclusion: It is an undertaking to teach each child, to the highest level applicable, in the school or classroom, he or she would otherwise attend.

Learning facilitator: The term learning facilitator is used all through the research study to represent an adult who assists a child with a disability, specifically ASD, within a mainstream institution.

Neuro-typical: The term neuro-typical stands for someone without ASD. A neuro-typical person thinks normally (Jordan & Caldwell-Harris, 2012).

Parent: It defines the biological, adoptive or legal guardian of a youngster, or an individual who shoulders the burden and the responsibilities of children education (Department of Education [DoE], 1996).

Social interaction: is defined as a process in which individuals exercise a degree of reciprocal influence over one another during social encounters.

DSM-IV: It is the diagnostic & Statistical Manual of Mental Disorders 4th Edition.

DSM-V: It is the diagnostic & Statistical Manual of Mental Disorders 5th Edition.

Teacher: A teacher is an individual who educates or trains others, or delivers professional educational services at any public school, departmental office or adult basic education centre and is appointed to a position in any teaching institution.

1.5. PROBLEM STATEMENT AND RESEARCH QUESTIONS

1.5.1. PROBLEM STATEMENT

The goal of every teacher should be to see learners excel holistically. Most educators pride themselves with bringing out the best in their learners. However, life brings in impediments that stand as strong barricades to these innocent learners' abilities. One of such is autism spectrum disorder. How can a teacher then educate children with autism ranging from mild to moderate in the foundation phase of a primary school in the Kingdom of Eswatini? Contributing knowledge that can help learners with ASD in the kingdom of Eswatini would make a significant impact, especially because not much is done in schools to help learners with ASD and there are not many schools that are built specifically for learners with ASD. This research was intended to reveal how teachers educate learners on the spectrum and to what extent their roles can improve the education of children with autism. Additionally, the study also explores the role of the teacher's interaction with other stakeholders in establishing conducive successful learning conditions of learners with ASD; for instance, the parents of children with ASD. This research focused on the education of learners with mild to moderate ASD at the foundational phase in the Kingdom of Eswatini. It is very important to be intentional as far as the learning experiences of learners with ASD are handled in a classroom situation to enhance the quality of education they receive and experience. This can only happen through equipping educators with the right tools and knowhow.

1.5.2.RESEARCH QUESTIONS

The study is guided by the following research questions:

1.5.2.1 Primary research question:

How do teachers educate learners with mild to moderate autism?

1.5.2.2 Secondary research questions:

- What strategies do teachers employ when educating learners with autism?
- What support services and resources have teachers received to help incorporate learners with autism?
- What challenges and successes have teachers encountered in teaching learners with autism?
- What is the role of parents in the education of learners with autism?

1.6. AIM AND OBJECTIVES

1.6.1.AIM

The aim of the study was to investigate how teachers can educate learners with mild to moderate autism at the foundation phase.

1.6.2.OBJECTIVES

- To investigate strategies that teachers employ when educating learners with autism at the foundation phase.
- To determine what support services and resources teachers received to help incorporate learners with autism at the foundation phase.
- To determine the challenges and successes teachers have encountered in teaching learners with autism at the foundation phase.
- To determine what the role of the parents is in the education of learners with autism at the foundation phase.

1.7. RESEARCH METHODOLOGY

The research methodology in a study concerns the theory, methods, justification and conceptualization of the research (Creswell, 2014). Research design and research methods are the key notes in methodology but are only be introduced in this section and to be further expanded on in the third chapter of the study.

1.7.1.RESEARCH DESIGN

The researcher adopts the case study research design so as to allow for a deep exploration and understanding of the complex issue of educating learners with autism. This is through the provision of an all-inclusive and thorough accounts of the social and behavioural problems. This enables the researcher to research beyond the quantitative statistical results and comprehend the behavioural issues through the actor's viewpoint. This technique permits the researcher to meticulously look at the data inside a precise setting by choosing a small geographical region or fewer people as subjects of the study in order to explore and examine present-day real-life phenomena through meticulous contextual analysis of a small quantity of events or circumstances, and their connections. According to Yin (1984), a case study research method is defined as an experiential inquiry that examines a present-day phenomenon within its real-life context, when the borders between phenomenon and context are not very clear, and in which numerous choices of evidence are used.

1.7.1.1. RESEARCH PARADIGM

Paradigms mean belief systems and theoretical frameworks used by researchers to comprehend and learn the reality of the world (Mackenzie & Knipe, 2006). Research paradigms are not chosen but rather inform studies based on the requirements of studies. The study's area focuses on learners with autism and especially how teachers can enhance their teaching of this group of learners hence the need to use a paradigm that will introduce the researcher to the subjective worldview of the participants. Guba and Lincoln (1994) stipulate that the main focus of the Interpretivist paradigm is to comprehend the subjective world of human experience by trying to get into the mind of the people being studied and to comprehend and deduce what the person is thinking or the interpretation he or she has of the circumstance.

1.7.1.2. RESEARCH APPROACH

Qualitative research approach is the only that is used to comprehend a research question in a humanistic manner and such allows the acquisition of awareness of a specific subject taking into account people's beliefs, attitudes, experiences and behaviour. Qualitative methods of research are crucial in finding intangible features such as social norms, socioeconomic status, gender roles, ethnicity, and religion, whose part in the research are not very obvious and aid researchers to deduce and better comprehend the difficult reality of certain circumstances and the effects of quantitative data. By nature, qualitative research seeks to explore the thoughts, feelings, emotions and personal experiences of the study participants themselves (Mason, 2000). The study adopted the use of a qualitative research approach.

1.7.2. RESEARCH METHODS

Research can require that a researcher to perform certain tasks using a variety of methods and at times they count variables and dialogue with people. There exist two kinds of research methods namely, quantitative which deals with quantifying especially data, and generalises findings from a section of the population of interest. This study used the qualitative research method which mainly concerns the quality of information. Methods associated with qualitative research, especially when used in educational research, seek to understand the fundamental motives and incentives for actions and portray how participants understand their experiences and the life close to them. These methods also give understandings into the setting of a problem, producing ideas and/or hypotheses. Qualitative research methods were considered the only applicable for this study since they seek to explore personal experiences and views of teachers and parents, while observing the learners hence the need for an approach that seeks to look at the detailed issues which will arise. A research method also informs issues pertaining selection of participants, data collection and data analysis which shall be briefly introduced below.

1.7.2.1. SELECTION OF PARTICIPANTS

In this study, the researcher selected a population of participants that included learners with autism, teachers of learners with autism and lastly parents of learners with autism. The learners with autism needed to meet a preset criterion. Teacher participants needed to have taught learners with autism from the age of three to nine with a mild to moderate diagnosis. Such information was identifiable through learner files and medical records from a specialist. Purposive sampling was used to identify the participants for the study. Participants from the target population were selected on the basis of meeting specific practical criteria that is, being educators or parents of learners on the spectrum in foundational classes. The convenience element was incorporated on the basis of geographical proximity to the researcher and availability to participate in the study which basically signifies willingness to participate (McMillan & Schumacher, 2014). There are several schools in Eswatini with learners with autism, however, only one specifically focus on learners with autism. The researcher consulted with the Eswatini Ministry of Education to request data from public and private schools teaching learners with ASD. The researcher approached pre-identified schools to seek permission to carry out the study but most took longer to respond while some granted permission however, they were far from the researcher's place of residence. This left the researcher with the only one option that is, doing the research in schools that were closest and had granted her permission. Once a school was identified, the researcher requested participation from parents of learners with autism and learning in the particular school, to be part of the study, and teachers who were teaching learners with autism at the school and willing to participate in the study, to partake. The researcher, having once worked at the selected school, was also able to identify the exact participants that she though met the criteria to participate in the study hence using convenience sampling to target them given their willingness to participate. The inclusion criteria were:

- Parents whose child studies at the school and had been identified with mild to moderate ASD, and were willing and available.
- Educators that were working at the school and educating children with mild to moderate ASD.

1.7.2.2. DATA COLLECTION

The researcher made use of a qualitative approach which according to Creswell (1994:67) is like a model happening in a normal setting that helps a researcher to develop a level of detail from high participation in the actual experiences. For the above reason, the research made use of the following three instruments; one on one interviews, direct observation, and questionnaires.

ONE-ON-ONE INTERVIEWS WITH TEACHERS

An interview is a tête-à-tête discussion through which the interviewer poses questions to gather data and to know ideas, beliefs, views, opinions, and behaviours of the participant. According to Cresswell (2014), qualitative interviews allow the researcher to understand life through the participant's lens. The study made use of a semi-structured interview comprising a selection of unrestricted questions in an exact order and the interviewer has options in adding questions or asking for illuminations. The interviewer guides the collection of personal data. The participant ought to be very relaxed, making the interview more of a chat than a planned examination of questions and answers.

The researcher employed this tool to get an appreciation of the position of the teacher in as far as the ability to teach learners with autism is concerned from their own point of view. She sought to establish data that present the skills, abilities, knowledge, and level of understanding the teacher has of the autistic learner. This would be presented in the form of experiences, difficulties, successes and joy they may have experienced during their time teaching learners with autism. Data was gathered from the perspective of the responsible teacher, and it would be very important, especially when matching it to what the researcher would later observe in the classroom. As already indicated, the interviews were to be a one-on-one session between the researcher and the interviewee. The researcher conducted interviews and used a pen paper to take notes. Throughout the process, the researcher made sure to note even specific gestures or facial expressions during the interview. The semi-structured interviews allowed the researcher to enquire or probe participants to add any other thoughts or to provide correction of misunderstood or unclear responses.

DIRECT OBSERVATION

It is a valuable technique for gathering, processing, and analysing information that is not possible to be studied in the artificial setting of a laboratory. It allows a huge unbiased analysis of day to day behaviours and interactions that happen normally (Anguera, 2010). Data gathered through an observational way is rich and offers researchers the chance to gain important pieces of daily realities, without precisely asking for the information as there are no interviews, questionnaires, or psychological tests involved. The study of daily activities gives information into the varied behaviours and proceedings that happen all through someone's life, therefore giving the researcher a very good place to perceive changes (Anguera, 2010). Researchers could use observation guides to aid them focus on issues they need to know. The researcher observed the teachers as they delivered lessons to learners with autism in the classroom whilst monitoring how they regulated participation, interaction and solicited responses to questions, oral and writing skills. Also, she observed the role of the teacher in learners with autism' use of technology during lessons, during break time, play time and sport time. The researcher wanted to observe the strategies employed by teachers and also relate to skills and knowledge of teaching learners with autism. These observations were continuous for the duration of a school term. The observations also focused on the attitudes and behaviours of learners with autism.

OPEN ENDED QUESTIONNAIRES FOR PARENTS

A questionnaire is a data collection instrument made up of questions and other prompts for the goal of collecting information from respondents. They allow a collection of subjective data. The questionnaires designed for use in this study were easy to answer, respectful and had to be completed three times, once every month for three months. Contained in the questionnaires was the information tittle and a clear introduction to help the participants answer appropriately. The introduction explained why data was being collected and for whom and explain confidentiality of responses.

This data collection instrument was crucial too as it gave a different direction to the research. The researcher wanted to establish the relationship between the teacher and the parent as far as the education of the autistic learner is concerned. The point is to

establish whether there was any involvement of the parent in the education of the learner and if there was an overspill to the home set up. The question to be answered was whether there was coordination between the parents and the teacher and whether it was important or not.

The researcher seeks to make it clear that despite the fact that questionnaires can be classified as mixed approach instruments, the type designed and used for this study specifically focused on the qualitative element. The argument is that the nature of classifying is justified by the nature of questions produced in which case for this study the researcher avoided restricted questions which are directly associated to quantitative methods. The nature of the questions used were open-ended and seek to establish subjective data in the form of understanding, knowledge, and experiences of participants. One would argue that such require critical analysis and or explanation from the participants' perspectives.

1.7.2.3. DATA ANALYSIS

Data analysis is the process of working on a huge amount of data, classifying noteworthy designs and building a framework for communicating the reason of what the data reveal (De Vos, Strydom, Fouché & Delport, 2011). Interpretivist collect mostly qualitative data from participants for a long time and the method to analyse the data produced is inductive, meaning the researcher has to look for designs in the data distorted in wide themes to comprehend a phenomenon and come up with a theory. Interpretivist use the inductive approach because they look at theory as originating from data gathering rather than the main aim of research (Grix, 2004). "Data typically comes as verbal rather than statistical and is often audio or video recorded to keep the proceedings in a mostly unaffected way for later data analysis" (Gall, Borg & Gall, 2003:21). Interpretive researchers use ways and means that generate qualitative data, and even though numerical data may be involved, they are not relied upon. The collected data is structured to match the research questions of the study. Upon completion of collecting data for this research, it was then organised according to the themes and codes formulated from reviewing the data. The process of data analysis made use of the thematic analysis approach to deduce the meaning or outcome of this research.

Thematic analysis is a qualitative data analysis method that comprises reading a set of data like transcripts from interviews and noticing patterns throughout the data to bring out themes and report patterns or themes within the data (Boyatzis, 1998). Themes are defined as details that put together important facts regarding data dealing with the research question, and signify a degree of patterned response or significance in the data set. In summation, thematic analysis is all about the searching across a data. In this study, the instruments on focus were interviews, observations and questionnaires in order to find repeated patterns of meaning. The researcher used the six-step guide for analysis of data. These are: familiarisation with the data, generating initial codes, searching for themes, review of themes, defining of themes and making a write-up (Braun & Clarke, 2006:26).

Step 1: Familiarisation with the data

The initial step in this process involves reading and re-reading the interview transcripts, questionnaire transcripts, and the notes from the observation task to enhance familiarity with the entire body of data or data corpus before notes were taken and early impressions highlighted (Braun & Clarke, 2006:16).

Step 2: Generation of initial codes

This involves organising data in a meaningful and systematic way. This is known as coding and it reduces a lot of data into little quantities of meaning. There are many ways of coding but the researcher used inductive coding guided by research questions and also deductive coding guided by responses (Braun & Clarke, 2006:18).

Step 3: Searching for themes

In this step, the researcher looks for patterns from the codes which capture important or interesting issues from the data and/or research question. As Braun and Clarke (2006:19) cited, there is no hard and fast rules on what a theme is made up, instead, they are characterised by their significance. At the end, the codes were grouped into wider themes that say something precise concerning the research question or responses.

Step 4: Review of themes

The researcher then reviewed, improved and developed the initial themes recognised in step 3. This was done through the gathering of all the data which was relevant to and associated with each theme to scrutinise if the data really supported it, and to also ascertain if the themes work in the context of the entire data set. The researcher ensured themes were inline and different from each other through thinking about if the themes made sense, if the data supported the themes, if the themes overlapped, or if they were indeed distinct themes, if there were themes inside themes (subthemes) and if there were other themes in the data (Braun & Clarke, 2006:20).

Step 5: Defining of themes

Step 5 is the last and involves fine-tuning of the themes and the aim and intends to find out what each theme is about (Braun & Clarke, 2006:22). The researcher established what the different theme(s) said, also, if there were subthemes and how they interacted and related to the main theme. Finally, how the themes related with one another.

Step 6: Write up

The final task of the researcher is to write the scientific report (Braun & Clarke, 2006:23).

1.8. MEASURES FOR TRUSTWORTHINESS

Lincoln and Guba (1985) are of the notion that trustworthiness is essential when conducting research to ensure thoroughness and consistency. It is maintained by making sure that there is adherence to concepts like credibility, confirmability, dependability and transferability of the study. The researcher accounted for credibility through clearly defining the research goals and also defining the target audience. This allowed equal chances of members of the sample to be incorporated in the selection process. For sampling procedures, purposive sampling technique was used since the determining factor was basically meeting criteria as already indicated. The educators and parents had to meet the required criteria of having learners with autism but specifically at the foundation stage. The participants were made aware of their right to exit the process at any time should they feel the need for that. The researcher enhanced transferability

through the complete comprehension of the research setting and context in which the research was carried.

Dependability and credibility are closely tied, and with the study being carried out and presented in full detail, a manner which should allow the research to be conducted following all the detail of the study which was closely examined and documented. To maintain confirmability of this study, the researcher when conducting the study, kept audit trails of like audio tapes, and kept referring to those when making the transcriptions to ensure participants opinions are said in the finest precise way possible (Lincoln and Guba, 1985).

1.9. ETHICAL CONSIDERATIONS

Qualitative research is a method of research where ethical responsibility is highlighted since it is where individuals' feelings, attitudes, and opinions are investigated. As such, ethical considerations should be considered in the entire study process, from the beginning to the end. Participants have to be assured that their responses will stay entirely confidential and would by no means ever be directly attributed back to them (Hennink, Hutter & Bailey, 2011). The researcher was constantly directed to be responsible towards the participants in the research project by ethics applied during the study. Ethics that guided the researcher included the following; do no harm, informed consent, data presentation, voluntary participation, and privacy and confidentiality. These guiding ethical principles are enumerated and deliberated in full detail in Chapter 3, as they were used in this study. The ethical clearance was obtained and the clearance certificate number for this research is as follows; 2022/05/22/5485/3834/26/AM

1.10. CHAPTER DIVISION

This study is divided into five chapters and below is how it is outlined.

CHAPTER 1: ORIENTATION

Chapter 1 is an outline of the background, the rationale, the statement of the problem, the research questions and aims, the research methodology, trustworthiness, and the ethical

considerations. Also included in this chapter is the definition of key concepts, the chapter outline, the focus and purpose of the study.

CHAPTER 2: CONTEXTUAL, THEORETICAL AND CONCEPTUAL FRAMEWORKS

Chapter 2 is a presentation of literature relevant to the study. The discussion is based on literature on the education of learners with autism on the global scale or level with a desire to also look at similar issues in Eswatini. The literature concerns the history of ASD, the roles played by different stakeholders in addressing the issue of study that is regionally and internationally. Additionally, the focus of the literature was to outline the current research in the subject area of research and the existing situation of the research milieu and how both equate.

CHAPTER 3: RESEARCH METHODOLOGY

Chapter 3 is a provision of a deep outlook of the research design and methodology that were used in the study. There is a detailed discussion in the areas of research paradigm, approach, and design, sampling procedures, setting, research participants, data collection methods and analysis. The chapter concludes by detailing the trustworthiness and ethical considerations that were followed in the research study.

CHAPTER 4: DATA PRESENTATION, ANALYSIS & INTERPRETATION

In chapter 4, there is the description of the findings from the empirically researched data collected through interviews, observation and questionnaires by the researcher. The chapter highlights the formation of themes, analysis and the presentation of findings from the collected data. The chapter presents an in-depth discussion of literature from previous studies to substantiate or contrast the findings of the study.

CHAPTER 5: SUMMARY, RECOMMENDATIONS & CONCLUSIONS

Chapter 5 gives a summary of the research, develops conclusions in relation to the analysed and processed data and fundamentally giving the theoretical and practical implications of the research study to reflect the significance thereof. According to the analysis of the data, the chapter also makes recommendations and generally discusses the study providing limitations, strengths, areas for future research and conclusions.

1.11. CONCLUSION

Chapter 1 was a provision of background to the study, the rationale through defining the problem statement within the context of the local milieu. The aims of the study, the research methodology, the theoretical framework, ethical considerations, trustworthiness and the definition of the key concepts were also addressed in the orientation of the study.

The following chapter is a review of literature that was related and relevant to the study in relation to international and regional experiences. The review looked at what has been established from research in the same area internationally and regionally while also looking at the gaps. Furthermore, Chapter 2 would be a discussion of the theory to the study in relation to question.

CHAPTER 2: CONTEXTUAL, THEORETICAL AND CONCEPTUAL FRAMEWORKS

2.1. INTRODUCTION

The study purposes to establish ways teachers can educate learners with autism in the Kingdom of Eswatini. This chapter explains the theoretical framework chosen to establish the relationships and associations of educators, families especially the parents as well as learners with autism when educating learners on the spectrum. The importance of the theory as far as linking practice to the concept, is also given. Secondly, the chapter also details the concept of autism as far as its definition, causes and also prevalence is concerned. The researcher had to also study global trends concerning the study area to expose prior research findings on how learners with autism are taught in the classroom and what strategies their teachers used to enhance the success of their learning over time and places. The chapter reviewed experiences of learners on the spectrum and their teachers in the selected school and the relationships concerned. Relevant material on the subject matter was collected from different sources over different regions, continents and various diverse cultures and laws governing education and training of teachers. The information or literature covered in this review is limited to the study's research question and its' three sub-questions.

2.2 THEORETICAL FRAMEWORK

2.2.1 Bronfenbrenner's Social Ecological System

Theory informs the basis for a research's form and make up (Mahlo, 2011:20). The research made use of the Bronfenbrenner's social ecological model of 1979. According to MacIntosh (2014:32), relevance of this approach or model is argued for by the suppositions of the model. It supposes that the nurturing of one is influenced how they socially interact with their environment that is from social institutions like the family, school, religion and friendships. Bronfenbrenner (1977) stated that aspects of life in an individual's milieu and the relationships formed through teaching experiences correlate to these components. The child's surroundings, in addition to the academic institution are significant for the research (Bronfenbrenner, 1977). Bronfenbrenner's ecological systems theory follows how humans are developed and more especially the impact of the

surroundings in the way families develop offspring (Bronfenbrenner, 1986). Bronfenbrenner (2005) posits such an approach enables the study of attributes of people to be separately understood within the confines of an order in a given period. According to Algood, Hong, Gourdine and Williams (2011:1143), Bronfenbrenner's approach views the milieu to be different but combining elements which more or less depend on each other and also informs one's world. Bronfenbrenner recognized what he termed environmental systems and indicated that these impose an effect on how an individual develops socially (Bronfenbrenner, 1986:723).

Mahlo (2011:21) posits that every child or student must not be viewed in isolation with regards to what surrounds him or her. The interconnected elements are a platform to determine learner achievement in their academia. Mahlo (2011:21) proposed that if these elements operate in synthesis, the result is that every learner, including the ones with special needs are beneficiaries of such an approach. The systems in one ecology have different operations but do depend on one another (Bronfenbrenner, 1986:723). Benjamin (2015:16) notes that developing a learner can be impacted when the different systems fail to work in tandem or if one of them disconnects from the other levels.

An ecological model or framework has a microsystem, a mesosystem, an exosystem as well as a macrosystem (Bronfenbrenner, 1995:22-26). Bronfenbrenner presents a young child, with what he calls their 'developmentally instigative person characteristics', along with meaning making by the child, right at the center of his model. Howe (2013) indicates that the learner's desires, their viewpoints, standpoints, how they are to learn and how they are defined form centrality of purpose in this model. Ties formed in the setup are fundamental, while defined elements inform how to they ought to be understood. According to Bronfenbrenner (2005), there are multiple systems which impact interaction in people and inform their development and this is described under the microsystems, the mesosystems, the exosystems, and the macrosystems as presented within the Social Ecological System. All the elements within the system form their existence inside of separate sections just like concentric circles (Neal & Neal, 2013).

The microsystem which is found on the base of the structure, is where individuals directly plays a part and is responsible for how they experience life (Neal & Neal, 2013). A

microsystem entails one's residence and it has such institutions like family, academic institutions, the neighborhood, as well as friends or colleagues (Christensen, 2016:28). Regarding academic institutions, the relationships relate to the teacher and learner on the spectrum and what responsibilities they partake in under the practice of educating learners on the spectrum. A microsystem is described as the design of activities, responsibilities, as well as the interactions and relationships formed when the child develops within a given setting with particular physical and material characteristics. In our study, a microsystem constitutes the relationship between an educator and the learner on the spectrum.

The mesosystem is about the social interactions between people in one given community and it shows interrelated relations which develop between the systems (Bronfenbrenner, 1977; Christensen, 2016:28). The mesosystem can also be described as an element within the microsystems which is also viewable in terms of the interconnectedness of the happenings in two or more systems within a developing child's ecology for example when the home and the school interact (Bronfenbrenner, 2005). As much as it is recognized that the family setting gives the first exposure to socialisation or development of the child, it is critical to also acknowledge the very important part played by other elements from the rest of the systems (Bronfenbrenner, 1986:723). The importance of this system to class activity is in the sense that learners lacking proper parental relations usually struggle when it comes to forming proper relations with their educators (Christensen, 2016:28). Benjamin (2015:32) highlights how the relations between parents and teachers are influential in the academic achievement and also socio-development of especially learners on the spectrum. Myles and Simpson (2002), in Goldberg (2010), also reiterates that partnerships between parents and educators forms the basis for practice in educating learners with autism. The level of interaction of these elements is influential to how the learner develops both academically and socially (Benjamin, 2015:18-32).

Then there is also the exosystems, based in the mesosystems and which impacts the person of interest even though the person's participation in this system is indirect. The exosystem is a social setting where the learner is not an active participant (Christensen, 2016:28). An exosystem presents a setting where the person is not active in but has

activities which influence and impact the setting where the developing individual is found, for example, the relations between the home setup and a parent's employment (Bronfenbrenner, 2005:148). Psychological development is also important for a learner since it is informed by an area where learners have limited direct access (Bronfenbrenner, 1986:723).

Last but not least is the macrosystem which is found in an exosystem and involves long-term outcomes of a person (Bronfenbrenner, 2005). According to Bronfenbrenner (2005:150), "The macrosystem forms the identity of culture and subcultures in given communities where one resides in (i.e. resources, lifestyles and hazards)". Lerner in Bronfenbrenner (2005), stated how crucial matters like public policies form a macrosystem. This system impacts developmental processes at more proximal levels (Bronfenbrenner, 2005:151). The macrosystem is an inclusion of overarching patterns in culture regarding religion, education, and economics, working in tandem in influencing the education of learners on the spectrum (Howie, 2013). The macrosystem adheres to conform to the form and material found in lower-order systems (micro-, meso-, and exo-) that subsist, or could exist, at the surface of the subculture, or even the culture at large. Belief systems or ideology which are the basis for such include an important part of the macrosystem (Bronfenbrenner, 1979:26). The macrosystem creates elements of culture and/or subculture (Bronfenbrenner, 1994:40), where societal norms, cultural traditions and national legislation are points of reference (MacIntosh, 2014:33). The social culture where the individual resides is also covered by the system (Christensen, 2016:29).

Bronfenbrenner's ecological model of (1979) defined these systems as social interactions. It is determined that in the systems, an individual and settings present the core of what determines a learner's development be it behavioural, academic or otherwise. The person element mentioned here point to characteristics as well as expertise gained by learners in the class otherwise regarded as classroom influence of the child (Poulou, 2014).

According to Bronfenbrenner's systems theory, development in children is hugely affected by their milieu and this is represented by systems with direct and indirect implications to their well-being. This theory is applicable to this study in the sense that there are

numerous avenues that qualify for its application. For instance, parents have to have communication that is consistent and open with their children's teachers. At the same time, educators need to acknowledge the presence of factors in the exosystem and the macrosystem which are likely to influence their learner's development. In practice, the exosystem is concerned how the world influences a child's microsystem. The microsystem is made up of individuals with daily influence on the child such as parents, siblings, teachers and or peers hence through the ecological the researcher acknowledges that the implication of influence may having lasting ramifications on the education of learners.

2.3 CONCEPTUAL FRAMEWORK

This study was informed by global and national statutory calling for all countries to embrace education as a basic right for all children despite their circumstances or standing in society. Examples of such statutes include the United Nations Convention on the Rights of Persons with Disabilities (2006) and also International Conventions on disabilities like the Salamanca Statement and Framework for Action on Special Needs Education (1994), Dakar Framework of Action (2000) as well as The United Nations Convention on the Rights of Persons with Disabilities of 2006 (UNESCO, 2015). Globally, similar studies have been done with different outcomes and for instance Avramidis et al. (2000:279) state how educators lack preparation to provide for the requirements of special needs learners. Cavanaugh (2012:20) noted how educators have to provide education to learners with special needs whilst they are usually untrained in that regard, and may not be aware and are also not supported to provide the needs of the particular learners they are to educate. Although it is crucial for teachers to be properly trained and have the right tools to effectively educate learners on the spectrum, Simpson (2004:140) highlights that the lack of a supply of rightly trained or specialist with the right qualifications provides the major hindrance in the educating of special needs learners. The study used Bronfenbrenner's ecological model to explore the abovementioned issues in the context of the Kingdom of Eswatini.

According to WHO (2019:02), "autism spectrum disorders are neurodevelopmental disorders, meaning, they are caused by abnormalities in the way the brain develops and works. There are a range of different disorders covered by this term, including conditions

that used to be considered separate such as autism and Asperger's syndrome. Some people still use the term "Asperger's syndrome". It is generally thought to be at the milder end of the ASD spectrum. People with autism spectrum disorders have problems in social behaviour and communicating with others; they tend to engage in solitary interests and activities which they do repetitively. In most cases, autism spectrum disorders become apparent during the first 5 years of a person's life. They begin in childhood and tend to persist into adolescence and adulthood." The global prevalence of the spectrum stands at 1 in every 160 people and statistics also indicate that it is more prevalent in boys than it is in girls. It is also common for individuals on the spectrum to have other conditions such as epilepsy, anxiety and attention deficit hyperactivity disorder (ADHD). WHO (2019:02), also indicate the variability in the levels of intelligence and cognitive functioning in people on the spectrum with the range being from superior functioning to profound impairment.

According to WHO (2019:02), individuals on the spectrum have behavior patterns unique to each individual although there are generalized signs and symptoms. These include; communication problems such that they have trouble using or understanding language, difficulties in social interaction leading to challenges in making friends, repetitive behaviors which requires them to follow routine procedures and also sensory sensitivity. Research has indicated that particular genes inherited from parents are likely causes even though environmental factors may also contribute for instance premature birth that is before 35 weeks of pregnancy or alcohol exposure whilst in the womb (WHO, 2019:02).

2.4 CONTEXTUAL FRAMEWORK

2.4.1 LEGISLATION

The world has seen legislation placing increasing numbers of special needs students alongside their regular education peers in mainstream education classrooms. In the midst of the population of special education learners, are learners with autism presenting the most rapidly growing group of special needs learners. Case in point is the United Nations Convention of 1989, on Children's Rights (Convention on the rights of the child, 1989) of such, which advocates for every child to live a full-fledged life, under humanely situations,

promoting independence as well as facilitating their involvement in their respective communities. Similarly, through the United Nations embracing the agenda of fighting for the rights of humanity and also the agenda of social justice through its' Universal Declaration of Human Rights (United Nations, 1948). Various nations have been influenced as far as their educational policies are concerned and through the United Nations, the global level at large (Pantic & Florian, 2015). Most countries - through their educational policies - recognise the children's rights for equality regardless of their diversity, which could be cultural, or based on sex (Humphrey & Symes, 2013:04). Fighting for equality and human rights has even turned to facilitating similar opportunities in educational issues as the main theme. This is also evidenced by yet another United Nations Convention in the form of Article 24 which is based on the Rights of Persons with Disabilities. The Article pinpoints to create through educational inclusivity, a way through which persons with disabilities can effectively participate. Furthermore, it is particular on how participation can be meaningful and not tokenistic by indicating how countries are responsible for the provision of the diverse needs of every individual.

Consistent with the above-mentioned systemic movements in the educational systems, even countries in Sub-Saharan Africa embraced the agenda in 1994, inclusivity was introduced in Zimbabwe adopting (Chireshe, 2013; Mandina, 2012). The Zimbabwe Education Act of 1987 otherwise amended in 2006 confirms this (Majoko, 2013; Mpofu & Shumba, 2012). It directs educating learners with disabilities under conventional classrooms. Across the border, the South African Education Department has created an educational practice reform by setting out a mandate requiring every child to be educated whilst doing away with enactments of excluding tutelage and also pledging impartiality and inclusive education for the nation (Hyman, 2014). To foster equality in education, the South African Department of Education implemented a framework through its 2001 Education White paper 6 which seeks to guide policy makers in education (Hyman, 2014). Running with an approach as integrative as that ensures that all diverse learners in South Africa are embraced and accommodated in their diversity.

According to Roberts (2007:17), the policy would create systems to aid educators in the respective school districts to grow the capacity of educators in the country to enable them to successfully deliver lessons to learners of different needs. The White Paper 6 (Department of Education, 2001) works off the same premise as the UN agenda which stipulates that disability is a human right concern and seeks to address marginalisation issues which may be a result of different societal structures that is either socially and or economically propagated (Bergstedt, 2015). A couple of main themes are highlighted in White Paper 6 (Department of Education, 2001). Examples include recognizing how everyone despite their age has the ability to be educated hence, the need to afford everyone assistance they may deem. Secondly, giving space to students and allowing them to learn as they are able. Finally, it recognizes the diversity of learners and hence is informed on the kind of assistance required from other learners to create a workable environment which fosters complete development for them (Kempthorne, 2018). As early as 1948, around 12 percent of learners with disabilities in general, had access to some type of specialized instruction to meet their educational needs in the U.S. By the 1950's, special education students were being educated in sort of discriminatory special schools that excluded them from the regular education curriculum and their typically developing peers (Pierangelo & Giuliani, 2012). The year 1954 saw a monumental case, *Brown v. Board of Education of Topeka, Kansas*, ruled that it was not legal to "arbitrarily discriminate against any group of people" (Pierangelo & Giuliani, 2012:6) and as such the ruling set the stage for individuals with disabilities to be viewed as a group protected by the Fourteenth Amendment who could not be denied access to public schooling because of their disability. From thence, significant federal legislation began to evolve into the 1960's, and designed to protect and assist learners with disabilities and the last four decades have seen special education laws continuing to expand with the recent No Child Left Behind Act of 2001 (NCLB) and the Individuals with Disabilities Education Improvement Act of 2004 (IDEA 2004) adding to the demands on today's teachers (Pierangelo & Giuliani, 2012; Swain, Nordness & Leader-Janssen, 2012). The NCLB requires the classroom teachers to be of high quality and that every child gets the assistance required in order to perform at levels considered proficient or advanced. The legislation requires accountability from classroom teachers with an emphasis on the use

of scientifically researched instructional practices and evidence-based interventions (Pierangelo & Giuliani, 2012). Together with NCLB, IDEA 2004 advocates for learners with special needs to be educated to the maximum extent applicable alongside children without disabilities in their neighborhood schools (Hill & Hill, 2012).

The Salamanca agreement (UNESCO, 1994) resulted in more acceptance of educating learners with special education needs even on the spectrum in their respective communities' schools. The majority of learners on the spectrum now enroll in established normal schools though other nations, for instance Ireland, acknowledge providing education on a continuum to be effective in supporting the diversity of all groups (Batten, Corbett, Rosenblatt, Withers & Yulile, 2006; Education for Persons with Special Educational Needs [EPSEN], 2004). Ireland for example, has accepted influence from policy makers internationally, resulting in the education policy of Ireland rapidly changing with even a task force being assigned for Autism issues (Task Force on Autism, 2001) which reported its commitment on addressing autism issues and redressing the negative issues associated with the disorder. To support such, the Education for Persons with Special Educational Needs (EPSEN) Act was formed (Government of Ireland, 2005) and the Disability Act (Government of Ireland, 2005) which is a provision of the layout to assess and support those below the age of 18.

Equally, the kingdom of Eswatini embraced the idea of providing an educational system that offers similar options to every child despite their situation as presented in the Eswatini National Constitution (Eswatini National Constitution, 2006). The promotion of Education for All (EFA) which is constitutionally advocated for as a Policy of Inclusive Education was also formed. As of 2006, the program has been in action at nine schools, each with four educators having received training to deal with special education needs learners. The Kingdom embraced the universal approach to the provision of grassroots education for all, which offers a provision of equality in chances and options to every young person and this notion is also carried in The CONSTITUTION OF THE KINGDOM OF SWAZILAND ACT (2005:20). The system is a reflection of valuing equality and developing systematic commitment to every child's success through promotion of similar educational options to

every child in line with the requirements of Inclusive Education designed by the UN agenda. The agenda seeks to create justice in communities which ensures similar educational opportunities for all children regardless of who and where they are (UNESCO, 2007). The kingdom of Eswatini is made up of four provinces and had a couple of schools piloting the program in each province using criteria deemed fit under issues of vicinity and issues of resourcefulness. These were to then service neighbouring schools for rolling out the Inclusive Education Program with the plan of rolling out to 608 primary schools by 2015.

Even with teachers having concerns on their ability due to being untrained, learners on the spectrum should legally be provided with programs meeting their educational needs. In Manitoba, the Public-School Act was amended (Appropriate Educational Programming) and it resulted to boards in schools being required to offer educational programs which are supportive to learners with disabilities participation both academically and socially (Manitoba Education, Citizenship and Youth, 2006). Morally, education institutions should also be required to provide services meeting the needs of learners on the spectrum. As shown in studies, learners with disabilities engage better and produce good results in class when they are included in conventional classes than when separated (Zagona, Kurth & Macfarland, 2017). Having an educator with knowledge of their different needs and expectation has been reported crucial by learners with autism in the support of education (Hummerstone & Parson, 2020). Goddall (2018) states that the majority of learners recognise that institutions only place them in conventional classes for the physical space without acknowledging the key differences between them and their neuro-typical classmates (Hummerstone & Parson, 2020). Inclusivity is still affected academically, socially, mentally and also lack of appropriate educator development adds to the list.

2.2.3 FOUNDATIONAL PHASE

Learners on the spectrum exhibit developmental milestones in unique ways, usually requiring complex skills and adaptations on the part of the teacher. The social-emotional development does not follow the expected trajectory. Autism spectrum disorder manifests in psycho-social or social-emotional disturbances. It is vital that teachers are well

informed on different milestones to be expected and generally the different aspects of development such as language and social development in their learners to be able to impact them to their maximum potential. According to Pope et al., (2010), there is more variability than universality in development differences in the autism spectrum disorder population and that creates issues for researchers, educators as well as practitioners. Pope et al, (2010) posit that it is highly challenging to actually determine or prescribe typical developmental trajectories as each individual are likely to follow unique development patterns. This is a critical area to understand as it influences the delivery of learning processes to the learners with autism. Pope et al., (2010), however highlights that general characteristics have been identified for example in movement and motor development to inform practitioners.

2.2.4 SCHOOLING OPTIONS FOR LEARNERS WITH AUTISM

Learners with disabilities can be educated in different ways. There is what is termed segregation, which is when they are placed in non-residential special schools. There is also integration, which happens in conventional classes either in special classes or inclusive classes. Usually, according to Frederickson and Cline (2002), the learner with special needs has the responsibility to adjust so as to fit into the status quo. The last model of educating learners with disabilities is inclusion where the learner is assigned to a conventional class appropriate for their age and also receive the support of the school. The school provides aid and support to change, adapt, methods of teaching, curriculum for the benefit of the learner (Frederickson & Cline, 2002:65; Buława-Halasz, 2015).

2.2.4.1 INCLUSION

According to UNESCO (1994), inclusion is when learners of special needs are included in conventional classes and the educational institution offers aid and support to these learners. According to Ferguson (1995), inclusion essentially recognizes publicly adopting frameworks that suit every child or young person to enhance their participated growth through societal education systems. This also informs creating a high level of standard accessible to every child. The process also fosters normalizing and accepting all learners and treating them equally and impartially in conventional classes in spite of any differences (Kaur, Noman & Awang-Hashim, 2016). Inclusive Education is focused

on providing education to every learner despite their background (Engelbrecht, 2006; Makoelle, 2012). It can be seen as a method of broadening learner participation inside of traditional educational institutions.

The idea of the inclusivity approach can be termed developmental in that it affords to cater for diversity of various learners and especially looking to advocate for the marginalized and excluded (UNESCO, 1994). This approach identifies show stoppers to education while finding ways to curb such problems. Educators in inclusive classes focus on their responsibility of teaching learners with disabilities in mainstream classes, which can be attained by hinging on approaches and having them directed to create a relationship between students and educators. According to Falkmer, Anderson, Joosten, and Falkmer (2015), inclusion has been prominent for some time now more so since the rise in numbers of officially acknowledged learners with autism included in mainstream education classrooms.

Numerous scholars posit that educating learners with autism in inclusive settings is critical (Lindsay, Proulx, Thomson & Scott, 2014) as it aides development socially (Schreibman, 2005, as cited in Goodman & Williams, 2007). According to Collins (2004), the objectives in the implementation of an inclusive education system emanate from the need to change how conventional classes are purposed to enhance acceptance and accommodate all children to develop under similar conditions as their age mates while embracing the diversity nature of society. Placing learners with autism in conventional classes allows the learners to develop skills in operating around diverse populations and environments, something they do not experience when placed under segregatory circumstances where interaction is only with their educators (Goodman & Williams, 2007). Apart from benefiting socially, studies established that learners on the spectrum also engage more in class, work more on school work and their general school-work improves (Lynch & Irvine, 2009). In addition, the approach benefits neuro-typical children as it is easy for them to acknowledge differences in communities, develop a sense to fight marginalisation and enhance inclusion and also develop their empathy (Mitchell, 2008). Lindsay, Proulx, Thomson and Scott (2013) point out that providing welcoming communities in educational

institutions aides every child to develop completely in a space that acknowledges and recognizes them as a member. Decades of research have indicated that inclusion can actually benefit both learners with and without autism (Chun & Biying, 2015).

Generally, the global eye has been provoked by inclusivity and this has been embraced in institutions of learning at the global scale with learners in their diversity able to learn, socialise, grow and mix within the same set up (Solis, Vaughn, Swanson & McMully, 2012). The common cause in the practice of inclusion is education for all and makes sure that learners on the spectrum can be developed together in the conventional classes with their peers in similar milieu (Parsons, 2013). Research has shown that learners with autism involved in conventional classes experience are more socially skilled and develop more friendships in comparison with those restricted by settings (Lauderdale-Littin, Howell & Blacher, 2013). Studies have also shown that attainment is enhanced by inclusivity since learners on the spectrum are beneficiaries of associating with neuro-typical peers and studies have also shown that learners on the spectrum's academic outcomes are higher when they are part of an inclusive environment (Johnson & Busby, 2015).

Since socialisation influences how learners on the spectrum are involved, comprehending successfully in socially desirable ways may prove difficult for academic excellence when it comes to learners on the spectrum possessing inadequate skills for such (Able, Sreckovic, Schultz, Garwood & Sherman, 2015). Inclusion allows learners with autism to socially interact with others in conventional class set ups (De Boer, Pijl & Minnaert, 2012). The responsibility of the teacher has grown to be more concerned with a collaborative class outlook so they can be able to aid socially enhanced interactions (Tremblay, 2013). Also, teachers ought to focus on socializing learners to enhance identity under environments accepting inclusivity of neuro-typical learners as well as learners on the spectrum (Kauffman & Badar, 2014). Studies have shown learners on the spectrum thrive through associations with their colleagues without autism in conventional classes (McCurdy & Cole, 2014).

The facilitation of inclusivity in conventional classes needs educators to be prepared, also, the involvement of all parties interested as well as various other supportive activities (Majoko, 2013), and teachers educate learners of various special needs in conventional classes (Flores, Schweck & Hinton, 2016). Learners on the spectrum deserve equality, identity and the right to participate in the otherwise regarded as the normal environment (Goodall, 2015).

2.2.4.2 INTEGRATION

Muntaner (2011) states that integration classes only take into consideration people with Special Educational Needs separately. Integration institutions include sections within mainstream education settings and Hallahan and Kauffman (1991) defines such sections as learning centres where learners are provided with special education for a given period. Such a section focuses on teaching fundamentals of daily skills succeeding with the goal being that when these skills are mastered, learners with disabilities attend classes with learners without disabilities in the same class. Resource teachers are responsible for taking integrated classes. The placing of learners with and without disabilities in one class seeks to address the established order which marginalizes others and Ysseldyke and Algozzine (1995) similarly confirm this by indicating how learners having special needs could grow on the social and academic fronts through learning in conventional classes while the other learners would also benefit. Such programs help enhance every learner to acknowledge how communities are different.

2.2.4.3 SEGREGATION

Segregation institutions accommodate learners having extensive special needs and normally learners who have the same issue are accommodated in similar schools. Such segregation institutions include those handicapped in sight or mentally. Segregation institutions are in most cases the only safe method of providing an education to children with extensive special needs (Sweeney, 2007). Provision of education seeks to broaden all the children's information, exposure and meaning as a preparation for them before they actively become a part of a bigger world. Such preparation is only suitable for learners who have severe issues but only in special schools since they can get

specialised instruction in such set ups. Special schools would often develop specific curriculum with focusing on living skillset, which aid learners to grasp the necessary livelihood abilities in travelling, financial literacy and self-upkeep among other things. Such an approach seeks to validate the lives of these learners to be ready to become part of a community with an opportunity to also be available for employment upon completing their education. In other cases, other special schools even make use of commercialized frameworks for instance the Walker Social Skills Curriculum in Australia (Walker, 1983).

2.2.5 COLLABORATIONS, SUPPORT SERVICES AND RESOURCES

Educators need to confer with a lot of therapists in the form of speech specialists, as well as other specialist dealing with the physical and the social who are part of the educational support team to learners with autism. Though such collaborations are often very tough to maintain (Busby, Ingram & Bowron, 2012), classroom teachers too should receive such consistent assistance necessary to manage the inherent behaviors that challenge teachers on a daily basis since having such appropriate levels of support is key for successful education of learners with autism. Leblanc, Richardson and Burns (2009) have shown how critical it is that teachers have provisions in support and resources needed to accommodate the different requirements of learners on the spectrum.

Despite teachers reporting being agreeable to inclusive issues (Zagona et al., 2017), most still indicate they do not have enough capacity in knowhow and skillset to satisfactorily educate learners with autism (Humphrey & Symes, 2013). Many teachers believe they are not equipped enough to cope with manifestations usually associated with the autism disorder. These come in the form of emotional outbursts, lack of flexibility, and social difficulties (Lindsay, Proulx, Thomson & Scott, 2013). According to Lindsay et al. (2013), the majority of educators have identified that they also do not possess the right apparatus that gives support in sensory issues for the learners while also indicating the desire for more assistance in areas needing to be addressed. Despite receiving some in-service training, some teachers still view themselves as not prepared enough especially for in-class approaches and such perceptions on ill-preparation are also presented in what has

been researched and what is actually practiced, that is, what has been established to actually work and what is being implemented in the classroom by teachers (Brock, Carter & Biggs, 2020). Many of the teachers feel a lack of support with preparation and facilitation of tools as well as a lack of knowhow of approaches that work.

There is a need for educators who engage in functional and adorning association with those responsible for learners on the spectrum. This will aid by involving them in their children's learning. According to Todd, Beamer and Goodreau (2014), events like school meetings involving teachers and parents should be harnessed by teachers to involve the parents in the educational life of their children. Responses from teachers who participated in previous studies have indicated that they know their role and their involvement in as far as the ways in which they should be involved is concerned when teaching children with ASD. Most of the activities where the teachers were involved were school-based as compared to home-based. A good example shows literature from a study by Hornby and Lafaele (2011), which that indicate teachers can also evaluate their learners to discover any learning barriers that may affect the child and if there are such, the notification of parents and engagement of appropriate professionals in the field follows. The teacher can then make use of the outcomes of an engagement with a professional to tailor make learning programs suiting that particular child. Most teachers had similar sentiments when it came to the significance of highlighting inhibitors to education.

When it concerned issues regarding motivation of the children to give their best or discipline or the child's development, the majority of the teachers emphasised on the vitality of an educator's responsibility in involving guardians or those responsible for the learners with autism as being crucial. Thwala (2018) identified in a study titled *Teacher's Strategies of Including Learners with Autism Spectrum Disorders in Mainstream Classrooms in Swaziland*, the role of teachers to be that of building a foundation of enhancing discipline, shaping a child's future and also constantly motivate a child towards certain appealing behaviors. It has been acknowledged that learners experience diverse barriers and diverse needs that ought to be met by the teacher. Whilst planning each child's intervention program, the teacher has to acknowledge that the learning content

has to be differentiated to encompass its' accommodation to all the learners. In performing their roles effectively, teachers can allow parents to work as volunteers in schools. Parents should be allowed and encouraged to give support to educators in academic programs (Erlendsdóttir, 2010). According to Epstein, Sanders, Simon, Salinas, Jansorn and Van Voorhis (2002), there are many events or areas where parents could help including celebratory or any other events and also in the library, playground, computer room and or the library.

Kulusic (2014) offered similar sentiments as far as emphasizing how the responsibility pertaining the progress of each learner with ASD lies with the teacher of that learner. Accordingly, the responsibilities of duties such as evaluating and reporting on the ASD students' progress remain with them. To add to that, they need to collaborate with both the parents and the learner in planning, creating as well as sustaining a learning environment which is safe. The teacher also has to make plans as far as instruction for both the individual learner and the whole class and make the implementation of goals and objectives for individual education plans attainable while allowing for provision of making revisions if and when necessary. Also falling under the same category is the issue of communicating with parents pertaining the education of their children (Azad, Marcus & Mandell, 2020). Other issues revolve around the coordination and management of information and services provided by the school support team and other community support services. Examples of such include social workers, occupational therapists, and speech or language therapists. Azad et al. (2020) indicated that most teachers highlighted the importance of their roles as it is them who have to create the base for preceding activities in the learner's culturing. As much as it is considered that schooling frameworks need to be diverse and more tailor-made to suit every child, it is usually them who have to create program-specific learning content to match each child's diagnosis. Epstein et al. (2002) noted that only through the educator's practices can the learners with ASD fully benefit, for instance, such practices can help get the families involved in the schoolwork of the child at home. A good instance is when teachers consistently allow the families to take part in the reading activities of the learner and it was established that the learners gained more ability to read in comparison with the other learners who had no involvement from their teachers (Epstein et al., 2002).

The next point attests the extent of the teacher's role in the education of a learner with autism. Learners with autism require so much attention at different settings of their life, that is, from school to the home, and the set-up of each of these institutions is an organ or opportunity for them to excel. These different institutions involve professionals across multidisciplinary teams across the board. In the same picture, there is also parents and family members who are influential in the life of the learner. Stahmer, Brookman-Frazee, Lee, Searcy and Reed (2011) acknowledge that all these different stakeholders cannot and will never operate in independence as far as their influence is concerned hence the role of a teacher will need him or her to harness the collaboration skill to create and maintain respectful relationships with other stakeholders for the ultimate success of the learner (McCabe, 2008). Collaboration with other stakeholders like other teachers and family has been noted as a strength which allows for sharing of knowledge gained and can help in the implementation of plans and objectives to the benefit of the child (Morewood, Humphrey & Symes, 2011).

According to Busby et al. (2012), partnering fellow educators can be regarded as challenging, tough and time consuming. It is nevertheless an essential component especially with a set up where the collaborators are working as one team as this can easily work well in issues like awareness raising among the group (Scheuermann, Webber, Boutot & Goodwin, 2003). Jordan, Orozco and Averett (2001) alludes to this by stating that it enhances favorable application since multidisciplinary collaboration entails early intervention specialist's involvement, combining escorted by well-being professionals and schools communicating with educational auxiliaries (Charman, Pellicano, Peacey, Peacey, Forward & Dockrell, 2011).

Teaching learners with autism needs educators partnering other significant members from other disciplines in addition to all stakeholders in the field (Stahmer et al., 2011). When it comes to good practice with regard to the needs of teachers in educating learners with autism, a multidisciplinary collaboration can be very essential. For instance, the engagement of those who offer preliminary services (Jordan et al., 2001), and also partnering those who specialize in well-being (Charman et al., 2011), how educational auxiliary liaise with educational institutions as well as how educators can be engaged to

prepare their deputies (Symes & Humphrey, 2011b). Developing partnerships is therefore an essential expertise needed by educators to successfully implement inclusion. The ability to develop associations and partnerships has been noted as a positive virtue and educators have even been encouraged to develop reverent associations (McCabe, 2008). Morewood et al. (2011) also highlight the importance of exchanging knowhow learnt on how to effectively foster inclusion. Such partnerships with fellow educators have also been described as difficult and can be protracted (Busby et al. 2012), nevertheless they are still regarded crucial in conscientising others on which methods are more relevant and work (Scheuermann et al., 2003).

Effective collaboration with families can also be viewed as a prerequisite for the success of educators (Whitaker, 2002; Whitaker, 2007; Whitaker & Preece, 2013). Thus effective application regards valuable parental and caregiver involvement (Jordan et al., 2001), exchanging of resources developed in education institutions describing parental involvement in their school programs (Jones, Happe, Baird, Simonoff, Marsden, Tregay, Phillips, Goswami, Thomson & Charman, 2009) and creation and honing of collaborations which focus on exchange of ideas and information as well as the provision of being supportive to the families of learners (Charman et al., 2011). Notable difficulties arising from partnerships with families have been noted (Busby et al., 2012), allowing giving coaching an important part of association formations. Jordan et al. (2001) posit that research studies acknowledge the idea of first having specialised skills for teachers which focus on the correspondence and interpersonal expertise of learners on the spectrum. Secondly, focusing on good practice which allows for aiding accessibility to curriculum without depending on identifying the learner's correspondence expertise and lastly, the techniques on educating interpersonal expertise and comprehension. Humphrey and Symes (2013), discuss challenges in this area most educators acknowledge that difficulties in ability to correspond is the toughest problem when educating learners on the spectrum. Charman et al. (2011) highlight how important it is for educators to focus on skills under correspondence as well as the social and emotional side of the learner specifically.

2.2.6 CHALLENGES

As more learners with autism enroll in conventional classrooms, teachers encounter the difficulties of educating, addressing their behaviors as they develop socially and also providing the perfect environment in class for successful educational outcomes (Lindsay et al., 2014). Learners with autism tend to be comfortable when there is repetition of activities, whilst hating high sensitive situations, which causes educating a child with autism in conventional classes very challenging since such classes usually easily provoke them due to their nature (Emam & Farrell, 2009). It becomes easy for learners with autism to feel riled in especially the busy and noisy environments associated with overcrowded classrooms. Experiencing inclusion in mainstream school classrooms exposes the learner with autism to have to adjust socially to the expected norms and at times conforming to such norms poses pressures to the learners (Rao, Beidel & Murray, 2008). Children with autism use self-stimulating behaviours otherwise known as stimming (Sinha, Kjelgaard, Gandhi, Tsourides, Cardinaux, Pantazis, Diamond & Held, 2014) which when manifesting provoke calmness and gratification under overwhelming situations (Sinha et al., 2014). These are manifested by utilising the diverse sensory processes like the auditory, tactile, smell, taste, vestibular and proprioceptive processes. Stimming can manifest as hums, screams as well as touching or moving the body inappropriately. These may also come out as a deterrent in class and could be a source of riling up tensions of teachers as they offer inclusion of diverse learners and their diverse behaviours and emotional attributes (Emam & Farrell, 2009). Most learners on the spectrum usually display behavior that is in form of repetition and that may also disrupt other class activities. Such attributes in learners with autism could pose issues to how they engage in classes resulting in reduction of utilising chances of learning, and this compromises educational outcomes (Sterling-Turner, Robinson & Wilczynski, 2001).

In addition, a compromise in social and emotional comprehension affects how educators associate with the student (Gutstein & Whitney, 2002). Learners with autism normally experience difficulties to communicate and interact in social circles and usually operate within the confines of their understanding, and as a result they neither try to reach out to their teachers nor their fellows (Gutstein & Whitney, 2002). They also exhibit behaviors

like focusing on away from class activities as well as shunning face-to-face interaction adds challenges and complications to educators' tasks (Lehohla & Hlalele, 2012). Collins (2014) also presents that learners with autism require what is called atypical learning styles which are a form of specific instruction different from neuro-typical peers. Having to provide diverse approaches to teaching can prove a tough task without support either from assistants or other classroom service providers (Emam & Farrell, 2009).

Autism also offers special difficulties to teachers because of its nature of being a spectrum, meaning it manifests in each learner uniquely. Such then becomes a pendulum which presents learners in with distinct heterogeneity. A learner with autism could shun face-to-face interaction, others could mildly engage, others may totally lack speech skills or be extremely talented in it (Autism Society of America, 2012). As noted by (Autism Society of America, 2012). knowing a single person on the spectrum simply implies that you know that particular person. The possibilities of attributes manifesting in the learners on the spectrum are outcomes of the general issues educators will face in class and are normally socially constructed problems, challenges in communicating and behavioural issues like repetitive behavior (National Institute of Mental Health, 2014).

Many learners with ASD also have challenges of sensory processing, planning organization and attention, motor skills, and emotional issues such as stress or anxiety (Autism Society of America, 2012). Manning and Butcher (2013) highlight that whilst every child with disabilities will not have behavioural issues, they are still challenging to teachers and this is certainly the case for learners with autism. The Autism Society of America (2012) reports that commonly, learners with autism face challenges controlling emotions and is manifested in behaviors exhibiting lack of maturity like crying in classrooms and verbal outbursts lacking appropriateness in conventional situations and at times persons on the spectrum exhibit violent eruptions as well as disrupt activities making them incapable of socially engaging others. It is also easy for learners with autism to lose control, especially new milieu tends to overwhelm them resulting in them even breaking stuffs, attacking peers or self-harming. The classroom teacher has to modify and adapt curriculum, classroom design, and behavior management techniques in numerous ways

on a daily basis to meet the disparate academic, behavioral, and sensory needs of learners with autism despite the fact that these disruptive behaviors are not the only challenge facing teachers of learners with ASD. The teachers also have to make the necessary modifications and adaptations in spite of the limited resources. As stipulated by Diggle and McConachie (2003) and Wing (1998) teachers have a very crucial role when educating learners with autism due to the far-reaching consequences of ASD in education. According to Schafer, Sedlmeier, Stadtler and Huron (2013), issues like difficulties in communication, attention to tasks, listening, organisation, rigidity, alertness, social interaction and behaviour manifest in children on the spectrum. It is therefore imperative that educators develop an understanding on the adapting of the environment and educational curriculum for learners like those with ASD, are likely to experience learning barriers (Wilson, Richards & Kelly, 2017). The needs of learners on the spectrum are rather specific and particular and hence it is crucial for their teachers to harness techniques like differentiated teaching approaches or techniques in delivering lessons or curriculum to learners on the spectrum (Sulaimani & Gut, 2019; Wilson et al., 2017).

Learners with autism face many challenges in the school environment in the form of school-work difficulties, exclusion, issues of anxiety in unfamiliar environments and educators lacking proper skills. According to Zagona et al. (2017), teachers may also present limited knowledge of what they expect from learners on the spectrum in terms of school outcomes, and this broadens the disparity as far as school outcomes and functionality of cognitions in the child is concerned (Goodall, 2015). Hummerstone and Parson (2020) noted other learners on the spectrum have reported their teachers tend to be too focused on scholarly results while disregarding the supporting of the student on issues outside academia like the socialisation into groups or with peers.

Naturally, due to shortcomings on ability to communicate socially, learners on the spectrum also suffer in social circles and are often bullied more than their counterparts (Able et al., 2015) of which Calder, Hill and Pellicano (2013), stated that such social exclusion increases as students mature. There is a lack of coordination with regards to social relationships as educators do not know aid facilitation of socialisation between

learners on the spectrum and their classmates, whilst the guardians and parents have indicated educational institutions are not providing the right platform in developing the child socially (Lindsay et al., 2013) and because of that, learners on the spectrum find themselves alone and unsupported in academic institutions (Goodall, 2018).

Academic set ups are problematic and cause stress to learners as classrooms can be very loud and disruptive for someone with increased emotional needs and sensory demands (Warren, Buckingham & Parsons, 2020). Ofner, Coles, Decou, Do, Bienek, Snider and Ugnat (2018) acknowledge that autism is often co-morbid with other mental health problems, thus increasing the complexity of the needs of learners with autism. The above point was also ascertained by Van Steensel, Bogels and Perrin (2011), who ascertained that 40% of learners on the spectrum have anxiety issues which is a problem since academic institutions are often a hub of noise in classes and overcrowded passages while the scheduling is also a cause of concern (Goodall, 2018). This may usually end with learners with autism demonstrating externalizing behaviours like yelling, throwing things, or stomping, and even physical aggression which can be difficult for regular teachers to manage (Ambler, Eidels & Gregory, 2015).

2.2.7 STRATEGIES AND TECHNIQUES

This section is a review of how the teacher embraces the challenge of teaching learners with autism through incorporating skills and strategies effectively in their education. It looks on strategies the teacher can look to harness in facilitating the proper incorporation of learners with ASD since the teaching of learners with autism is always unique to individual needs and specifications. The focus is on the different strategies that have been found to be relevant and effective globally.

- **DIFFERENTIATED INSTRUCTION**

Differentiated instruction is centered on the theory of constructivism and social constructivism. It is the basis of what constitutes this era of modernity, real accepting and accommodating learning focusing on the learner therefore differentiated instruction is a didactic strategy where education is designed or

tailor-made to suit the learner's capabilities, point of requirements, desires and adaptations to allow learner development which suit every one despite their diversity (Zafiri, Konstantinidou & Pliogou, 2019). It bases its practice in applying diverse educational techniques, and diverse sources of material which attend to differences in expectations, experiences as well as understanding to enhance effective teaching and meaningful learning. Its efficacy has also been documented in theory and practice by various researches supporting the idea that differentiated instruction provide impressive outcomes in education, specifically on learners' exhibiting challenges in learning (Zafiri et al., 2019). It is also regarded as very efficient globally and in a variety of diverse education set ups.

Approaching differentiated instruction need to consider various issues which interface particularly the factors which are direct and decisive at a micro-level (internal differentiation). This refers to issues like how the learner performs their expertise, capabilities, desires and requirements and also affects the education and process of learning is structured (Zafiri et al., 2019). Certain issues then influence the macro-level (external differentiation), an example is respective countries policies in the education sector or nature of existing academic institutions, the curricula, language, social field, the culture and politics influenced the education framework. Differentiated instruction also allows academic communities to influence the vital areas in education. The key facets focusing differentiated instruction consist of context of teaching, methods or approaches to teaching, outcome of educating as well as the learning milieu (Zafiri et al. 2019). The first axis identifies with content of education, that is knowhow and expertise to be acquired, plus whatever may be relevant for their development in learning. Secondly, the focus is on different scenarios where the child will be exposed to for them comprehend the taught material and gain knowhow. In addition to the first two, is another aspect which deals with how to apply and present the knowhow and expertise using presentations as required using different methods and means. Lastly, the focus shifts to the education milieu and how it is developed from the

class and furniture design, presentation and decoration so as to produce the perfect scene which can support and enhance learning for every learner.

- **INDIVIDUALIZED EDUCATION PROGRAM**

Another strategy which can be used for incorporating learners with autism is the use of the individualized education program. After determining that the learner indeed requires specialised learning, an educator would then begin to develop a plan for the learner with ASD. An IEP is the foundation in the provision of programs for particular learners for instance for a learner on the spectrum (Patti, 2016). Learners who carry diagnosis for needs be it for function or education gain when individualized education programs are used and such programs are usually aligned to conventional curriculum levels (Yell, Katsiyannis, Ennis, Losinski & Christle, 2016). Providing effectively the demands that is both educational and emotional, of learners on the spectrum is a focus of individualised educational plans. This is informed in the targets and approaches to acceptance and these are usually part of the detail of the individualised education programs. They are firstly presentation of instruction, the kind of expected responses, the timing or scheduling of instruction, and the setting (Harrison, Bunford, Evans & Owens, 2013). In the mapping of the programs, important is the consideration of issues like the incorporation of academic approaches developed in research study, incorporation of approaches which have worked for like learners as well as incorporation of approaches developed prior to the engagements (Rubin, 2017). According to the Individual with Disabilities Education Act (2004), such planning need to be formulated by teams made up of members with knowhow and who also engage with the learner. The development of individualised educational plans is a chance to yield skills of individuals who desire to create a fruitful framework to enhance the educational results of the learner (Hedeem, Peter, Moses & Engiles, 2013). Patti (2016) states that the educator lead such teams and is often accountable in the collection of detail from the rest of the squad as well as having to create parts of the program like for example, current situation detail and expected yearly targets. Developing an IEP follows the steps of collecting detail

and telling the story of the child. The steps are completed by sharing data and providing resources.

- **PARTICIPATION OF PARENTS**

An important aspect of individualised education programs meeting concerns the involvement of parents with knowledge of the learners as well as approval (Rubin, 2017) and usually parents desire participation in such programs because of searching for specialists willing and able to assist in the process of educating their child (Reynolds, 2016). Having parental involvement does not only come highly endorsed but is also reiterated (IDEA, 2004) as another strategy. The conjecture supposes parental involvement in decision making about the type of education and how the child is placed improves benefit to the child since they come with knowledge about the child (Lo, 2012). Academic institutions implore parents to be active in spotting the crucial elements in the individualised education programs procedure with particular parts being esteemed in the decision-making process for the goals, accommodations, and setting for the autistic learner (Schuttler, 2012). Individualised education programs create frameworks for such roles with teams which include educators, parents, academic specialists and the learner him or herself (Patti, 2016).

- **PEER MODELLING**

Peer modelling is also an efficient way in which learners with autism grasp the relevant socialisation and linguistic techniques. A lot of academic set ups offering inclusion have effectively implemented the approach (Atherton, 2005; Garfinkle & Schwartz, 2002; McCorry & Hermansen, 2007). To improve learners on the spectrum development of socially useful expertise, self-dependence as well as linguistic skills, educators partner learners on the spectrum with their neurotypical peers showing desirable behaviors (McConnell, 2002). According to Kasari, Locke, Gulsrud & Rotheram-Fuller (2011) intervening facilitated through using their peers greatly boost the skillsets of learners on the spectrum especially the socializing and communicative aspect. Beidel, Turner and Morris (2000) have stressed

importance of acquiring social skillsets from a tender age as it enhances higher chances of achieving success in academia. Peer modelling is hence the perfect platform as learners with autism can easily be socialized into the system which benefits both educational and childhood development.

- **PROMPTING**

Kartsen and Carr (2009) mention prompting which increases the desire in individuals reaching goals or achieving what is expected of them through directing signals. Prompts work as precursors given to aid where ordinary antecedents fail to produce expected outcome (Kartsen & Carr, 2009). Hayes (2013) believes prompting has to be to the point and have strategy for schedule to demonstrate the expectations to the learner. Hayes (2011) also acknowledge how prompting also aids both interactive development and linguistic skills. Pennington, Ault, Schuster and Sanders (2011) emphasize how approaches to implementing prompts form a significant part of educating children with special needs and also highlight that a great deal of research and evaluations have been done on the aspect. Prompting can take the form of gestures, verbal or harness models which pronounce desirable behaviours (Bryan & Gast, 2000).

- **INFORMATION AND COMMUNICATION TECHNOLOGIES**

Information and communication technologies (ICT) dominated various spaces like academic set ups as of the 21st century. This approach brought changes to educational frameworks and this resulted in the need for amending of instructive content which the internet and technological advancements prompted more. As much as changes of that nature need to be supported by latest factual appliances and programs formation (Kagohara, Sigafoos, Achmadi, O'Reilly, & Lancioni, 2012; Ramdoss, Machalicek, Rispoli, Mulloy, Lang & O' Reilly, 2012), of which the special education branch has incorporated the latest advancements in technology as well. Herbert (2010) reiterates the significance of information and communication technology and specifically that which digital tech brings as a highlight to the creation of improved special education practices. Computers and

computer-based systems, virtual reality, multimedia, interactive videos as well as other various latest appliances are included in illustrating the possibilities which can be brought about by information and communication technology in enhancing the schooling milieu of learners with disabilities. To add to that is the proposal of using robust theoretical frameworks in pertinent domains and this includes interactive media as a schooling technique, as it accommodates diversity in people but also creating state of the art useful models of learning.

- **TECHNOLOGY-RICH IMPLEMENTATIONS**

Other models aiding the work of improving the lives of those on the spectrum could as well be adopted from latest technological astute applications which can invigorate illuminative milieu. A freshness coming out of using latest tech appliances has the capacity to keep desire from learners on the spectrum pretty high and the facilitation of educating learners on various social, psychomotor and academic techniques is possible through applying such appliances (Hagiwara & Myles, 1999). Children on the spectrum often engage in activities which include spelling, counting, drawing, solving puzzles, recalling pictures and matching items (Mayer, 2005). Such can be achieved by using latest tech gadgets like cellular. The gadgets have been proven to be within the reach of most and they are also friendly to users with the ability to manage good levels of acceptable sway on learning material (Gentry, Lau, Molinelli, Fallen & Kriner, 2012), while also facilitating tailor-made approaches to education friendly to students on the spectrum (Chen, 2012).

- **VERBAL AND AUDIO-VISUAL MATERIALS**

Almost similarly to the technology mentioned above is the audiovisual teaching method which provides illumination using verbal and audio-visual content (Mayer, 2005). Research has shown that quality education is maintained by providing material in verbal form and also through multi-media (Houghton & Willows, 1987; Mandl & Levin, 1989; Schnotz, 1993). This allows for presentation of material to be done using various ways to enhance education (Mayer & Sims, 1994). The

framework pinpoints how limited capacity of short term memory is (Miller, 1956), and posits the idea learning material presented using multi-media modes of delivery. This allows the use of multiple channels in the facilitation of comprehension and avoid a cognitive load (Sweller, 1988). The different audio-visual modes arouse various sensory points, reducing the burden on a single channel thereby increasing the effectiveness of digital learning materials.

- **INTERACTION**

Other benefits that make education through audio-vision more appealing is interaction. Students are easily exposed to diverse material (e.g., texts, graphics, animations, images, videos, sounds) in simple interactions. This is so because instead of simply looking at the material, they have an option to choose to act on it however they deem fit. Audio-visual approaches offer interactive opportunities which is actually exciting and brings more success to learning (Mukti & Hwa, 2004). The practice in learning activities has yielded impressive outcomes and this has led to it being introduced in special education. Such interactive multi-media is especially important for learners on the spectrum since their perception of visual stimuli is higher in comparison to auditory content (Rao & Gagie, 2006; Shukla-Mehta, Miller & Callahan, 2010).

- **SOCIAL STORIES**

Approaches that have the capacity of sustaining learning that is rich in modality include social stories (Gray 2010; National Autism Center [NAC], 2015). Formulating short stories takes particular form which is informed by particular rules of engagement in social circles which indicate the correct ways of acting in diverse contextual set ups. (Gray, 2010; Gray & Garand, 1993) and the stories are presentable using text or visuals (Goodman-Scott & Carlisle, 2014; Gray, 2010). Students with ASD who have the ability to read can be taught how to cope with diverse situations through the technique of social stories. The stories are developed and written by the teachers themselves, keeping in mind the child, where they are told by words and simple images, step by step, what will happen

in anxiety situations and how to deal with difficult situations for instance a social situation can be used to learn what to do in the street, in a bus, when with friends, etc. (Children, 2010).

- **POSITIVE HOME-SCHOOL PARTNERSHIP**

According to Bevan-Brown (2010), it is also critical to establish beneficial collaborations between the home and the school as an approach to influence better outcomes from learners on the spectrum. The magnitude of value of such a collaboration is beyond putting a price. As Kelly (2008) highlighted, parents are influential in making teachers develop knowledge of the learner. Despite the above notion Bevan-Brown (2010), noted how teachers as well as many specialists usually fail to find worthy in parental knowhow especially on how to teach or what works for the learners on the spectrum and this results in disregard of input from parents. Bevan-Brown (2010) also indicate how educating methods and frameworks emanating from parents are validated in research around autism spectrum disorders and examples of such methods include additional academic support; 'time-out' seating and breaks, use of strengths and interests to promote engagement, advance warning about changes in routine, pro-active playtime strategies, rewarding effort through positive feedback, implementation of correct safety strategies and use of teachers to role model a respectful attitude and understanding towards learners with ASD.

- **ELIMINATING OF DEFICIT THEORISING**

Another interesting strategy is the eliminating of deficit theorising. Goodall (2014) noted that other educators find it difficult to acknowledge that learners on the spectrum have the capacity to learn effectively and successfully, and this led to learning opportunities for these students being overlooked. The concern is that if teachers do not see potential in learners with autism, the result will be a failure in teaching to the best of their ability. Kelly (2008) reiterated the importance of taking approaches which harness the strengths of learners as well as developing the educational setting to the suiting of learners. Bevan-Brown (2010) also highlighted

how parents had described how the modelling of respectful behaviour by educators is a crucial approach since everyone working with a child with autism should assist significantly to model acceptable behavior. Evidence of deficit theorising when educators interact with their learners' likely result in other learners considering such behaviour acceptable. Goodall (2014) recommended the exposure of educators to actual lives of adults on the spectrum to help them refrain from deficit theorising. When they meet the great multitudes in well-educated, articulate and successful adults identifying as being on the spectrum could help educators consider how they perceive the potential of learners with ASD.

- **PEER TUTORING**

During class sessions, learners with ASD can quickly lose concentration. In such cases where learners with ASD easily lose focus, teachers can call out the name of a friend or classmate to the child to attend to the learner. The peer could keep the learner with ASD stable so that the teacher may peacefully continue with the lesson without the need to attend to the learner with autism (Thwala, 2018).

2.2.8 TEACHER TRAINING

There is recognition that for much of the time during weekdays, learners are in and around the classrooms and surrounded by their teachers. Even though these learners are of diverse backgrounds, the responsibility of each individual still lies with their respective teachers. The facts below can help focus teacher training good enough for educating learners with autism.

- **DEEPER UNDERSTANDING**

According to Myles, Hagen, Holverstott, Hubbard, Adreon and Trautman (2005:2), it is crucial to have educators who are knowledgeable on their learners' differing needs and be able to satisfy those needs so as to positively influence the lives of the learners, more so those with ASD. Learners on the spectrum bring unique challenges in the classroom for any teacher. In a study with regards to the elements aiding successful education educating of learners on the spectrum, and

according to Goodall (2014), having increased knowledge about autism as a disorder and how learners experience it will have increased the likelihood of teachers successfully educating their learners. Goodall (2014) proposed that educators can get such knowhow through collaborative problem-solving strategy. According to Goodall (2014), the use of collaborative problem-solving assisted educators in getting an understanding of why learners with ASD sometimes failed to comply with their instructions and this allowed an establishment of framework for communicating which can help educator and learner negotiate to complying and learning. In addition to that, collaborative problem-solving helps improves academic outcome through encouraging educators to develop knowhow of how learners on the spectrum think and perceive their surroundings. Goodall (2014) argue how having awareness of the learner's thinking process changes how the educator perceives their learner from being tough to deal with or lacking capacity to a learner with diverse skillset and difficulties. Goodall's (2014) collaborative problem strategy brings confidence since it produces good outcomes in educating learners on the spectrum whilst enabling the educators' development of knowhow of their learner. The model used by Goodall requires some modifying so as take into cognizant how old the learners are and level of challenges the learner has in respect of their spectrum. Other educators could view collaborative problem-solving challenging in that coordinating with others to find solutions may seem like losing their power and responsibility and capacity to offer successful education (Goodall, 2014). This strategy can be harnessed by every educator whilst even the learners with autism' classmates can also get insight of people with autism's perspectives.

- **TEACHING METHODS**

The unique challenges brought into the classroom by learners with autism are great opportunities for teachers to develop and implement teaching methods that can influence the learner for a lifetime (Myles et al., 2005). According to Bayat (2012), there are areas which need to be adapted by teachers in the process of ensuring the successful accommodation of needs of children on the spectrum.

These areas include the creation of individual workstations, adjusting noise levels in class, lessening visual cluttering, adjusting layout for easy of moving around and even adjusting the lighting. Kelly (2008) then contends how it is difficult to pinpoint a specific method to educating learners on the spectrum and how educators struggle to improve their teaching styles from simply understanding fully their learners where they could get pointers to improve academic outcomes.

- **TRAINING**

The biggest regret comes in the lack of training. Training on the facilitation of how learners on the spectrum learn and participate in conventional classes can provide solutions which can improve educational outcomes. Humphrey and Symes (2013) highlighted that secondary school teachers in the UK had a very strong willingness to upgrade and improve their expertise and knowledge. Research has shown that in order to teach children with autism effectively, teachers needed to be highly trained and require a very specialized skill set (Busby et al., 2012). Such appropriate training for educating learners with autism is paramount because when educators lack sufficient training, the learning outcomes for learners with ASD decline (Loiacono & Valenti, 2010). Teachers identified a need to be knowledgeable on autism spectrum disorders as well as having knowhow on facilitations of especially group activities as areas they need appraisal on so as they can deal with learners on the spectrum (Helps, Newsom-Davis & Callias, 1999). Additional research also looked into conventional preparation of educators in autism and the material of such, in the main, it pointed to diverse subjects including psychological theory and knowledge, child development, games, music/movement, fine motor activities, ABA and DTT (McCabe, 2008); the knowhow on autism issues, approaches in teaching, TEACCH, communication systems, sensory integration and behavioural management techniques (Charman et al., 2011); interpersonal relationship interventions, skill-based interventions, cognitive strategies, physiological, biological, neurological interventions, other interventions and model programmes (Morrier, Hess & Heflin, 2011). Jennett, Harris and Mesibov (2003) present that the right appraisal gives educators belief

as well as the potential to negate issues of burnout in staff. Busby et al. (2012) also posits how educators perceive their self-efficacy impacts on the capacity to be positively desire challenging work. The point that preparation minimizes burnout also gets support from broad research in autism studies (Coman, Alessandri, Gutierrez, Novotny, Boyd, Hume, Sperry & Odom, 2013).

- **ATTITUDES**

Preparedness to work with learners with ASD is also a resource in short supply. Underpinning the success story in the inclusion of ASD learners in education is shown in the literature which highlights attitudinal foundations at the core of the themes. Lastly, two participants raised issue on the inadequacy of the courses to fully prepare teachers to work with students having specific SEN with the implications being that teachers end up lacking confidence in their ability to teach. The two focus areas of the attempts to address concerns on inclusion of learners with autism in regular education classroom have been on the preparedness of the teacher to educate learners with autism as well as the educators' perception on educating children on the spectrum (Avramidis, Bayliss & Burden, 2000). Cassady's (2011:3) research in autism connects teachers' attitudes with their reflected level of confidence in their own instructional skills and shows that when educators are more welcoming to the idea of educating learners on the spectrum, it improves their efficacy. Prior research by Avramidis et al. (2000:279) demonstrates as well that teachers are more positive about including students with special needs when there is "confidence in selecting appropriate teaching methods". Confidence in their capabilities and their capacity for success can only be attained when and if the teachers have been well prepared. And finally, it is imperative that the attitude toward inclusion of autism learners is a positive one. Despite conventional learning, educators being in support of academic inclusion, most lack the confidence in providing education for learners with ASD since they do not have the right appraisal (Deris & Di Carlo, 2013).

- **WEAKNESSES AND STRENGTHS**

Learners on the spectrum are also similar to other learners in that they also have their own particular weaknesses as well as strengths. To facilitate successful learning, there is need for unique strategies when dealing with learners on the spectrum as highlighted above (Myles et al., 2005). According to Kelly (2008), the ultimate approach formulated from action research has been to developing knowledge on a learner. According to Kelly (2008) it is through collaborations and sharing of information about the learner from diverse settings. This is done through engaging all stakeholders, that is, specialists and parents or families to come up with whole picture information. Kelly (2008) argues that such data helps us develop knowhow on what the learner prefers, do not like, their personality, habitual issues as well as how they cope in diverse environments, what motivates them, their sensory preference as well as their perceptions of the world.

- **WHOLE SCHOOL BANDS**

There should be trainings which cover whole school teams and in turn develop positive ethos while also ensuring consistency in practice. From such highly acquired deep content, bands then form personalized programs for implementation, which center on the full knowledge of the learner's traits that is positive, negatives and how they comprehend their world. This way, the schools can then have the ability to fulfil the role of awareness raising within the wider communities. To reach the goal of supporting the participation of children with ASD in education and being able to satisfy their needs despite their diverseness, there is need to emphasize awareness raising on ASD issues. There is also need for the school environment to have an ethos of inclusivity and also inclusive attitude. Positive attitudes from teachers on inclusion especially when it comes to learners on the spectrum are regarded important first before other issues can be raised for instance their confidence in educating learners on the spectrum (Charman et al., 2011; Humphrey & Symes, 2013; Symes & Humphrey, 2011a).

- **IN-SERVICE PROFESSIONAL DEVELOPMENT**

Numerous studies have insisted on the importance of in-service professional development for educators especially the ones dealing with ASD learners. Once teachers acquire skills through the on-the-job-training, it acquaints them with the requisite professional development especially at conception (Bush, 2016).

- **STRATEGIES**

It is critical that a teacher is equipped with the knowledge of appropriate strategies that can be used in educating learners with autism. In a study seeking to explore the instruction of learners on the spectrum under the International Baccalaureate (IB) framework, Primary Years Programme (PYP), teachers were requested to register any other issues when educating learners on the spectrum under the PYP framework which had not been discussed but which they wished to pursue (Bush, 2016). Three participants wanted strategies which are more practical. Another teacher even suggested that the International Baccalaureate needed to add more content to expand and include more strategies in working with students with ASD.

- **EVIDENCE-BASED INTERVENTIONS**

Due to the increased requirements for teachers to focus their practice on evidence-based interventions when teaching, there has been research done on the accuracy of such practices. Outcomes show educators should implement the evidence-based strategies, accompanied by particularly organized approaches which are simpler to comprehend. There is need for practicing, guiding as well as time to gain as well as keep up modest action application accuracy, in particular when it comes to real-life approaches (Stahmer et al., 2015). Downs and Downs (2012) indicate that research has also showed the same outcomes, highlighting how appraisals need additional support in the form of practice assessments to confirm successful implementation of what has been learnt in training. Having confidence and competence in use of specific strategy can be attained through training for example according to Leblanc et al. (2009), instruction of educators on ABA had a number of benefits. Their study revealed a boost in autism issues knowhow by teachers

which also led to improved evidence based practice. Furthermore, it showed a reduction in the emotional problems of teachers like stress and anxiety of teachers during when as learners on the spectrum got included in mainstream classrooms and the teachers also developed their ability to utilise professional support in meeting learners with autism' needs.

- **APPROACHES**

Scheuermann et al. (2003) point out the need for educators' need to have special expertise in a number of strategies, since training and also using one method will not work for every learner. Jones et al. (2009) had similar recommendations when writing in the context of the UK context, that there was need for teachers to get training on diverse methods. Jennett et al. (2003) identified the raise in teacher self-efficacy when they have commitment and knowhow and foundation of conjectural direction of a method to teaching.

- **TEACHING ASSISTANTS**

The engagement or use of teaching assistants can be used either in support of specific learners or generically to the benefit of the whole classroom. This is also a crucial tool or supportive strategy in inclusive education to the benefit of special needs learners and more especially learners on the spectrum (Webster et al., 2011). Symes and Humphrey (2011b) locate limited competence of most educator auxiliaries in the UK as hindering their ability to support ASD learners. The level of training received by teaching assistants could not be considered helpful in the classroom due to it being extremely variable and very generic. The effectiveness or capability of the auxiliaries in including learners on the spectrum are affected by issues like lack of skills, educator's know-how on autism issues and how the school and staff communicates (Symes & Humphrey, 2011a). Wermer et al. (2018) also impressed how anyone working with learners and auxiliaries should also receive training from educators to effectively implement evidence-based approaches for the promotion of increased communicating, supporting collaborations and sharing of ideas and knowhow.

- **POSITIVE RELATIONSHIPS**

Whitaker and Preece (2013) outline the significance in the fostering of functional relations between schools and families while enhancing educators' expertise with regards to procedural issues in educator and family partnerships meant to enhance inclusion which works have been recognized to be vital training need (Busby et al., 2012). According to Howley and Preece (2013), there is importance in shifting focus onto creating working collaborations between schools and families, while creating environments which offer supportive action for educators especially with regards to aspects which challenge the norm for instance managing behavioural issues and transitioning among other things. The provision of support for children on the spectrum which is effective also lies on the teacher. It is the teacher who can create and form lasting and effective collaborations with other professionals, particularly those that can offer services for ASD children. Jordan et al. (2001) reiterates the significance in giving support to learners on the spectrum as they transition between their home and school, between classes as well as during less-structured 'free-play' sessions and in formal lessons.

- **KEY PROBLEM AREA**

Humphrey and Symes (2013) also acknowledge how correspondence between all involved identifies as a key problem area, but what is acknowledged as biggest of the challenges for learners on the spectrum is dealing with inappropriate display of emotions, heightened anxiety and poor turn-taking skills.

2.2.9 CURRICULUM

In as far as aiding accessibility of curriculum to learners on the spectrum, Fortuna and Ince (2013) propose educators get training on differentiating lesson objectives, lesson material, approaches to education and also how to be supportive when dealing with learner group activities. Busby et al. (2012) noted that in addition to the above issues, there is also the need for the teacher to be able to deal with other issues pertaining the design and implementation of each learner's individualised plan. With regard to this, Probst and Leppert (2008) acknowledge another theme in teaching and learning and the

requirement thereof to have adaptations and modifications focused skills for each particular classroom specific needs. A good example is where an environment can be enhanced by spatial and temporal structuring through TEACCH, Probst and Leppert, (2008), and the support of transitioning to new classes and adaption individualization when addressing exact needs of learners (Jones et al., 2009). Morewood et al. (2011:64) have positively evaluated the 'saturation' model in mainstream education, stating that for efficiency, the ideation of inclusivity and its implementation should be based on all elements of life experiences in academic environments. As such, to create an environment welcoming enough is to develop full knowledge and proper understanding of the subject matter.

From a study that was instituted by the Autism Education Trust [AET] in the United Kingdom (Charman et al., 2011) recognized some areas that led to or resulted in 'good autism practice' for or in schools. They acknowledged that having a higher level of expectancy in their aspirations and ambitions for learners with autism is a key note. Also highlighted were issues surrounding an interest in actually listening to the learner with autism and hearing their voice as well as fostering relationships with the learners. Most importantly, in good practice they also pin pointed the need for an adapted curriculum which is individualised with the core focus areas being on communication, emotional and social whilst embedding the traditional curriculum in that. The qualities of the educators involved in the AET study had training of high caliber, highly dedicated and highly motivated. In other findings which were similar to the AET, McCabe (2008) noted that in China's specialist educational setting the main issues identified included having the best qualifications, desire as well as educators knowledgeable enough and who found further teacher education being of value.

Charman et al. (2011:6) indicated that some schools who showed the right temperaments to in effective teaching of learners on the spectrum did more than providing individual programs or curriculum adaptation for each learner. Their focus was on coming up with a curriculum dealing with learners needs while also addressing the social, emotional and communication needs of children and young people with autism, and to nurture their independence and well-being.

That then suggests the need for an ASD-specific curriculum which automatically then implies that the education of learners with ASD is a needs a specialised approach where it is to be delivered by only experts in the area of ASD. In a study, Busby et al. (2012) found out among educators in the USA respondents thought the educating of learners on the spectrum was specialised and needed highly specialised skills and qualities. This was also ascertained yet again in another US study by Loiacono and Valenti (2010), where they also identified that the majority of teachers in the mainstream settings had indicated feelings of being ill-prepared and un-skilled to educate learners on the spectrum.

2.3 CONCLUSION

This chapter has looked at defining and understanding the various challenges as revealed in previous studies, facing a child with autism and to interrogate how support practices for learners with autism can be established in schools globally. Being able to facilitate the successful learning of learners with unique needs, including autism has become international priority and the chapter has reviewed studies done previously on how teachers can facilitate the utmost learning environment for such learners and the very many strategies that have been put to task in this quest. Lastly, the concept of autism was defined and how it has evolved since its inception while also highlighting the symptoms associated with it and the statistics of thereof.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1. INTRODUCTION

The preceding chapter presented on what autism is all about. It also looked at the effects of the spectrum on learning. Chapter 2 reflected what have been worked on pertaining this area of this study, globally. It also introduced theory informing the study and accounting for the different aspects and stakeholders involved and their different roles. Most importantly, it introduced the educator and his/her responsibilities and how the part he/she plays impacts the outcomes of learning.

This chapter is a presentation of the research approach and is designed to be used in the quest to establish how teachers can teach learners on the Autism spectrum and what role they play. The chapter gives an expose of the detailed approach of methods of capturing, analysing as well as the presentation of data. It also discusses other areas concerning methodology such as validity and reliability. Lastly, the chapter presents ethical considerations during the study.

3.2. RATIONALE FOR EMPIRICAL RESEARCH

In this research, the researcher began by answering the research question: How can teachers educate children with autism spectrum disorder? Identifying the research purpose preceded forming of research goals and objectives. Research in social circles usually takes the form of one of three classes namely exploratory, descriptive, and explanatory research. It is possible for particular research to address a variety of discourses (Yin, 1994). Research under the descriptive banner is hugely guided and also always provide descriptions of research variables such as human beings or even the environments of study. Descriptive studies are usually informed by at least a single research question even though they do not follow formulated research hypotheses. There is then the explanatory research of which the primary purpose shows and describes the occurrences of behaviours and any other issues as well as predicting even future behavior or happenings. The character of such research is based on research hypotheses which provide in specific terms, the different dynamics and causal effects surrounding the different aspects in a research study (Creswell, 2014:186).

Exploratory research focuses on the formulation of research issues, concept clarification as well as formation of hypotheses. The process of exploring can start by searching literature, discussions in focus groups and case studies. Exploratory research often makes use of experts in the field to be studied. It is all about seeking to create hypotheses instead of testing. Lastly, it produces qualitative data and this is derived through platforms like brainstorming sessions, interviews with experts, and posting a short survey to a social networking website (Yin, 1994:22).

This study aimed to establish how teachers provide education to learners on the spectrum. The research ventured into the experiences of educators of learners on the autistic spectrum, their parents as well as the learners with autism themselves. The qualitative research method enhances soliciting of data through observing directly the real life circumstances of those being studied. It was also fundamental for the researcher of this study to do fieldwork and make use of one-on-one interviews as well as questionnaires.

3.3. RESEARCH DESIGN

The case study research design was used for this research so as to enhance a deeper exploration of the respondents' worldview of the phenomena and have them describe their experiences as they perceive them and be able to understand their lived experiences through observations. Case studies provide all-inclusive and detailed explanations of the social and behavioural issues being looked at through going further than just the quantitative statistical outcomes. This helps researchers to embrace and acknowledge the behaviors through the scope of the specificity of participants' environments. The researcher can explore information in given contexts through selecting a segment of a given study population from which explorations and investigations can be done on subject matters in present experiences. Such can be done by contextually analysing a few scenarios relating to the study course and how they interact. According to Yin (1994), the case study research method affords empirical enquiry on present-day subjects of study within their milieu.

The researcher employed the following three instruments for primary data collection:

- one-on-one interviews
- open ended questionnaire
- direct observation.

For this study, the researcher used one-on-one interviews to get an appreciation of the position of the teacher in as far as the ability to teach learners with autism is concerned as well as to establish information about the skills, abilities, knowhow and or level of understanding the teacher has of the learner with autism. These are presented in the form of the experiences, difficulties, successes and joy they may have experienced during their time teaching learners with autism.

The researcher also utilised observation sessions to observe the teachers as they delivered lessons to learners with autism in the classroom whilst also wanting to monitor how they regulate participation, interaction and solicit responses to questions, oral and writing skills. This also allowed the researcher to observe the teacher's role when learners use technology during lessons and also their interactions during break time, play time and sport time. In addition, the researcher also observed the strategies employed by teachers and also relate to skills and knowledge of teaching learners with autism.

Lastly, the researcher wanted to establish how teachers and parents interacted in this facet of educating learners on the spectrum. This was to establish parental involvement if there was any in the education of the learner and to also check an overspill to the home environment. The question to be answered is whether there is coordination between the parents and the teacher and whether it is important or not. Open ended questionnaires were used to engage parents and this was so as to establish an answer to the above-mentioned question. The focus of this research instrument was only qualitative data gathered through open-ended questions to try and establish in-depth insights into participants' thoughts, feelings, and experiences. Such an approach could bring out a depth in understanding of individual perspectives, motivations, and subjective that is not immersed with interviewer fingerprints or fellow participants' responses during maybe say interview or focus group sessions.

3.4 RESEARCH PARADIGM

The research paradigm is a fundamental block in the building of the methodology of a study and methodology is informed by questions like what paradigm informs your methodology. Kuhn (1962) introduced paradigm as a term meaning a philosophical way of thinking and paradigm forms its' *etiology* in Greek of which the meaning is design. Mackenzie and Knipe (2006) highlight that paradigm describes a researcher's worldview which is a school of thought, or set of shared beliefs which give meaning to researched data. Lather (1986) state that it is actually an inherent reflection of the researcher's beliefs about the world and principles that conceptualize how the researcher views and approaches the methods of research in their study and its interpretation thereof. Denzin and Lincoln (2000) posit that paradigms are constructed by people to detail the basis of their research and also the basis of the constructions of the detailed meanings. These are then embedded in belief systems which determine the direction to be followed when researching.

The research focused on learners with autism and especially how teachers can enhance their teaching of this group of learners. A paradigm that introduced the researcher to the subjective worldview of the participants was used. Guba and Lincoln (1989) stipulate how the understanding of the real-life experiences of people though subjective, is the foundation of the Interpretivist paradigm. This is achieved by developing ways to understand or appreciate the thoughts of a participants and significance they attach in that given context. Importance is attached to acknowledging subjects' viewpoint as well as how they give meaning of their environment and therefore this model suggests reality is socially constructed (Bogdan & Biklen, 1998). Under interpretive methodology, it then is a requirement for research to acknowledge the perspective of the subjects and their viewpoints (Cohen, Manion & Morrison, 2007:21). Hence, interpretive methodology aims to deduce and account for social phenomena in-terms of the participant's viewpoint. Accordingly, then research precedes theory and this means theory is developed from actual research (Strauss & Corbin, 1990).

3.5 RESEARCH APPROACH

Research-based studies answer questions through investigations and follow procedural guidelines in the collection of data to come up with outcomes only derived from the study itself and not before. This study adopted a qualitative research approach. This approach to research was more appropriate to this study for its main focus which allows the researcher to get answers to a research problem from participants' vantage point. The approach has been proven to be very essential when dealing with particular contexts requiring to consider data and or knowledge from values, opinions, behaviour, and social environments. Most importantly, qualitative studies give sophisticated textual descriptions about human experiences and perceptions in phenomena under research. This thereby provides knowledge or data which basically entails, the often contradictory behaviour, beliefs, opinions, emotions, and relationships of individuals.

Creswell (2014:235) highlight that qualitative research views humans as sophisticated, to an extent unpredictable beings with so much individuality such that one cannot then place universalism in how they behave. This form of study allows researchers to develop knowledge on humans by harnessing their values, interpretative schemes, mind maps, belief systems and rules of living to get their own perceptions (Cavana et al., 2001). This then offers constructivism, which entails the activeness and creativeness of knowledge. This is also enhanced through emphasizing carefully and detailing the socially governed activities to appreciate their experiences in their own terms (Jackson, 1995).

Qualitative methods of study also help researchers identify other valuable facets of research like social norms, socioeconomic status, gender roles, ethnicity, and religion. These facets affect and inform how people act and behave and thus are useful if researchers are to be informed about certain behaviors and environments as well as the differences or associations. Such qualitative methods help researchers establish meaning from interpretations given by participants. This is crucial since hard numbers may fail to provide such interpretations. Rationalizing outcomes from qualitative research to other people sharing similar qualities as those researched on is possible in most cases, but it is hugely meaningful to actually gain sophisticated knowledge of each separate environment rather than simply generalizing data to different contexts. Qualitative

research was much more enticing for this particular research for the above-mentioned reasons. By nature, qualitative research establishes thought patterns, feelings, emotions as well as personal experiences of the participants (Mason, 2002; Sutton & Austin, 2015).

3.6 RESEARCH METHODS

Research requires the researcher to either quantify data or elicit meaning to data and as such, models of study can be distinguished by this. The classes of models of study take the form of first quantitative research methods which deals with quantifying data (Guba & Lincoln, 1994). This method quantifies information and generalizes outcomes to a study population. Secondly, there is also qualitative which concerns the detail of information (Guba & Lincoln, 1994). The methods in qualitative research seek knowledge of the causes of every behavior and the perceptions of participants as far as how and why they live the way they do within their societies. This allows participants to also give insight especially on how the research issue manifests within their milieu.

Qualitative forms of research provide results with detail, but often they also offer concept formations which guide the studies through tapping into the world of participants' thoughts and feelings about a particular research issue. For the above reason, this study made use of qualitative research methods to address the study question. The population of interest also influenced the choice since the researcher needed to work with a limited number of learners from the age of three to nine years and their parents as well as teachers. For the above reason, the study made use of one-on-one interviewing using semi-structured interviews on educators. This technique is about following set questions to get detail or data and compare the different answers. The second instrument for data gathering was questionnaires which were completed by parents. Lastly, direct observation of the learners with autism provided rich data for research.

3.6.1 SAMPLING

Sampling involves considerations of sample size and sampling designs, which are fundamental to qualitative research. These considerations help in the selection of sample sizes and sample designs which are appropriate for the chosen research facets (Onwuegbuzie & Leech, 2007). Qualitative research elicits understanding of subjective reality in research work from participants. Such is done by harnessing the real-life

experiences of the participants to come up with what is illustrated by their experiences which is the range. Thus, this method allows the researcher to make a sample of participants rather than a whole study population.

The population in this study included learners with autism, educators of learners with ASD and parents or guardians of learners with ASD in the Kingdom of Eswatini. When selecting participants, the researcher adopted purposive sampling meaning, participants from the target population were selected on the basis of meeting certain practical criteria that is being parents or educator to a learner with autism spectrum disorder. Of course, other issues were also considered like agreeing to participate, geographical proximity to researcher and availability to take part. Most importantly, research questions informed the selection (McMillan & Schumacher, 2014). There numerous schools in Eswatini that accommodate learners with autism and to identify them and get approval to approach them, the researcher consulted with the Eswatini Ministry of Education to identify academic institutions fitting the criteria required and also seek permission to approach them in the Manzini region. The researcher then approached different schools to as to search for that which would be willing to partake in the research study and as soon as one school confirmed its willingness, the search stopped and commitments were made between the researcher and the school representative. Upon identifying the research institution, the researcher then through the school (the school has access to sensitive information defining the population which cannot be accessed by the researcher) engaged the willing parents of learners with autism attending the school to take part in the study. The researcher needed at least four learners with autism to a number of data saturation from the age of three to nine with a mild to moderate diagnosis identifiable through learner files and medical records. The researcher also engaged educators of learners with autism at the school prepared to take part in the research.

Criteria for inclusion is indicated below:

- at least four willing and available parents of a learner with a mild to moderate ASD diagnosis and also aged between the age of three and nine
- at least three willing and available teachers currently working at the school and teaching learners with a mild to moderate ASD diagnosis

- four learners with a mild to moderate ASD diagnosis between the ages of three and nine

3.6.2 DATA COLLECTION

The study used a qualitative approach, defined by Creswell (1994:67) to be an unfolding model harnessing real life situations to get data with detailed experiences. As such, the research made use of the following three instruments namely one-on-one interviews, direct observation as well as questionnaires.

3.6.2.1 ONE-ON-ONE INTERVIEWS WITH TEACHERS

The study made use of a semi-structured interview which combines questions and follows a specific structure. It also allows the researcher freedom to probe further for clarity. Semi-structured interviews are efficient when collecting sensitive data, since respondents feel at home easily and this creates a conducive setting with comfort for the participants.

The interviews were used in the collection of data, and because they lasted an hour each, it provided the interviewer freedom to dig deeper on every question. One-on-one interviews are valuable in providing rich detail concerning what the phenomena reveals from all participants in the research milieu. Interviews proved more suitable in the research since the expectation was to get diverse viewpoints about the research question.

One-on-one semi-structured interviews were used to elicit teachers' responses. The interviews took a flexible form that facilitated interactions which are more or less direct (McMillan & Schumacher, 1993:254). The researcher engaged the school to plan and prepare for the actual interview processes. This was done through presenting to the school and the participants what the study was all about and also getting the necessary consent from the interviewees before commencing the sessions. All the interview sessions took place at the school premises during work time. The researcher conducted these interviews, recorded them and transcribed verbatim in English.

3.6.2.2 OPEN ENDED QUESTIONNAIRES

Questionnaires are research instruments which use a series of questions or other prompts to gather data from participants and are useful when collecting subjective information. Just like in other research tools, the caliber of questions included should bring

comfort to respondents. The questioning should also not intrude in order for respondents to be comfortable in their lifestyle, beliefs or behaviors and can never feel judged. Given that the subject of research or questions may seem sensitive to other participants, the smart thing would be to avoid direct questioning.

The researcher designed the questionnaire and had sections covering demographic information of the learner that is on age, gender and educational level. It was also designed to get opinions of participants together with the attitudes and behavior of the learners with autism. The questionnaires were easy to answer, respectful and completed one time. They also contained a clear introduction to help the participants answer appropriately. The introduction explained why data was being collected and for whom and also explained confidentiality of responses. The questionnaire was distributed through the school to the parents of learners with autism.

3.6.2.3 DIRECT OBSERVATION

The observation technique provides a crucial option in collecting data which is impossible to study in certain experimental settings. Observations take away bias issues since it simply happens during real-life routines occurring outside of interferences (Anguera, 2010). Observation as a technique derives rich data which gives the researcher the chance to acknowledge the reality of the researched phenomena as it happens in chunks or snippets of everyday realities. Observations focused on real-life daily activities which were a rich source of information which the researcher tapped into to get the necessary data. Studying daily routines provided intuition as far as various conduct and occurrences in the lives of the participants' is concerned. This gave the researcher the benefit of unprecedented position to discern everything. This was so even though daily routines are sophisticated and have a lot of dynamism because of other knowledge which may still be undiscovered (Anguera, 2001).

As indicated above, this method is crucial when unlocking information on diverse environmental systems. It is also important in that participants within a research may be unconscious of how they interact in activities or with others and having the researcher's eye may unlock certain unknown facts of their behaviours (Corbin & Strauss, 2008:30). The researcher made sure not to define the behaviours and interactions on the bases of

the observations but made use of interviews to ascertain meanings of the observed activities and interactions. The above is to avoid misinterpretations of non-verbal cues which can easily be distorted across different cultures and communities (Patton, 2002:291).

The direct observation was conducted in the classroom as the teachers were teaching and also during break-time and also sports time. The researcher made use of observation guides formulated from the teachers' interview responses which helped acknowledge other aspects of interaction in the form of muted cues, face cues, voice tone, and many other non-verbal gestures of interaction. Most importantly, the researcher used the combination of observed data and interview responses to form interpretations with the participants (Corbin & Straus, 2008:30). Corbin and Strauss (2008:29) emphasize how critical the use of observations is since it allows researchers to confirm what people would have said they are actually doing in reality and practice. This can be done by observing the claimed behaviour.

3.7 PROCEDURES OF THE INVESTIGATION

The first aspect of the investigation procedure was obtaining permission and consent while the second phase was fieldwork. After the granting of approval for research to be conducted by the Research Ethics Committee (College of Education) at the University of South Africa, the researcher approached The Ministry of Education (Eswatini) to seek permission to conduct research at Primary School A. The Principal assisted with the identification of learners who met the sample criteria and their parents and teachers were engaged for consent and assent to be part of the research study. Plans for administering of the questionnaire, interviews and observations were scheduled after approval, permission and consent were granted by the relevant parties.

3.7.1 APPROVAL, PERMISSION AND CONSENT

After approving the research, the Research Ethics Committee of the College of Education (University of South Africa) provided an ethical clearance certificate (Appendix A) to continue with the research (ethics clearance number 2022/05/11/54853834/26/AM). The researcher submitted the requested permission to conduct research from the Eswatini Ministry of Education. Permission for the researcher to conduct research at Primary

School A was granted by the Ministry of Education (Eswatini) (Appendix B). The researcher provided a written request to solicit cooperation of the staff members through the principal and the principal granted this permission (Appendix C). Teachers teaching learners with autism were observed and interviewed.

Letters requesting parents' consent and consent to confirm participation and return slips were furnished to parents providing details pertaining the research. The same parents were furnished with consent forms to confirm their participation as well as reply slips and assents forms confirming their children's participation in the study. Selected parents were also given a questionnaire form to fill. A letter was sent to parents of non-participating children seeking their permission for the research (Appendix K).

Assent forms were provided for parents with children with autism. These children were the participants to the research, and for parents of the other learners in the same class, who were non-participants. The parents had to return the signed forms (Appendix H).

3.7.2 FIELDWORK

The data was collected from one school in Manzini Region and this was through participants being observed, interviewed and given questionnaires to fill in. Upon receiving approval, the researcher visited several schools as directed by the ministry seeking a school willing to take part in the study. As soon as the school agreed to partake in the study, appointments were made for the orientation and during this phase of the investigation procedure, there was the administration of (Appendix I), (Appendix J) and (Appendix K) and these involved processes of signing consent and assent forms before both the interview sessions, delivering of questionnaires and observations commenced.

The activities of questionnaire administration to parents and conducting of interviews with teachers then took place. The questionnaires were administered to parents individually at the school as hard copies and to be taken home only to be returned upon completion. The administration came with instructions on what to do if any queries arise and how to contact the researcher for submission or assistance.

The researcher then conducted one-on-one interviews with teachers using semi-structured interviews. Such an interaction allowed for follow-up questions and clarification

from both the interviewee and interviewer. This process was done at the school premises during working hours and the researcher recorded the responses.

Lastly, the researcher analysed the responses from interview questions and also the responses from questionnaires to develop observation guides with the intention of triangulating the results. Actual observations took place mostly in classes where teachers were showing how they dealt with the education of learners with autism. The researcher had also hoped to observe activities provided to the school by the Ministry of Education but none were observed during the data collection period. The researcher named the school where research was carried out School Z and the parent participants were identified as parent A, B, C and D while the teachers were recorded as Teacher A, B and C for confidentiality.

3.8 DATA ANALYSIS

Interpretivist researchers use more of qualitative data collected from respondents during long periods of study and this model embraces an inductive approach to data analysis, meaning focus is on discovering patterns in collected data to be collapsed into broader themes (Grix, 2004:108). This creates understanding of the researched phenomenon which then helps to generate theory. Interpretivist use the inductive approach since according to their viewpoint, it is collected data which then inform or formulate theory rather than having theory inform data collection (Grix, 2004:108). Data comes in the form of words and ideations rather than taking statistical form and often is presented in audio or video form which makes it easy to secure safely for analysis (Gall et al., 2003:21). Interpretive researchers use data collection techniques which are effective in collecting qualitative data. Even though statistical data may form part of the research, researchers do not rely on it.

One technique used in analysing qualitative data is thematic analysis and it entails going through a given set of data like a transcript from interviews. It also involves identification of formula in meaning over data to formulate themes as well as acknowledging patterns or themes from the data (Boyatzis, 1998). This technique focuses on the experience, meaning as well as participants' experience as areas to report on.

Themes are defined as detail which identify critical aspects from the data concerning the study subject, representing a consistent or formulated answers in a set of data. In summation, thematic analysis is all about canvassing through data content for formats and meaning and in this study, the instruments on focus will be interviews, observations and questionnaires. The analysis of data for this research was adapted to match Braun and Clarke (2006) six-step guide, namely familiarisation with the data, generating of initial codes, searching for themes, review of themes, defining of themes as well as write up.

STEP 1: FAMILIARISATION WITH DATA

Familiarisation process involved the reading, and re-reading of interview transcripts, questionnaire transcripts and notes from the observation task to enhance familiarity. This allows the researcher to immerse themselves into the whole knowledge bank which is the entire body of data or data corpus before processing or generating codes. Notes were taken and early impressions highlighted (Braun & Clarke, 2006:16).

STEP 2: GENERATION OF INITIAL CODES

Step 2 then commenced with organising data into structures providing a system of meaning. This is known as coding and it eliminates unnecessary and obsolete information by trimming the data into small chunks of meaning. Coding can be done in many ways and for this study inductive coding was used guided by research questions and also deductive coding guided by responses (Braun & Clarke, 2006:18)

STEP 3: FINDING THEMES

Step 3 focused on looking for patterns from the codes which capture the critical issues from about the research phenomena. Braun and Clarke (2006:19) posited that themes are not governed by specific guidelines or rules but rather by the significance in relation to the researched phenomena. At the end, the researcher organised the codes into broader themes giving meaning to the responses.

STEP 4: REVIEWING THEMES

The researcher then reviewed, modified and developed initial themes indicated in the preceding step. This was done through collection of all the data which was relevant to

and related to each theme to actually confirm if the collected data is in tandem with the responses and to contextualize the complete set of data. The researcher ensured themes were coherent and distinct from each other through thinking about whether they had meaning, emanated from data, though also locating overlaps if any, looking for similarities to confirm if they are not the same, identifying sub-themes and lastly locating other secondary themes in the data set (Braun & Clarke, 2006:20).

STEP 5: DEFINING THEMES

This step 5 focused on identifying the penultimate output from themes. The idea was to establish the point being brought out of each theme (Braun & Clarke, 2006:22). The researcher established what the theme(s) were indicating, whilst noting possible the presence of subthemes. This was to also realize the interactions of these sub-themes and also their relationship to key themes and other sub-themes.

STEP 6: PRODUCING REPORT

This is the last step of the process. It focuses on formulating the report of what the data communicates about the researched phenomena. It starts when the researcher has established the themes. It provides the ultimate analysis and write-up of the report. The write-up tells the story of the research data in a manner which convinces of its merit and validity (Braun & Clarke, 2006:23).

3.9 VALIDITY AND RELIABILITY

The role of reliability in research is to address the issue of research replicability while validity focuses on the accounting for the accuracy in the apparatus of measuring and also if they are serving the intended purpose that is, measuring what they are purposed to measure (Stenbacka, 2001:551). The two are perceived with indifference in the eyes of qualitative researchers as they see them as quantitative terms lacking capacity to be applied in qualitative research paradigm. The above point is supported by Glesne and Peshkin (1992), who state that replicability for example, is not a huge concern when it comes to the research outcomes, instead the focus should be on other aspects more appropriate for evaluating outcomes in qualitative research like precision (Winter, 2000), credibility, and transferability. There are different reasons for the evaluations done and as

such what works in evaluation of quantitative and qualitative research cannot be similar. Stenbacka (2001:552) posits that reliability is liable to misleading under qualitative research since discussing qualitative studies using the criteria involving reliability simply shows that the research is bad. This is due to the fact that qualitative research is based on constructing reality hence, concepts like reliability and validity cannot be goals of qualitative research. Qualitative research makes use of trustworthiness. This concept enables anyone to be able to interpret the written work, to develop a sense of confidence in what the researcher has reported.

Below are the criteria the researcher engaged which created trustworthiness for this study's activities as well as the report. Lincoln and Guba (1985) identify the ways of achieving trustworthiness, namely credibility, transferability, dependability, and confirmability. Seale (1999:266) acknowledged the core issues otherwise known to be validity and reliability, appear in the guise of trustworthiness in qualitative studies.

3.9.1 TRANSFERABILITY

This deals with how far outcomes in a qualitative study are transferrable to environments with similarities to the one where the study was carried out in. It is the researcher who can facilitate transferability judgment through providing detailed descriptions of the study. Almost often times, outcomes in studies of this nature particular to limited groups or settings and highly challenging to apply the outcomes or even show the possibility of applying the outcomes to other settings or people. Erlandson, Harris, LI, Skipper, & Allen, (1993) believe that for the majority of those who inquire in natural settings believe it to be impossible to generalise due to the inability to actually recreate the circumstances where observation took place with the terrible exactness. Stake (1994) and Denscombe (1998), however point out that despite differences or uniqueness in cases, still such are selected portions of wider societies and therefore are representations, dully, and it could be premature to just reject the idea of transferability but rather pursue it cautiously to also acknowledge issues of context.

Transferability of this study is enhanced through the description of research setting information and indicating central tenets and suppositions of the study. The researcher provided enough details on research site issues so that whoever reads the report has

capacity to confirm transferability of the study. What is offered is called 'sending context' and though the researcher is unable to declare transferability inferences, what then helps is providing detailed content in the report about the research setting to enable inquirers to decide the level of confidence with which they can transfer outcomes of the study to related milieu. The researcher also provided enough information on the research issue so that users may be fully informed and have capacity to contrast what the report presents against what other settings present (Shenton, 2004:69).

3.9.2 CREDIBILITY

It is the establishing of how true the outcomes of a study are. Credibility confirms if a study's outcomes are the true representation of responses from respondents and also that the interpretation thereof is how the respondents actually perceive it to be. Lastly, credibility also seeks to confirm if outcomes of study match real life scenarios and way of life (Shenton, 2004:69).

The agenda of qualitative research is the description and or understanding of researched phenomena from the perspective of the participants, who to a certain degree should return the right to determine how credible the outcomes are. The researcher implored on triangulation through the three methods of data collection. According to Lincoln and Guba (2000), using diverse techniques in data collection cater for each method's weakness whilst harnessing the advantages of each too. Most importantly, use of triangulation methods helped confirm that indeed the outcomes came from respondents and also that through for example observations, the researcher actually confirmed the reality of data captured and outcomes of study. This encouraged the researcher to actually confirm what the participants were saying when interviewed with what was observed during practice and even confirm some of the behaviours where it was required of them.

3.9.3 DEPENDABILITY

Dependability is a representation of how stable outcomes of research are over long periods. Respondents are also involved, especially to evaluate the outcomes and how they are interpreted with the point being to make sure such is achieved with the basis being grounded in the information gathered from respondents. It is concerned with recreating similar outcomes if a research study is run again (Shenton, 2014:71).

Dependability requires the researcher to counter the fluctuating factors which may arise in research settings. The researcher has to account and acknowledge for the detailing of everything that happens in the research environment which may have influenced the approach to research processes. In addressing dependability, the researcher provided full details about the procedures followed during the research processes, to enable anyone to replicate the study in the future even without conveniently getting a repeat of the outcomes (Shenton, 2014:72). According to Shenton (2004:71), a design of research is viewed as a prototype model and presents readers and other interested parties to confirm the appropriateness of procedures followed in research. This enables those who go through the study report to be informed on the tools, models and approaches used in research and how effective they were. The researcher provided information to match such a report including sections focused firstly, on the research design and how it was implemented. This is a description of the strategic plan and execution thereof. Secondly, the researcher put a section on collection of information used, detailing the field activities. Lastly, there is the declaration of reflections through appraising the study that is on issues like how effective the procedures followed in the process were.

3.9.4 CONFIRMABILITY

Confirmability is the degree of which findings from the project could get confirmation from other researchers and it seeks to establish that data presented comes from respondents and the way it was interpreted indicates that it is not figments of the researcher's own making. According to Patton (1990), objectivity when dealing with scientific situations is possible especially when using apparatus and methods independent of people's skill or perception. It is rather challenging to ensure actual objectivity due to the fact that people are responsible for the formulation of tests and questionnaires used in research and therefore presence of the researcher's influence may be always present. Confirmability represents the equivalent of objectivity in qualitative study and the researcher took considerations to ensure that study outcomes represented those of participants instead of thoughts and ideas of the researcher.

The researcher offered a detailed methodological description so that readers are able decide if data and its constructs acceptable to what degree. The researcher provided an

audit trail allowing observers a track to source the research steps and how decisions were reached at (Shenton (2004:73). An audit trail shows all the processes and procedures used in collection of information or data and how that resulted in the formulations and outcomes reached in the end. A more theoretical trail was given to direct how the key procedures were undertaken and also how this could be followed up. According to Shenton (2004:73), such theoretical audit trails, should be perceived within the confines of the entirety of the study. This also helps even after the study, as one is able to do a data audit which allows for the examination of how data was collected as well as how it was analysed in determining the possibility of bias or distortion

3.10 TRUSTWORTHINESS OF THE RESEARCH

Research should achieve trustworthiness which entails that reviewing methods of data analysis, research outcomes and the research culminations (Lincoln & Guba, 1985). The researcher used a couple of methods to enhance trustworthiness and curb bias issues in data collection methods and also outcomes.

The researcher employed the member check technique, which allows research participants to confirm or denounce the results through looking at transcriptions as well as the ultimate outcome of research (Barr, 2014). This approach enhanced the validity of research. Documents for member checks were kept in a safe cabinet under lock and key. The research also used the triangulation technique during the collection of data. Different research methods in the form of interviews, questionnaires and observations were used to confirm that indeed the outcomes of research is a true reflection of what is on the ground.

3.11 ETHICAL MEASURES

Studies, especially done in academic settings, usually raise concerns about ethical issues due to involvement of humanity as research subjects and sometimes usually minors, which was the case with our study of which data was to be collected predominantly in primary education classrooms. Qualitative research involves highlighting ethical responsibility given that individuals' feelings, attitudes, and opinions are investigated. As such, ethical considerations should be considered in the entire study process, from the beginning to the end. The participants have to be assured that their responses will stay

entirely confidential and will by no means ever be directly attributed back to them (Hennink, Hutter & Bailey, 2011). The researcher was constantly directed to be responsible towards the participants in the research project by ethics applied during the study. Ethics that guided the researcher included the following; do no harm, informed consent, data presentation, voluntary participation, and privacy and confidentiality. Clearance was solicited from the University to ensure adherence to ethical guidelines. The ethical clearance number for this research is as follows; 2022/05/22/5485/3834/26/AM. The researcher anticipated the following as ethical issues which were addressed:

3.11.1 DO NO HARM

The main concern in research is to avoid harming participants and or research assistants hence the need to identify any possible negative effects of the project on subjects. Despite the best efforts from the researcher in trying prepare for such harm, it may still happen, at which point the project shall stop or be adjusted.

The researcher debriefed all the participants prior to engaging in the sessions while also encouraging them to be upfront or speak out if they may feel guilty or are affected in any way during and or because of the proceedings. The researcher will provide services to diffuse such harm through counselling sessions and also preparing the participants for what may come up.

3.11.2 INFORMED CONSENT AND ASSENT

The researcher made sure to procure approval or confirmation for participation from subjects before implementation of the study and will also provide details of study like possibilities of harm if any, remuneration from participation if any as well as how the information gathered will be used, protected and shared. The individual responsible for the school (the school principal) signed a compliance document. The study involved minors and as such it was necessary to collaborate with the school and parents.

After furnishing the participants with all the information about research, the researcher provided consent forms for teachers and parents who had shown the desire to take part in the study. Consent forms also comes with the right to stop participation at any given

moment without any repercussions. Assent forms were also provided to parents of learners who were to take part in the observation sessions.

3.11.3 PRIVACY AND CONFIDENTIALITY

The researcher considered issues of anonymity as far as information about subjects was concerned. This came from respecting the idea that respondents may desire their participation to be immersed in privacy, even if others may not be bothered by it. The use or lack thereof and revelation or not of the identities will be discussed with participants and with this aspect also affecting consent and assent issues. Participants were afforded complete details on the project to inform their decision whether to partake in it and for minors, parental permission was obtained.

Privacy and confidentiality of participants was achieved throughout the research process. Recordings and notes from the sessions were kept confidential. The researcher also made use of code names to identify and conceal either the school or participants to report the outcomes of the study. Participants will be identified as Parent A or Teacher B. Privacy and anonymity was guaranteed using the above.

3.11.4 VOLUNTARY PARTICIPATION

There is also the significance of affording the power of free will to potential subjects. In voluntary participation, the subjects retain the choice of partaking and or withdrawing from the study any given moment and the researcher will explain all pertaining this issue.

The researcher reminded the respondents of their right to withdraw from the project at any moment as they wished. Such provisions were done in writing on the consent and assent forms which detailed the freedom of participation and withdrawal from the study without facing any consequences.

3.11.5 DATA INTERPRETATION

The researcher was as ethical as possible in the interpretation of the results generated in this study and did not over-interpret or misinterpret it and represented the possible conclusions as closely as possible. The researcher used triangulation techniques to achieve the requirement which was basically the adoption of methods in interviews, observations and questionnaires.

Data was recorded as it addressed the study research questions. The researcher recorded and transcribed data from interviews and involved participants to confirm the outcomes. The interpretation of the data had to be from the viewpoint of the participants and it was achieved through member checking.

Secondly, the researcher also analysed data from questionnaires completed by the parents to fully comprehend and acknowledge the content again from the viewpoint of other stakeholders, in this case, parents. In essence, it was an opportunity for the researcher to get more insight from the actual players in their different capacities.

Lastly, the researcher recorded data derived from observations. The data was open for interpretation and confirmation from the observed participants so as to avoid the misinterpretation and misunderstanding of phenomena. The researcher would have achieved the goal of not attributing anything wrongly, but rather be informed through harnessing the data and how the participants give meaning to it. This enabled the researcher to develop a coherent interpretation of collected data. The three approaches presented a chance to develop insight on the phenomena from critical perspectives.

The researcher then focused analysis on the identification of recurring themes across the different sources of transcripts that was from interviews, observations and questionnaires. The researcher applied thematic content analysis to identify common themes present in the data. The identified themes were then reviewed and comparison done against all participants.

3.12 CONCLUSION

This chapter provided an in-depth trail of the research design and methodology used in the project. A qualitative approach was adopted for use in this study due to its reliability as a method, especially when conducting interviews and using questionnaire method of data collection. The qualitative approach prohibits researchers from tainting the research work with his or her influence since it only focuses on participants' contributions. It included the presentation of research aims, methods, ethical considerations, setting, participants, data collection instruments, data collection, data analysis and trustworthiness. The sample population chosen included teachers and parents and also

the learners to make sure that there is complete data deriving from all relevant stakeholders in the subject matter. The chapter concluded with detailing the ethical considerations of the project. Thus, details were offered on how anonymity and confidentiality were enhanced and observed during the data collection process.

CHAPTER 4: DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1. INTRODUCTION

The research methodology used in this research was discussed in the preceding chapter. This chapter presents the research outcomes and data analysis from the captured material pertaining to the research phenomena. The detail presented in this section are direct quotations from interview transcripts, questionnaire responses and observation notes. Themes and or sub-themes which emerged were acknowledged through the inductive thematic analysis. The discussion of research outcomes was curtailed by the researcher's conclusions.

4.2. RESEARCH PROCESS

The researcher undertook several steps in order to successfully complete the chosen research methodology. First, the steps involved the initiation of correspondence to potential schools identified, with the aim of seeking their participation and also indicating criteria for eligibility to take part in the study. Convenience sampling was used to select the participants for the study, and this meant participants from the target population were selected on the basis of meeting certain practical criteria like willingness to take part in the study and proximity to researcher (McMillan & Schumacher, 2014).

Participants matching the criteria who committed to taking part were given thank you letters. Upon the signing off of consent forms, the researcher provided details on how data was to be collected from the different respondents. The researcher made sure every respondent was in a comfortable setting for the data collection process. The primary research question developed aimed at establishing how teachers educated learners on the spectrum with the focus being on how they did it and if they were also getting the support to achieve the optimum levels required in their practice.

The researcher collected data in three phases. First, the researcher used semi-structured interviews to establish the experiences of the teachers as far as their practice was concerned. This method actually enabled the researcher to appreciate the actual happenings as described by the teachers themselves before exploring any other avenues

of data collection. Three teachers from the same school took part in the interview process to identify similarities and consistence in the way the education for learners with autism was being administered. The researcher recorded the interviews by taking notes using a pen and paper. Using semi-structured interview questions enabled the researcher to explore and probe further when necessary. It also allowed the researcher to gain a deeper knowhow on the participants' conduct in practice and most importantly to clear up any confusing detail. Lastly, the method gave a voice to the experiences of the respondents in their diversity.

Secondly, the researcher then collected data from parents using open ended questionnaires. Such an approach enhances the chances of locating and giving classes to either similar or diverse responses on top of attitudes and opinions which inform how participants perceive, relate to the structures associated to the learning of their children and as they impacted their lifestyle from their own perspective. It was also very important to get a different view of how learners with autism were being educated. Providing questionnaires to parents allowed the researcher to get detail pertaining the spill over relationship between the teachers, the parents and the learners. This afforded understanding of the roles and responsibilities of parents in their children's learning and what part teachers played outside of the classroom or school hours. The use of questionnaires may seem inappropriate or insufficient to say the least in comparison with the richness of data captured through the main robust qualitative methods such as in-depth interviews, focus group discussions and even observations. Some arguments can be that they lack significance of actions or attribution of behavior as there isn't much probing. For a researcher, a questionnaire enables crucial identification of regular or different behavior or experiences. As put across in the work of Beckett and Clegg (2007), questionnaires offer researchers an opportunity to collect full, frank, thoughtful and detailed accounts which more intensive instruments like interviews with the presence of the interviewer may actually inhibit. In a way, participants are given ample time to reflect and respond without interference or influence.

Lastly, the researcher made use of direct observations as teachers went about their duties in class. These took place separately as the three teachers under study were

responsible for different classes. This method allowed the researcher to get first hand detail of how the education of learners with autism was being carried out in class and within the school premises. It also allowed them to see the kind of support teachers received if any. Both the observation and questionnaire methods were also useful in confirming details and information established during the teacher interview sessions. In summation, the semi-structured interviews and direct observations were carried out on the teachers while the questionnaire method was done on parents. Part of the observation process also included the interaction between teachers and parents as well.

Table 4.1: A summary of the methods used.

Method	Further details of methods	Purpose	Data produced
Phase 1: Semi-structured interviews 11 July 2022 – Teacher one 12 July 2022 – Teacher two 13 July 2022 – Teacher three	One interview was scheduled for each teacher and each interview schedule contained three main questions with the researcher retaining to probe further as necessary.	To establish from the teachers how they go about their practice including interaction with their learners' parents and also discover the support and services received in their work.	Three transcribed interviews
Phase 2: Parent questionnaire 25 July 2022: All four parents submitted the completed questionnaires on the 25 th of July 2022 as agreed.	Questionnaires for four parents of children with Autism	To learn how much parents are involved in the education of their children and the interaction between them and their teachers and	Four completed questionnaires

		also children.	
<p>Phase 3:</p> <p>Direct observation: Three observations were carried out per teacher.</p> <p>Teacher one:</p> <p>01 August 2022 02 August 2022 03 August 2022</p> <p>Teacher two:</p> <p>04 August 2022 08 August 2022 09 August 2022</p> <p>Teacher three:</p> <p>10 August 2022 11 August 2022 15 August 2022</p>	<p>Observations were carried out to experience how teachers carried out their practice. This was to establish their interaction with parents, learners, the school and other service providers they mentioned during their interview sessions.</p>	<p>This helped ascertain the detail provided in both the interviews and questionnaires since this strategy was purposed for triangulation as well as to also gather new information as well and also experience the practice provided by teachers.</p>	<p>Journal with notes</p>

4.3. DATA ANALYSIS

According to Vosloo (2014), analysing data using qualitative techniques refers to using respondents' viewpoints to deduce meaning of phenomena. This procedure has been described by McMillan and Schumacher (2014) as inductive and focuses on the organisation of collected data to form categories. Such categories then help the

researcher establish patterns and interactions between these categories. The analysis of data was adapted to match Braun and Clarke's (2006) six-step guide namely familiarisation with the data, generation of initial codes, searching for themes, review of themes, defining of themes and lastly the write up.

Teacher one taught the pre-school class and possessed a General Diploma in Pre-Primary education as well as ten years teaching experience in mainstream education. She stated that she relied on workshops for training on how to deal with learners with autism and had not received any official qualification in teaching learners with autism. Teacher two taught the Grade one class and held a Diploma in education specializing in foundation phase with fifteen years teaching experience in different schools. She had three years' experience of teaching learners with autism. The teacher had no training in teaching learners with autism and also relied on staff development workshops. Teacher three had no teaching qualification but was trained by an organisation called 'Autism Swaziland'. She was responsible for the Resource Centre which mainly focused on learners one-on-one and ideally the centre should have had all the resources to assist learners with autism, but it was not the case with the school where the research was carried out.

The researcher could not get more details from the parents about the nature of their jobs, family structures among other things as there was limited access. Also, the parents had only agreed to take part in the research and not shed other details of their lives and the researcher felt the need to protect their right to privacy. This meant that not much information was gathered as far as the living situations of the learners' parents was concerned.

Figure 4.1 shows the three focus areas informing the study. The researcher mainly focused and accessed parental involvement and teacher practice in educating learners with autism and used reported information to understand the area of support services. Interesting was the intersection between parental involvement and teacher practice as well as the intersection between teacher practice and support services. The middle intersection theoretically highlights how it is supposed to be.

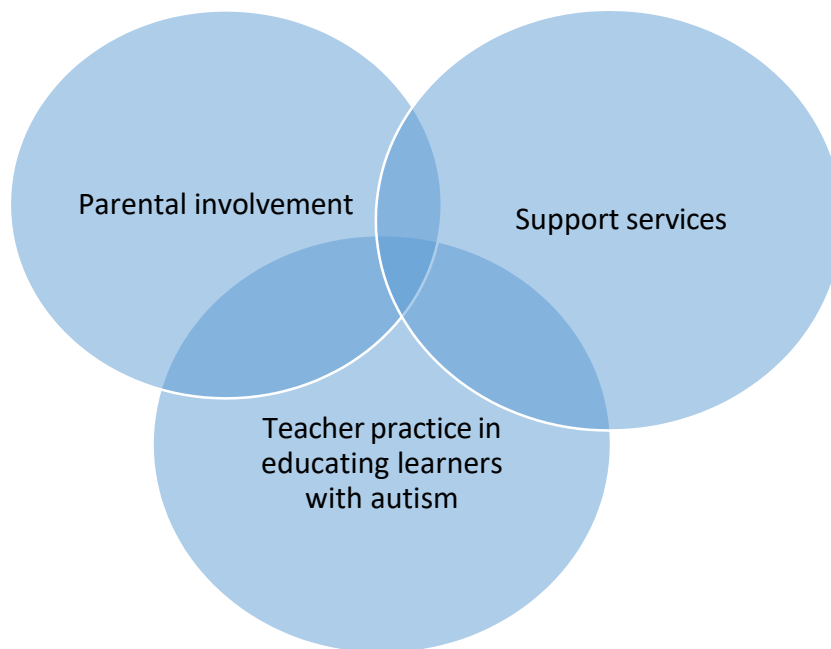


Figure 4.1: The area of data collection and presentation

The section below provides raw data from respondents as recorded in all the data sources. These are the actual voices in their different forms of realities that is from the teachers themselves as well as parents active in the study. Data revealed in this segment comes directly from the semi-structured interviews with teachers, the parents' questionnaires and lastly the observations done by the researcher. These will be under respective research questions and participants. The participant responses were presented as they were in this section without adding the voice the researcher's voice.

4.3.1. INTERVIEW DATA: HOW CAN TEACHERS EDUCATE LEARNERS WITH AUTISM SPECTRUM DISORDER (ASD)?

The following data was recorded during the interview sessions with the teachers under study. Each teacher's responses are presented respectively as recorded and no interpretation was given to the raw information by the researcher. The responses are also presented according to the respective research questions.

WHAT STRATEGIES DO TEACHERS EMPLOY WHEN EDUCATING LEARNERS WITH AUTISM?

According to teacher 1: *“Teachers need to be patient and also have a good heart to ensure he/she comes to their level. The teacher needs to make use of eye contact and a firm voice. There is need to allocate more time to learners with autism.”*
“Learners with autism need close supervision and one-one-one attention and they have mastered their routines. I have noticed a lot of behavioural changes which is very motivating for me, for example when they first arrive, they are unable to follow instructions but with time, they do so very well and their fine motor skills improve too and the evidence is seen in their ability to hold pencils and write well.”

According to teacher 2: *“I use visual aids and sometimes gadgets. As strategies to teach. I also use a lot of love and patience and do frequent follow-ups. I have to hold hands to support them in each activity since they are delayed in everything they do. When it comes to routines, sometimes they easily adapt to new ones but it helps when they do it every day, so I teach them their daily routines.”*

“It is very difficult to handle learners with autism in mainstream classes because they take time to master anything taught, although they end up understanding concepts taught though not much. Some of the learners with autism should spend time in the resource centre to avoid disruptions during lessons especially the ones who are violent and exhibit disruptive behaviors like screaming during learning periods.”

“I would say the challenges are having them write, talk and also mix with other children. At first it is hard to do such but for me the success is when they are able to accomplish such things. Other challenges, are when a learner makes strange and disturbing noises which sometimes affects other learners at times even the whole day. Those behaviors and noises are a challenge when I am teaching other learners.”

According to teacher 3: *“I use dramatization and storytelling as my strategies for teaching. I also use play way strategy to engage them in class. I am patient, non-judgmental and have good decision-making skills.”*

“To meet their individual needs, I teach each of them as an individual, valuing their uniqueness. I have one boy who has a speech problem and some use sign language, a smile or a disturbance to gain attention. They need more time, concepts and syllabi are prolonged. Learners take longer to adjust to new routines.”

“It is a challenge to complete the syllabus, it’s a challenge to achieve the objectives of the day. I cannot teach all the expected day’s work. Such children have been able to socialise with other children. They have been developed intellectually, in writing, reading and interpreting. My most challenging experience was when a child was refusing to sit in class. He was always comfortable in other classes. I created a friendly atmosphere and conducive environment.”

WHAT SUPPORT SERVICES AND RESOURCES HAVE TEACHERS RECEIVED TO HELP INCORPORATE AUTISTIC LEARNERS?

According to teacher 1: *“I enjoy teaching learners with autism but feel isolated in this endeavour. On the downside of my practice, I feel I do not have enough knowledge on how to handle learners with ASD. There also a concern on resources needed to support learners with autism for instance her learners who cannot speak have received gadgets for communication but that is just about it. I have not received any training to improve my work.”*

According to teacher 2: *“So far nothing has been done. And yes I really need support services so that I will be able to the learners better. I only get information about the learners from the parents and administration. I personally advocate for more workshops and staff development exercises to be conducted at the school to equip us as the teachers. In addition, there is need to provide other resources which can be used to improve both the teachers and also the learners with autism.”*

According to teacher 3: *“Staff development has been conducted by the school. No resources available. A psychologist assists on a daily basis; a variety of therapists visit the school institution. The Psychologist monitors these learners daily progress. Yes, I should receive support services to assist because these learners need more*

time on one-on-one.”

“I observe the learners on a daily basis and record in their IEP. I interact with their parents and Psychologist. Parents provide first-hand information about the child and also support the holistical development of the child which supports skill development. I communicate with parents using group whatsapp, diarized parental telephone calls. To some extent parents understand their role but sometimes don’t comply with the educational needs of the child. Their responses are too slow. There is a lack of resources which can help us support learners with autism better. As you know, autism is a spectrum and it means we encounter a variety of issues and in most cases we do not even know how to deal with some of the issues. We can definitely do with more staff workshops to aid our development as educators.”

WHAT IS THE ROLE OF PARENTS IN THE EDUCATION OF LEARNERS WITH AUTISM?

According to teacher 1: *“I am always in contact with the parents of my learners through whatsapp, calls and school reports. I always advise them on how to help of which the parents have been willing and are supportive especially in homework. I regret that not all parents are playing their role with regards to helping with homework and supplying all things needed.”*

According to teacher 2: *“I am in contact with some of my learners’ parents and sometimes parents hide information but through discussing, they open up. The parents have a bigger role to play since learners must not only learn at school but continue at home and the parents can supervise. Some parents do not talk to you as a teacher and it affects the learner at school.”*

According to teacher 3: *“The parents do not realize that the biggest role has to be played by them. I am the first to acknowledge that the system has many faults and we can only rectify these through what parents can do for their children beyond the classroom set up. As a teacher, I can only do as much considering that I have to attend neurotypical learners and also a number of learners with autism. I try to communicate this to the parents of my learners that they actually need to do more*

as the system is not really at the required standard to fully provide what these learners need. For instance, we do not have enough resources for the learners in terms of gadgets but may be other parents could afford them. I need to know how my learners are progressing at home and it is only through discussions with parents or guardians that I can achieve this. The extra work at home is actually very critical for me as a teacher.”

4.3.2. QUESTIONNAIRE DATA: WHAT IS THE ROLE OF PARENTS IN THE EDUCATION OF LEARNERS WITH AUTISM?

Parents were required to shed light on what their role was in the education of their children with autism. Below are the responses from the four respondents and it is important to also acknowledge that these responses were given in writing.

According to parent 1: “I have a teacher-parent relationship with my child’s teacher, but we do need to communicate a little bit more via mobile phones since my child is non-verbal, she is my eyes, ears and my child’s mouthpiece in the classroom and school situation. I communicate with my child’s teacher to find out if he is participating like other kids in the classroom and to find out if there is progress in terms of attentiveness and being able to socialise with other learners in a classroom situation.”

“I think it is a bit early for me to know where his strengths lie, for now I am still learning about his strengths educationally. My expectation is for my child to achieve the best education goals though it is not easy due to the level of development and social skills. Having him at a private school where inclusivity is embraced is an advantage. The teacher to child ratio makes it possible for the teacher to focus on the children as individuals. My child does not react well to changes in routine, it is almost impossible to stray from routine, things need to stay the same but I give support in any way if there is a need.”

“My role is to help my child in any educational needs. It is also to encourage my child to adapt in the school environment. I am involved in my child’s education. I do communicate with my child’s teacher all the time to find out about the progress.

I am apparently trying to gain some knowledge though its' quite difficult due to change of my child's behavior and emotions."

According to parent 2: "My son's teacher is very friendly to the both of us. I can say she is really good with him. She gives me feedback on a daily basis, we chat briefly every day when I pick him up from school which is very helpful."

"I'm not very sure on his educational strengths yet but sometimes he is able to take instructions, but does not always respond. He is also able to copy actions at times. By looking at his work-file, there seems to be great improvement. According to his grandparents who spend weekends with him, his behavior is very much improving and it can only be the school as I am not doing much. He is very good in following routines and becomes a little reserved if routines are changed and seems scared of new routines."

"In terms of accommodations in transitions, I try to explain the new activity beforehand even though I'm not sure he understands or not. I just do it, try to introduce new activities gradually. As far as my role in his education is concerned, to be honest I don't even know what I'm doing right. I just make sure I get him to school on time and therapy sessions weekly. I also make sure he has enough food so that he does not get upset for any reason at school. No one in my family is involved in his education and we are not knowledgeable about his academic needs. We are not sure."

"I just hope to understand if he can learn and also discover any other activities he might be interested in or he might be good at like sports (cycling, swimming), cooking or backing and any other outside activities. He is just too busy and all over the place, it is just difficult to know what to expect."

According to parent 3: "I am responsible for letting the teacher know about my child's status and also take the child for therapy (Speech & Occupational). I always communicate with her teacher to monitor her progress. It helps a lot because I know how to help her with school work. Her strength is in Maths and English Language exercises. I think she is receiving the best education."

“She reacts negatively to change of routine or transitioning to new activities. I make accommodations by allowing my child to mingle with different people and take him to different places so that he can easily adopt to any change and different places.”

“My role is to provide all the educational needs and support my child in anything that he needs. As a parent I am directly involved in his education. Taking my child to school every day and also interacting with the teacher about her school work and how my child is coping. I am knowledgeable about her educational needs yes, I always make sure I communicate all the time with the teachers to find out about her progress. My expectations are for her to improve in social skills and learn to be independent.”

According to parent 4: *“I have a good relationship with my child’s teacher as we communicate every day about my child’s progress. I communicated with the teacher yes, when I noticed some positive changes in my child’s behavior and also trying to be independent. I am not sure what her strengths are for now, though most of the time she tries to sing the school songs.”*

“It is quite difficult sometimes for her to change routines and it is very uncomfortable. When she is uncomfortable, I encourage and support her.”

“Apparently, I believe she is getting good education because my child is improving in terms of speech and interacting with other learners. My role in her education is to comply with the educational needs, respond positively and have a daily communication with the educators. I am a single parent and I am actually involved in her school needs and help her. I am not really knowledgeable, but I am eager to learn as I interact with the educators about my child’s progress at school.”

“My expectation is for my child to do well and achieve her goals and overcome learning challenges if possible.”

4.3.3. OBSERVATION DATA

This section represents the researcher’s observations based on the responses of the interviewed teachers. The idea was to use this tool as a triangulation tool specifically to

corroborate the responses given by the teachers and parents. The observation notes are presented separately in respect of the individual teachers.

Teacher 1: The teacher used different techniques haphazardly to prepare learners for and during activities. While story telling was the widely used of the strategies, the teacher also used pictures and charts. In the different sessions that the researcher observed, she noticed that the teacher would venture and digress between different strategies and lacked loyalty or expertise to at least a single strategy. During the lessons, learners listened attentively but some interrupted. Learners with autism had challenges in re-telling the story though they could identify some pictures and recall some of the activities. They were given more time to complete their tasks. They also showed interest in some of the activities however, one learner with autism could not concentrate properly and could not even stay calm. The learner frequently got into and out of the classroom whilst also screaming during the lesson. The educator was very patient especially during the activities. During play time, the educator monitored learners while also encouraging friendships. In most cases, the learners with autism were isolating themselves and usually played individually with their toys.

Teacher 2: The teacher made use of mostly visual teaching aids and strategies included pictures and flash cards. During the demonstrations, learners listened attentively and answered oral questions well enough. Learners with autism had difficulties saying the sequence of events correctly. The educator was very patient and helped them in any activity difficult for them. The educator also attended to learners with autism individually during activities like written work and even gave them extra time to complete their tasks. The teacher also gave these learners more practical activities to improve their fine motor skills as well as other tasks like puzzles to exercise their mental faculties. During play-time, the learners with autism isolated themselves though the educator made an effort to engage them in group activities.

Teacher 3: Teacher 3 displayed different teaching strategies to learners with autism. During one observation session, the teacher used dramatization and story-telling. The approach was a bit challenging for the learners. They found it difficult to also dramatize due to speech difficulties and also struggled to follow instructions that were used to convey

the messages. The teacher had the ability to use variances in their strategies for instance, they also used songs in one of the lessons which the learners appreciated and enjoyed. The educator also showed a lot of patience and love to the learners. The researcher noticed that learners with autism easily followed their daily routines like play-time or break time. At one point, one of the learners on the spectrum started a tantrum during lesson time, screaming and making noises and the teacher took him out and calmed him down and all was well again. The teacher also hinted on the disparities between learners who had extra help from parents or guardians at home and those whose parents seemingly did not assist. The differences in their work was noted and clearly those learners who had help at home were faring much better compared to their counterparts who allegedly were without help.

4.3.4. THEMES AND CATEGORIES

After completing the process of collecting data through interviews, questionnaires and observations, the researcher transcribed the data and started the two phases of data coding. During the initial coding stage, the researcher chose to combine inductive and deductive coding which meant that data generation and analysis was based on two categories. In summary, the researcher contacted this by creating priori codes from the research questions and literature, reading and familiarizing with collected data, creating posteriori codes and combining the codes as they emerge.

4.3.4.1. CREATING A PRIORI CODES

This is a deductive facet emanating from the research questions as well as from literature. Table 4.2 shows the priori codes inducted from research questions and literature.

Table 4.2: Priori codes and their definition

Priori code	Definition
Teacher strategies	Methods, techniques, procedures and processes of instruction.
Teacher knowledge	Pedagogue principles of subject to be taught.
Curriculum	Planned sequence of instruction.
Parental support	Awareness and involvement in child's learning process.
Challenges	Barriers to successfully teach learners.

4.3.4.2. CREATING POSTERIORI CODES

This phase is the inductive coding stage which the researcher got off as they were sieving through collected data in search of priori codes. This inductive facet is derived through in-depth, ongoing engagement with data from semi-structured interviews, questionnaires and direct observation notes creating sequences and patterns. The researcher also impressed on priori codes to identify re-occurrences. Table 4.3 shows the list and definitions of posteriori codes.

Table 4.3: Posteriori codes and their definition

Posteriori codes	Definition
Teaching strategies	Methods, techniques, procedures and processes of instruction
Teacher skills	Abilities which help teachers succeed in their field.
Teaching aids	Objects or device used to enhance instruction
Challenges	Barriers to successfully teach learners
Impact on parents	Consequences to parents.
Roles	Responsibilities carried through given status or relation.
Joys	Great pleasure or happiness.
Relationships	The way two people are connected.

Upon completion, the researcher then combined the codes from the two sources to form a simplified code list. The process made it easy for the second phase of coding to commence where sorting and categorizing of codes was done based on their frequency and relationships to come up with themes. The researcher then used the final list of codes to develop the major themes. Theme construction was based on likeness or difference of codes from respondents and the presence of patterns which influenced how teachers educated learners with autism. These codes can be located in all the respondents' testimonies and also in the research questions. The major themes to emerge regarding how teachers educate learners with mild to moderate autism were:

- Teacher training
- Support services and resources
- Parental involvement

- Skills and strategies

Table 4.4 shows the simplified priori and posteriori codes and the themes they develop into.

Table 4.4: Simplified priori and posteriori codes and themes formed

Codes	Themes
1. Teaching strategies 2. Teacher knowledge 3. Teacher skills	Teacher training
1. Teaching aids 2. Curriculum	Support services and resources
1. Parental support 2. Roles 3. Impact on parents	Parental involvement
1. Challenges 2. Joy 3. Relationships	Skills and strategies

4.4. DATA INTERPRETATION

The researcher answered the research question ‘How teachers educate learners with mild to moderate autism?’ through interpreting data from teacher interviews, parent questionnaire and teacher observation sessions. Below is the interpretation of the data from the indicated data collection sources.

- **TEACHER TRAINING**

All the teachers that were interviewed highlighted the aspect of receiving teacher training as relevant to the education of learners with autism. They indicated that they had joy in educating these learners but required more training to capacitate them for practice. Prevalent in all their submissions were challenges that they faced because they lacked

the right and necessary skills to be able to rightly educate learners with autism. Below are selected direct quotes from the teachers which support this theme:

According to teacher 1: *“I enjoy teaching learners with autism but feel isolated in this endeavour. On the downside of my practice, I feel I do not have enough knowledge on how to handle learners with ASD...I have not received any training to improve my practice.”*

According to teacher 2: *“...I personally advocate for more workshops and staff development exercises to be conducted at the school to equip us as the teachers...”*

According to teacher 3: *“Staff development has been conducted by the school....As you know, autism is a spectrum and it means we encounter a variety of issues and in most cases we do not even know how to deal with some of the issues. We can definitely do with more staff workshops to aid our development as educators.”*

- **SUPPORT SERVICES AND RESOURCES**

There is just but a slight difference on this theme with one teacher acknowledging some form of support even though she stated that more could be done. Below is the extract from an interview session with teacher 3:

According to teacher 3: *“...A psychologist assists on a daily basis, a variety of therapists visit the school institution. The Psychologist monitors these learners daily progress. Yes I should receive support services to assist because these learners need more time on one-on-one. I also interact with their parents and Psychologist.”*

The other two teachers had a different viewpoint to the above. They submitted that there had been a lack of support services whatsoever but agreed with teacher 3 that there was a serious need for support services as highlighted in their submissions to follow:

According to teacher 1: *“I enjoy teaching learners with autism but feel isolated in this endeavour. On the downside of my practice, I feel I do not have enough knowledge on how to handle learners with ASD. There also a concern on resources needed to support learners with autism for instance my learners who cannot speak have received gadgets for communication but that is just about it. I have not received any training to improve my work.”*

According to teacher 2: *“So far nothing has been done. And yes I really need support services so that I will be able to educate the learners better. I only get information about the learners from the parents and administration. I personally advocate for more workshops and staff development exercises to be conducted at the school to equip us as the teachers. In addition, there is need to provide other resources which can be used to improve both the teachers and also the learners with autism.”*

- **PARENTAL INVOLVEMENT**

This is yet another critical theme highlighted in all the teachers’ submissions as well as questionnaire responses from the parents. All the teachers indicated that the parents were responsible for a very important role which had a direct impact on the performance of the child and in the long run affected the teachers’ practice. Extracts are presented from both the questionnaires and interview transcripts:

According to teacher 1: *“I am always in contact with the parents of my learners through whatsapp, calls and school reports. I always advise them on how to help of which the parents have been willing and are supportive especially in homework. I regret that not all parents are playing their role with regards to helping with homework and supplying all things needed.”*

According to teacher 2: *“I am in contact with some of my learners’ parents and sometimes parents hide information but through discussing, they open up. The parents have a bigger role to play since learners must not only learn at school but continue at home and the parents can supervise. Some parents do not talk to you as a teacher and it affects the learner at school.”*

According to teacher 3: *“The parents do not realize that the biggest role has to be played by them. I am the first to acknowledge that the system has many faults and we can only rectify these through what parents can do for their children beyond the classroom set up. As a teacher, I can only do as much considering that I have to attend neurotypical learners and also a number of learners with autism. I try to communicate this to the parents of my learners that they actually need to do more as the system is not really at the required standard to fully provide what these learners need. For instance, we do not have enough resources for the learners in terms of gadgets but*

may be other parents could afford them. I need to know how my learners are progressing at home and it is only through discussions with parents or guardians that I can achieve this. The extra work at home is actually very critical for me as a teacher.”

In turn, the parents’ responses also showed that indeed this area also formed part of their responsibilities. The responses were also more or less consistent across all parents as shown below:

According to parent 1: “I have a teacher-parent relationship with my child’s teacher, but we do need to communicate a little bit more via mobile phones since my child is non-verbal, she is my eyes, ears and my child’s mouthpiece in the classroom and school situation. I communicate with my child’s teacher to find out if he is participating like other kids in the classroom and to find out if there is progress in terms of attentiveness and being able to socialise with other learners in a classroom situation. I think it is a bit early for me to know where his strengths lie, for now I am still learning about his strengths educationally. My child does not react well to changes in routine, it is almost impossible to stray from routine, things need to stay the same but I give support in any way if there is a need. My role is to help my child in any educational needs. It is also to encourage my child to adapt in the school environment. I am involved in my child’s education. I do communicate with my child’s teacher all the time to find out about the progress. I am apparently trying to gain some knowledge though its’ quite difficult due to change of my child’s behavior and emotions.”

According to parent 2: “My son’s teacher is very friendly to the both of us. I can say she is really good with him. She gives me feedback on a daily basis, we chat briefly every day when I pick him up from school which is very helpful. I’m not very sure on his educational strengths yet but sometimes he is able to take instructions, but does not always respond. He is also able to copy actions at times. By looking at his work-file, there seems to be great improvement. According to his grandparents who spend weekends with him, his behavior is very much improving and it can only be the school as I am not doing much. He is very good in following routines and becomes a little reserved if routines are changed and seems scared of new environments. In terms

of accommodations in transitions, I try to explain the new activity beforehand even though I'm not sure he understands or not. I just do it, try to introduce new activities gradually. As far as my role in his education is concerned, to be honest I don't even know what I'm doing right. I just make sure I get him to school on time and therapy sessions weekly. I also make sure he has enough food so that he does not get upset for any reason at school. No one in my family is involved in his education and we are not knowledgeable about his academic needs. We are not sure. I just hope to understand if he can learn and also discover any other activities he might be interested in or he might be good at like sports (cycling, swimming), cooking or backing and any other outside activities. He is just too busy and all over the place, it is just difficult to know what to expect."

According to parent 3: "I am responsible for letting the teacher know about my child's status and also take the child for therapy (Speech & Occupational). I always communicate with her teacher to monitor her progress. It helps a lot because I know how to help her with school work. Her strength is in Maths and English Language exercises. I think she is receiving the best education. She reacts negatively to change of routine or transitioning to new activities. I make accommodations by allowing my child to mingle with different people and take him to different places so that he can easily adopt to any change and different places. My role is to provide all the educational needs and support my child in anything that he needs. As a parent I am directly involved in his education. Taking my child to school every day and also interacting with the teacher about her school work and how my child is coping. I am knowledgeable about her educational needs yes, I always make sure I communicate all the time with the teachers to find out about her progress."

According to parent 4: "I have a good relationship with my child's teacher as we communicate every day about my child's progress. I communicate with the teacher yes, when I notice some positive changes in my child's behavior and also trying to be independent. I am not sure what her strengths are for now, though most of the time she tries to sing the school songs. It is quite difficult sometimes for her to change routines and it is very uncomfortable. When she is uncomfortable, I

encourage and support her. I believe she is getting good education because my child is improving in terms of speech and interacting with other learners. My role in her education is to comply with the educational needs, respond positively and have a daily communication with the educators. I am a single parent and I am actually involved in her school needs and help her. I am not really knowledgeable, but I am eager to learn as I interact with the educators about my child's progress at school."

- **SKILLS AND STRATEGIES**

Skills and strategies were also prevalent in all the submissions made by the three teachers. The researcher also noted these aspects during the observation sessions. Interestingly, it was also two sided with arguably one side more of innate and the other one being a learned concept. As highlighted below, both were very consistent across the data set:

According to teacher 1: "Teachers need to be patient and also have a good heart to ensure he/she comes to their level. The teacher needs to make use of eye contact and a firm voice. There is need to allocate more time to learners with autism."

According to teacher 2: "...also use a lot of love and patience and do frequent follow-ups. I have to hold hands to support them in each activity since they are delayed in everything they do....."

According to teacher 3: "...I am patient, non-judgmental and have good decision-making skills. They need more time, concepts and syllabi are prolonged. Learners take longer to adjust to new routines. My most challenging experience was when a child was refusing to sit in class. He was always comfortable in other classes. I created a friendly atmosphere and conducive environment."

The above points highlight the significance of other extra skillsets which cannot be taught professionally but are rather personal characteristics. Despite that, such characteristics prove to be very popular among all teachers. There are also other strategies employed by the teachers which are otherwise learnt in training or workshops:

According to teacher 2: *“I use visual aids and sometimes gadgets as strategies to teach.”*

According to teacher 3: *“I use dramatization and storytelling as my strategies for teaching. I also use play way strategy to engage them in class. To meet their individual needs, I teach each of them as an individual, valuing their uniqueness. I have one boy who has a speech problem and some use sign language, a smile or a disturbance to gain attention.”*

All teachers, even teacher 1, used some kind of strategies even though she could not identify it by name. As noted below from an extract of her observation sessions:

“The teacher used different techniques haphazardly to prepare learners for and during activities. Story telling was the strategy mostly used but the teacher also used pictures and charts. In the different sessions, the researcher noticed that the teacher would venture and digress between different strategies and lacked loyalty or expertise to any strategy.”

In answering the research questions, the data harvested from teacher interviews and teacher observation sessions showed that whilst the teachers were placed in positions to teach learners with autism, they were lacking in the appropriate training required to successfully perform this task. This was evidenced by the teachers’ responses which indicate that two of them had received some form of teacher training but nothing related to special education at all. Regardless of this, all the teachers had been practicing teaching of learners with autism for a significant period of time and the bigger part of their struggles related to lack of specialised training.

Secondly, the data highlighted the lack of support services that would have facilitate the fluidity of the whole system that is, connecting all the stakeholders from the school, parents, teachers and other responsible professionals. This was highlighted especially by the fact that the school had a resource centre that was ill-equipped with shoddy resources. According to the teachers’ submissions, there was not much appraisal of their skills to improve which probably hints institutional or national issues. The same can also be said on the issues of parental involvement, with only one showing decent knowledge

of the issues surrounding the subject. The rest would only indicate willingness to do better but also lacked capacity.

Lastly, there were highlights of for example mismatches which are not need in the education of learners with autism. There were intersections between teachers and providers of support services and other resources as well as intersections between parents and other stakeholders which were very idle showing there was either a need to involve a whole lot more stakeholders in the research or that the right practice was still a fallacy in the Kingdom. Such disparities need to both be accounted for and also to be addressed at all levels.

These findings validate the addressing of the study using the ecological model since the issues highlighted take form in different structures of influence. To address them, it is necessary to look at all the structures from various ecologies which can touch on institutions like the Ministry of Education, the individual families as well as individual schools or even the teachers.

4.5. CHAPTER SUMMARY AND CONCLUDING REMARKS

The chapter showed how respondents answered the study's research question. The outcomes from the three sources of data collection in interviews with teachers, questionnaires with parents and observations on teachers were presented in the best possible way. All the respondents afforded intimate details through their lived experiences of the practices of teachers which alluded the researcher an opportunity to immerse themselves deep in the detail.

The chapter was an opportunity for the researcher to present study outcomes in terms of themes. The themes were formulated from the detail harvested from teachers' and parents accounts of their understanding of the research study phenomena. Prevalent concepts in the findings include parental involvement, teacher training, support services and resources as well as skills and strategies. The forthcoming chapter provides a summarized version of research questions conclusion, policy recommendations to aid practice and future studies.

CHAPTER 5: SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

5.1. INTRODUCTION

The study investigated the realities of teachers' practice as far as educating learners with mild to moderate autism is concerned. The aim was to understand the practice within the confines of the Kingdom of Eswatini. The chapter provides concluding remarks based on research outcomes and also possibly contribute to the academic field. Other areas covered in this chapter included evaluation of study and recommendations. Most importantly, the chapter dwells on research findings with regards to the research question and the implications thereof.

5.2. SUMMARY OF RESEARCH FINDINGS

The researcher collected data through semi-structured interviews, questionnaires and observations. Three teachers participated in the interviews while the observations were also carried out on the same three teachers during class periods. Lastly, the questionnaires were administered to four parents of learners with autism. The research data showed prominent and important statements which were analyzed to come up with the study's themes. Themes which emerged from the study were Teacher training, Support services and Resources, Skills and Strategies and lastly Parental Involvement. These were formulated and then expounded in relation to the research question. The summary of the findings falls under the secondary research questions as these were used to ultimately answer the primary research question.

SECONDARY RESEARCH QUESTION ONE: What strategies do teachers employ when educating learners with autism?

The three participants that were interviewed and observed, made use of varying strategies across the board. Strategies like storytelling, visual aids, and dramatization were somewhat used albeit with inconsistencies. Not one of the teachers highlighted the expertise to flow during implementation of the above-mentioned strategies. However, all the teachers showed other attributes in patience and love when educating their learners which was a quality all of them also highlighted as very important. This indicates a desire to work for and better the learners with the focus being the learners and not teachers. The

researcher was then tempted to acknowledge a side of the practice which is beyond the science of learning certain strategies.

SECONDARY RESEARCH QUESTION TWO: What support services and resources have teachers received to help incorporate learners with autism?

All the teachers highlighted that overall, they lacked support services with at least one of them having gone through a staff development workshop. The teachers highlighted the need for more of such workshops to aid their development as special education teachers further. Resources to support learners, their parents and also teachers were lacking too. The school resource center did not offer much yet the learners relied on it for their needs. Similarly, even some parents indicated a lack of understanding of their children which could only be dealt with through providing support services and resources to empower them in their different capacities. For an environment which was supposed to afford better learning outcomes for learners with autism, this was worrying.

SECONDARY RESEARCH QUESTION THREE: What challenges and successes have you encountered in teaching learners with autism?

The main challenge highlighted was the issue of being not fully capacitated for duty. All the three teachers who took part in the study had no specialised training to cater for the needs of learners with autism. They somehow found themselves at the deep end having to provide something they did not really have the skill set nor training for. Other issues highlighted included noise and other behavioural disruptions by some of the learners with autism during class-time. Such an issue even disrupted other learners in the class. The other issue which came as a challenge was failure to complete the syllabus. This was raised because learners required individualised focus and as such, time to complete assigned tasks was never enough especially for classes with inclusion like at this school. Lastly, other teachers mentioned inconsistencies in parental cooperation with some eagerly taking part and vice versa.

PRIMARY RESEARCH QUESTION FOUR: What is the role of parents in the education of learners with autism?

This question produced interesting responses from teachers and parents. Generally, both agreed that parents had an important role to play in the education of learners with autism. The teachers indicated that there were some parents who were playing their roles very well and that this could even be seen by how their children were performing. Some parents, however, were not doing so well and not communicating enough. On their part, the parents also shared similar sentiments. Some parents showed that they lacked the necessary understanding to be able to help even though they wanted to. Others showed that they had the knowledge and were aware of what was expected of them and also did play their part.

5.3. KEY SCHOLARLY REVIEW FINDINGS CONTEXTUAL FRAMEWORK

There has been global legislation influencing the placement of learners with special needs into inclusive set ups and one group which is part of these are learners with autism. Legislations like the 1989 United Nations Convention on the Rights of the child, Article 24 of the UN Convention on the Rights of Persons with Disabilities, the Universal Declaration of Human Rights (United Nations, 1948) and The Salamanca agreement (UNESCO, 1994), have provided guidance at a global level for educational policy regulation (Pantic & Florian, 2015).

Sub-Saharan Africa has also embraced the agenda with Zimbabwe adopting inclusion in 1994 according to Chireshe (2013) and Mandina (2012). This is evidenced by the Zimbabwe Education Act of 1987 as revised in 2006 (Majoko, 2013; Mpofu & Shumba, 2012) which states how it is mandatory to provide education for learners with disabilities in mainstream school classes. South Africa has also restructured the education system and now stipulates that all South African children are required to attend school and also the promise of inclusivity and educational equality has become central to educating practices in the country (Hyman, 2014). The Department of Education outlined a policy in the Education White Paper 6 (2001) aiming to influence new policies for a single and unsegregated educational system for all learners, including those with disabilities (Hyman, 2014), centered on providing a flexible curriculum catering for the diverse abilities and needs of South African learners. Roberts (2007), stated that the policy would

develop support structures for teachers in the schooling districts to develop the skills of South African teachers to enable them to cope with more diverse classes.

The Kingdom of Eswatini has also committed to providing high quality basic education providing equal opportunities for all as evidenced in the Swaziland National Constitution (2006). The promotion of Education for All (EFA) which is an Inclusive Education Policy was developed and the programme has been operational since 2006 with nine pilot schools and four teachers from each school having been trained to handle pupils with disabilities. This model is a reflection of the values, ethos, and culture of the commitment to excellence by promoting educational opportunities to all learners in line with the requirements of the UN agenda's Inclusive Education which seeks to build justice in society ensuring the right to education for all learners in their diversity (UNESCO, 2007). Of the four provinces in the Kingdom of Eswatini, two pilot schools were chosen in each with a plan to roll out the Inclusive Education Programme to 608 primary schools by 2015. The researcher acknowledges that there has been progress in how learners with autism are being educated in the Kingdom of Eswatini and there has been some progress but the research outcome indicates that more needs to be done still. There is still a lack of cohesion in the education of learners with autism in respect of the various stakeholders from the Ministry of Education, Schools and Teachers among others.

5.3.1. THEORETICAL FRAMEWORK

Bronfenbrenner's social ecological system was this study's research study's theoretical framework. The microsystem consisted of the teachers, the parents, and learners who played direct roles in the education of learners with autism. The work of the identified key structures, as shown in the findings, prove how the different systems in the life of the learner with autism played significant roles in their success. Important to also acknowledge is that the findings also impressed on the importance of engaging and harnessing the other systems to successfully and effectively practice the educating of learners with autism. Findings highlighted structures outside the teacher and the learner with autism as very important to the success of such programs. Other factors providing support services and resources to the Ministry of Education at large, the schools, the teachers and or the learners have been identified as very significant. Again, a point which

signifies the relevancy of the ecological model's systems approach. Indeed, outcomes at individual level are a result of the systems surrounding that particular individual. What happens in the classroom reflects a bigger picture. Success or failure of educating the learner with autism does not entirely lie on the teacher but rather other important aspects and stakeholders in the form of legislation, parents and society.

The study results are in tandem with the theoretical framework which looks at the systems approach of educating learners with autism. Particularly it is the macrosystem which is more influential with players in that ecology impacting the outcome of the learning process. That speaks to peers, classmates, families and even teachers themselves as their roles are so pronounced despite the results showing a lot of lacking. This probably confirms the current state of affairs in the Kingdom of Eswatini. The researcher does not disregard other ecologies as well especially when one looks at what the government agencies are trying to establish. The matter at hand indicate that there are gaps and there are various players representing different ecologies which need to improve their services to reach the required standards.

5.3.2. CONCEPTUAL FRAMEWORK

The research embraced global statutory which called for accepting diversity and providing an education for all despite the diversity. There is recognition and acceptance of diversity of learners in mainstream settings now in many countries (Humphrey & Symes, 2013). Local community schools are now embracing learners with special needs in their set ups including those with autism. Countries like Ireland are even set up to provide specialist services for the learners to effectively and correctly support the diversity of learners for example they came up with a 'Task Force on Autism' which provides a range of services for children and young people with ASD including mainstream inclusion, partnership with parents, multi-agency working and staff training (Batten et al., 2006; EPSEN, 2004; Task Force on Autism, 2001). This ensures that the endeavour is not just academic but actually successful. Despite what the statutory states, studies have been conducted with different outcomes, for instance Avramidis et al. (2000:279) implored how educators lacked preparation to cater for special needs learners' requirements. Cavanaugh (2012:20) also noted how educators are expected to provide education to learners with special needs

despite their lack of training and lack of support. According to Simpson (2004:140), it is important to properly train teachers and provide them with the right tools for effective practice as. The above have proven to be very correct even in our study with the highlight not being the intention but rather the practice itself. Globally, countries have actually embraced the idea of equal education and inclusion. For some nations, it has been easy to create frameworks for the successful implementation like the case of Ireland with set structures in the right places. In this study, the Kingdom of Eswatini has embraced the idea as well but still fall short in the practice itself.

5.3.3. KEY EMPIRICAL FINDINGS

The focus of the research study aimed at establishing how teachers educated learners with autism. The researcher amassed responses from different stakeholders which then formed themes. First and foremost was the theme of teacher training which was the most outstanding of them all. The first thing the researcher noted from the findings was the lack of specialised training for this particular practice among the teachers. The description of their qualifications alone indicated the above point. Their responses also highlighted the same issue with all three indicating that they had not received formal training to become teachers for learners with autism.

Secondly, another key finding came in the form of support services and resources provided for the teachers' practice. At least one of the teachers mentioned having received some form of support through staff workshops but all of them agreed the need to have more of these to actually equip them in their task. On paper, the Eswatini Ministry of Education should be able to provide such services through the Department of School Health. It is very similar even to the issue of resources for both learners with autism and their teachers. The researcher noted the existence of a resource center specifically to cater for learners with autism. The downside is that despite its presence, there were not enough resources for both teachers and learners which again presents with a familiar question. Is it that the system is headed towards the right direction simply due to the presence of certain structures or that it is failing because the right structures are not doing what they are meant to do?

To add to the above, the third theme which was established was skills and strategies. The researcher established significant issues surrounding teaching strategies used by the three teachers. All the teachers had an idea on the need to use and adopt specialised teaching strategies for their learners. A few concerns were noted on this aspect as well. Despite the teachers being at the same school and also having trained in the same country, they used different approaches, which could be problematic since there it lacks continuity and structure to build upon. Observations made by the researcher revealed that teachers would jump from one strategy to another without properly applying the strategies principles correctly. One would expect an academic institution to at least have a solid structure to follow which helps with routines for the learners. This point is related to the one of teacher training. With proper training, teachers would not struggle around their work strategies. Seemingly, the strategies used probably work but they are not informed nor do they inform what the school seeks to achieve. It therefore means if one teacher moves on and another comes, there would be changes on the teaching strategies.

Lastly but not least, is the theme detailing parental involvement. It is not possible to exclude involvement of parents in any child's life. What was then raised in the study was the role played by parents in the education of their children on the spectrum. The teachers indicated that parents had a critical role which comes in different forms that is from providing resources, providing feedback to teachers both ways and even helping with schoolwork. The teachers also reiterated that some parents were very active and played their part and their efforts resulted in better academic outcomes for their children. It is also important to indicate that some parents also acknowledged their role and were able to articulate their responsibilities. All parents also showed desire to participate in the education of their children but not all knew how. One even stated that she had no idea what to do and where to start and was confused by how her child exhibited behaviors. This particular theme is related to the support services and resources one. The above content has shown a serious need for support services to be rendered to parents to enable them to be a useful tool for teachers.

5.4 INTEGRATION OF RESEARCH FINDINGS WITH EXISTING LITERATURE

Scholarly literature has produced quite a composite detail of what good practice is all about especially in well developed countries. In Sub-Saharan Africa, only South Africa has an existent structure that guide how to educate learners on the spectrum. In fact, in countries where the spectrum is acknowledged, literature show that these countries have made strides towards improving their approach to the disease. The researcher can attest to the fact that indeed themes from the study matched reveal reality on the ground, that is, that on paper is not always that practiced in theory but rather the practical side of things is far from what is required. Key issues highlighted in the literature hinged on legislation, teacher training, support services and resources, parental involvement as well as skills and strategies used by educators. Similar issues were also established in the research study. The discussion below will then highlight the differences.

As highlighted already, the results from research show that the Kingdom of Eswatini has actually introduced a statutory instrument to support the proper education of learners with autism. During the research study, the researcher noted that indeed there are some structures which have been put in place to support such but it seems those have not yet fully functioned as the researcher actually never met them in practice at the school. Ideally, the information on the paper even indicates that the government established structures specifically for that purpose but their existence in the field is lacking. Where other studies for instance, Bush (2016), emphasize how studies highlight the importance of in-service professional development for educators especially the ones educating learners with autism. This is done through teachers acquiring skills through on-the-job-training, to acquaint them with the requisite professional development especially at conception. It speaks to the in-service professional support that is rendered to the educators which is currently non-existent according to the results of the study.

The above point is also supported by the lack of collaborations between schools, colleges for teacher training, and other professionals. For example, there is not much

action as far as support and professional development to the already ill-equipped workforce. When one compares the depth of knowhow in terms of the skills or even just the methods highlighted in the literature used in the profession to the ones of teachers in the Kingdom of Eswatini, again there is an indication of the disparity in practice. In existing literature, there are terms like differentiated instruction, individualized education program, peer modelling, prompting, information and communication technologies, technology-rich implementations as well as verbal and audio-visual materials. These are some of the methods being used in teaching learners with autism in countries like the United Kingdom, United States and South Africa and yet none of the participants interviewed mentioned anything similar to the above.

It is to be expected that approaches to the spectrum varies between countries for instance Charman et al. (2011:6) highlighted that in schools where teachers showed the right temperaments to teaching learners on the spectrum, they did more than providing individual programs or curriculum adaptation for each learner. Their focus was on coming up with a curriculum dealing with learners needs while also addressing the social, emotional and communication needs of children and young people with autism, and to nurture their independence and well-being. It is therefore not difficult to observe the differences in progress that schools make between the practice in the Kingdom of Eswatini and that reported in schools in countries like the United States and South Africa. The specialized support given to teachers in the Kingdom is still lacking at the best.

Furthermore, literature has shown that there exist different options as far as educating learners with autism is concerned. The schooling options highlighted include inclusion, integration and also segregation which also indicates efforts to look for the best possible option as well as to offer diverse options so that learners may be placed in situations best suited for them. Parents are then spoilt of choice. Importantly, it then means even the teachers are trained in a variety of skills and knowledge on the diverse options available to stay informed and relevant. Such an approach can only guarantee best practice since the practice is open to all exposing weaknesses and strengths of the different practice. That probably speaks to why the practice has evolved over time.

Another element that features in published literature is the issue of whole school bands which is actually impressive as an ideology of practice in the sense that it looks to encompass everyone and all stakeholders in structuring the education of learners with autism. This speaks to the whole system from all teachers and all students as well as the wider community since they also should be empowered to understand learners on the spectrum since they are also responsible for impacting them in one way or the other. The approach looks to acknowledge that successful learning means success not only in the school environment but the wider community meaning, there is need to expose learners to the wider community and vice-versa. It is also important to note that the approach was not mentioned by this study's participants but it actually speaks to the theoretical framework (ecological model) which basically acknowledges every institution as having a role to play in the education of learners with autism. It is a lack of such methods and strategies in the practice in the Kingdom of Eswatini that shows gaps and malnutrition in the system currently at work. As a recommendation, it would be a smart move to look to borrow working strategies from other situations especially the South African ones since we have almost similar cultural dynamics as well as other similar systemic variables.

In addition, educators hinted that normally, the learners on the spectrum were not referred to learning centers which probably speaks to the learning option in practice. They basically learn as heterogenic group in terms of their ages. This counters what the researcher wanted to establish in terms of the foundational phase age. It is difficult for the educators to then keep up with that heterogeneity in terms of the developmental milestones. Worse off is the fact that the responsible teacher at the center was actually a general teacher converted into a different role which again speaks to the insufficiencies.

The above discussion should also not take away the strides taken by the Kingdom of Eswatini in trying to move towards the general practice like other countries. For various reasons, it may not be where it should be as already highlighted but the fact that some

strides are made is an indication that studies such as this one can be used to show deficiencies in the structure whilst appreciating good practice in other countries to emulate them as well. There is a lot of positive aspects as well, parental involvement was acknowledged by teachers even though it was not as perfect. The same can be said about teacher training, though they did not receive proper training to educate learners with autism, they had some training and as a starting point, it is a positive.

5.5 RESEARCH CONCLUSIONS

The research study purposed to establish how teachers educated learners with mild to moderate autism. The researcher discovered that the teachers whose class activities were observed and were also interviewed understood what their tasks were but were not capacitated enough to complete them. Of the teachers who took part in the research, none had a special qualification to teach learners with autism. Despite the above point, the teachers were able to make use of some specialised teaching strategies albeit with varying consistencies. Other strategies of teaching meant involving parents of the learners and the outcomes were mixed as well. Some of the parents, just like the teachers, lacked the knowhow on how to participate in the whole process. Keynote factors for successfully and effectively educating learners from the study include parental involvement, teacher training and support services. The researcher established that success lies with coordinating various stakeholders from parents, teachers, the ministry and every other relevant service provider in the field. So in conclusion, there is need for teacher training and support services to all stakeholders from parents, teachers and learners to successfully and efficiently educate learners with autism.

5.6 RECOMMENDATIONS

RECOMMENDATION 1

It is important that the Eswatini Ministry of Education develop a national standardized mandatory training for teachers of learners with autism and also stipulate such as a requirement to allow schools or teachers to run such programs. Inclusion programs need to be run on the basis of the correct capacity and schools running them need to be consistently inspected of good practice.

RECOMMENDATION 2

A platform should be developed which would help develop and empower the skills of parents such that they can play their role effectively without compromising the future of their children. This can be done through academic research and incorporating the Ministry of Education to render such services to schools having learners with autism. Part of successfully educating learners with autism involves having parents who know what their role is.

RECOMMENDATION 3

The outcomes of this study show a need for further research especially that which would expand knowledge on practice and knowhow. In essence, this can be achieved through use of a wider study population from more schools, more parents and more teachers. The expanded study would also incorporate other stakeholders like the school administration and also even the Ministry itself to try and locate where the gaps concerning the correct practice emanate from. There is need for more insight at different levels and to also establish trends in other regions of the country. The research would look at diverse schools.

5.7 LIMITATIONS OF THE STUDY

This section presents points describing the evaluation of the study.

- The use of a small number of participants is a limitation to a degree and even though critical data was gathered, using more participants could have enhanced the research. More participants may have resulted in different outcomes.
- Generalizing of research outcome to the rest of the country is also difficult since data collection was done at one school.
- Availability of participants was also a limitation with a good number of parents either refusing to take part or not being fully engaged in the research process.
- The researcher also noted that the study population was limited. Other stakeholders need to be part of the study to have a clearer and full picture of the study matter.

5.8 AVENUES FOR FURTHER RESEARCH

The study highlighted critical areas in addressing the research question. Most importantly, the researcher established that success in the education of learners with autism does not solely lie with teachers and or the school but rather there are so many other stakeholders who ought to play an equally important role. Future research should take into cognizance these other stakeholders and the roles they play. A doctorate study would do well by adding the Ministry of Education, teacher training colleges, more schools, more teachers and also more regions as participants. This is necessitated by what the researcher perceived to be outstanding issues from the current study. On paper, the education of learners with autism is supposed to be flowing but the results of this study showed that it was not the case with a couple of issues needing to be addressed. Areas like the training and qualifications of teachers, the support from the larger community and other stakeholders are concerning. It is obviously not ideal to have a parent stating that they are failing to keep up with their child and it is even worse when the teacher who is supposed to be properly trained also states that they are not fully equipped. A systematic approach to research again this time focusing on a larger scale may actually provoke more thinking and produce detailed knowledge of the field and practice.

5.9 CONCLUDING REMARKS

It was an exciting experience to do the research on best strategies on how to educate learners with autism. This researcher learnt a lot on how teachers strive to implement best strategies in teaching learners with autism. She is more conscious to exercise more patient, love and care when dealing with learners with autism.

The researcher also learnt that communication is the best skill that can help to enhance good results between parents and educators. Therefore, these two parties should always communicate about learners' progress to yield best results.

Through this research, this researcher learnt that learners learn and understand differently. Therefore, different strategies to teach learners with autism.

Also, the researcher learnt that if schools practice inclusive education and provide good facilities and centres to deal with learners with autism, it motivates educators and bring best results to learners with autism.

Lastly, the researcher believes that this research will aid educators in the Kingdom of Eswatini to note and probably apply strategies used in other countries as indicated in literature, in educating learners with autism in getting better results. It would help if administration acknowledge the challenges faced by the educators, improve educators teaching skills and equip them with more skills and knowledge on how to help learners with autism.

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APPENDIX A: ETHICAL CLEARANCE CERTIFICATE – FACULTY OF EDUCATION, UNIVERSITY OF SOUTH AFRICA



UNISA COLLEGE OF EDUCATION ETHICS REVIEW COMMITTEE

Date: 2022/05/11

Ref: **2022/05/11/54853834/26/AM**

Dear Mrs S Takwi

Name: Mrs S Takwi

Student No.:54853834

Decision: Ethics Approval from
2022/05/11 to 2025/05/11

Researcher(s): Name: Mrs S Takwi
E-mail address: 54853834@mylife.unisa.ac.za
Telephone: +26876385736

Supervisor(s): Name: Dr AM Moll
E-mail address: mollam@unisa.ac.za
Telephone: +27124294434

Title of research:

EDUCATING CHILDREN WITH AUTISM SPECTRUM DISORDER (ASD) IN THE KINGDOM OF ESWATINI

Qualification: MEd Psychology of 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 2022/05/11 to 2025/05/11.

*The **medium risk** application was reviewed by the Ethics Review Committee on 2022/05/11 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.



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3. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the UNISA College of Education Ethics Review Committee.
4. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
5. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing.
6. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
7. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.
8. No field work activities may continue after the expiry date **2025/05/11**. Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

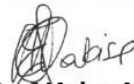
Note:

*The reference number **2022/05/11/54853834/26/AM** should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.*

Kind regards,



Prof AT Motlhabane
CHAIRPERSON: CEDU RERC
motlhat@unisa.ac.za



Prof Mpine Makoe
ACTING EXECUTIVE DEAN
qakisme@unisa.ac.za



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APPENDIX B: REQUEST TO SCHOOL PRINCIPAL



Department of Psychology of Education
The University of South Africa

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT YOUR SCHOOL

RESEARCH TITLE: EDUCATING CHILDREN WITH AUTISM SPECTRUM DISORDER (ASD) IN THE
KINGDOM OF ESWATINI

Date: _____

The School Principal

Dear Sir/Madam,

I, Sinini Takwi am doing research under supervision of Doctor A. Moll a Senior Lecturer in the Department of College of Education towards a Master of Education in Psychology of Education at the University of South Africa. We are inviting you to participate in a study entitled Educating Children with Autism Spectrum Disorder (ASD) In the Kingdom of Eswatini

The aim of the study is to investigate how teachers can educate children with mild to moderate ASD.

Your school has been selected because you specialize in teaching learners with ASD

The study will entail the use of observation, one on one interview and the filling of a questionnaire.

The benefits of this study are to help teachers use better strategies in teaching learners with ASD

Potential risks are psychological and social

There will be no reimbursement or any incentives for participation in the research.

Feedback procedure will entail written document

Yours sincerely

A handwritten signature in black ink, appearing to be "Sinini Takwi".

Sinini Takwi

Master's student at the University of South Africa



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APPENDIX C: CONSENT LETTER TO PARENTS



REQUEST FOR PARENTAL CONSENT FOR YOUR CHILD TO PARTICIPATE IN A RESEARCH PROJECT

Dear Parent

Your _____<son/daughter/child> is invited to participate in a study entitled **Educating Children with Autism Spectrum Disorder (ASD) In The Kingdom of Eswatini**.

I am undertaking this study as part of my Master's research at the University of South Africa. The purpose of the study is identifying suitable ways of teaching learners with Autism and the possible benefits of the study are the improvement of teaching strategies to learners with autism. I am asking permission to include your child in this study because she is amongst the chosen one. I expect to have four other children participating in the study.

If you allow your child to participate, I shall request her:

- Take part in a survey

I will be observing your child during lessons and play time at their school. The observation will be for six weeks and I will be looking at how they learn and interact with others.

Any information that is obtained in connection with this study and can be identified with your child will remain confidential and will only be disclosed with your permission. His/her responses will not be linked to his/her name or your name or the school's name in any written or verbal report based on this study. Such a report will be used for research purposes only.

There are no foreseeable risks to your child by participating in the study. Your child will receive no direct benefit from participating in the study; however, the possible benefits to education are books and crayons. Neither your child nor you will receive any type of payment for participating in this study.

Your child's participation in this study is voluntary. Your child may decline to participate or to withdraw from participation at any time. Withdrawal or refusal to participate will not affect him/her in any way. Similarly, you can agree to allow your child to be in the study now and change your mind later without any penalty.



The study will take place during regular classroom activities with the prior approval of the school and your child's teacher. However, if you do not want your child to participate, an alternative activity will be available; indoor games.

In addition to your permission, your child must agree to participate in the study and you and your child will also be asked to sign the assent form which accompanies this letter. If your child does not wish to participate in the study, he or she will not be included and there will be no penalty. The information gathered from the study and your child's participation in the study will be stored securely on a password locked computer in my locked office for five years after the study. Thereafter, records will be erased.

The benefits of this study are also to help the teachers to have a better understanding on how to teach learners with autism and how to handle them in a classroom situation.

There are no potential risks involved. There will be no reimbursement or any incentives for participation in the research.


If you have questions about this study please ask me or my study supervisor, Dr. A Moll Department of Psychology, College of Education, University of South Africa. My contact number is +26876385736 and my e-mail is 54853834@mylife.unisa.ac.za. The e-mail of my supervisor is mollam@unisa.ac.za. Permission for the study has already been given by Principal and the Ethics Committee of the College of Education, UNISA.

You are making a decision about allowing your child to participate in this study. Your signature below indicates that you have read the information provided above and have decided to allow him or her to participate in the study. You may keep a copy of this letter.

Name of child: _____

Sincerely

Parent/guardian's name (print) Parent/guardian's signature: Date:

Sinini Takwi
Researcher's name (print)  _____
Researcher's signature Date:



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APPENDIX D : ASSENT LETTER FORM (CHILD)



CONSENT/ASSENT TO PARTICIPATE IN THIS STUDY (Return slip)

I, _____ (participant name), 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 (or had explained to me) 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 (if applicable).

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 my questionnaire

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) Sinini Takwi

Researcher's signature

Date



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APPENDIX E : INTERVIEW QUESTIONS



INTERVIEW QUESTIONS/GUIDELINE FOR TEACHERS

The research will make use of the following guiding questions and will extend on these through the use of probing questions. These include:

- ✓ Would you give me an example?
- ✓ Can you elaborate on that idea?
- ✓ Would you explain that further?
- ✓ I'm not sure I understand what you're saying.
- ✓ Is there anything else?

How can teachers educate children with autism spectrum disorder (ASD)?

To what extent can teachers help in educating learners with ASD?

1. What are your perceptions about teaching children with ASD?
2. What difficulties have you experienced in teaching an ASD child in your class?
3. Tell me about your experiences working with a child with Autism Spectrum Disorder.
4. Could you describe your most challenging experience while working with ASD children and how you handled it
5. What is motivating to the child? Any particular likes and dislikes?

What do teachers need to educate learners with ASD?

6. Describe any methods you use to communicate student progress to parents?
7. What do you feel is important for you to know about your ASD students and how do you go about gathering this information?
8. Tell me about the support systems or services available to you in the accommodation of this child.



How do you feel you could be better equipped to deal with children with special educational needs in the mainstream classroom?

9. How does the student handle changes in the daily routine?
10. How does the student handle transitions throughout the day?
11. What specific strategies have you implemented to measure indicators like student engagement and attainment in class when educating children with ASD?
12. Tell me about the learner with Autism Spectrum Disorder in your class.
13. How does the student let you know he/she wants help or to gain your attention?



APPENDIX F : PARENT QUESTIONNAIRE



Parent Questionnaire

1. Could you describe the composition of people in your home and give relationships?

2. What are your child's educational areas of strength?

3. What types of things work best for your child in terms of rewards and motivation?

4. How does your child best communicate with others?

5. Describe how your child reacts to changes in routine or transitions to new activities.



6. What types of accommodations do you make to help your child adapt to change and transitions?

7. Describe your child's interaction with peers:

8. Describe your child's interaction with family noting differences on adults and siblings,

9. How long does your child pay attention?

10. What are your expectations in the area of your child's education? Please discuss:



APPENDIX G: OBSERVATION SCHEDULE

OBSERVATION	Very Fast	Fast	Moderate	Slow	Very Slow
Time taken to complete a task					
Response to questions					
Interpretation of pictures					
Participation in group activities					
Use of technology in learning (Computers, Tablets. Phones)					
Story telling					
Oral skills					
Writing skills					
Peer learning					



APPENDIX H: ASSENT FOR INTENDED LEARNERS



A LETTER REQUESTING ASSENT FROM LEARNERS IN A PRIMARY SCHOOL TO PARTICIPATE IN A RESEARCH PROJECT

Dear learner,

Date _____

My name is Sinini Takwi and would like to ask you if your teacher can watch you do some activities using different learning skills, and watch you when you play outside on the playground. I am trying to learn more about how children do activities with their teachers as well as when they play with friends.

If you say YES to do this, I will ask your teacher to watch you when you do activities as well as when you play on the playground. Your teacher will not ask to you to do anything that may hurt you or that you don't want to do.

I will also ask your parents if you can take part. If you do not want to take part, it will also be fine with me. Remember, you can say yes or you can say no and no one will be upset if you don't want to take part or even if you change your mind later and want to stop. You can ask any questions that you have to your teacher. If you have a question later that you didn't think of now, please ask your teacher.

Please speak to mommy or daddy about taking part before you sign this letter. Signing your name at the bottom means that you agree to be in this study. A copy of this letter will be given to your parents.

Regards

Sinini Takwi

Your Name	Yes I will take part 	No I don't want to take part 
Name of the researcher	Sinini Takwi	
Date		
Witness		

ALL COVID PROTOCOLS WILL BE FOLLOWED



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APPENDIX I: LANGUAGE EDITOR'S CERTIFICATION



STMbondvo editing services (Pty) Ltd

148 Aramburg (Mpumalanga)

Cell: 060 346 7091

email:mhlekazist@gmail.com

Final Proof of Editing

STMbondvo editing services
148 Aramburg
Mpumalanga
South Africa
Cell.: 0603467091

Date: 22 August 2023

This is to certify that I have edited the MEd dissertation of the following candidate:

Names and Surname: Sinini Takwi

Student number: 54853834

Title: Educating children with autism spectrum disorder (ASD) in the kingdom of Eswatini.

Dr ST Maseko
Director
STMbondvo editing services

Confidentiality: *In editing academic documents, I understand that I have access to confidential data, that information contained in documents is confidential and for that, I agree not to divulge, publish, make known to unauthorized persons or to the public the data in documents.*