

Effectiveness Of Inclusive Education on Social Skills Development in Children with Autism Spectrum Disorder (ASD) In Nigerian Primary Schools

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Abstract- This seminar examines the effectiveness of inclusive education on social skills development in children with autism spectrum disorder (ASD) in Nigerian primary schools. Education is a fundamental right for all children, including those with disabilities, as affirmed by the United Nations Convention on the Rights of the Child and Nigeria's National Policy on Special Needs Education (2015). However, children with ASD face persistent deficits in communication, social interaction, and behavioral flexibility that make inclusive classrooms challenging. Despite policy support for inclusive education in Nigeria, implementation gaps remain. Many teachers lack specialised training, classrooms are under-resourced, and societal stigma persists, resulting in social isolation and poor academic outcomes for pupils with ASD. This study therefore sought to: (1) examine social skills deficits experienced by pupils with ASD in Nigerian inclusive primary schools; (2) explore effective strategies for social skills development; (3) assess teacher and parent perceptions; and (4) investigate challenges teachers face in implementing social skills training. A qualitative descriptive design using a systematic literature review was adopted. Data were drawn from peer-reviewed journals, policy documents, and empirical studies published between 2009 and 2025, with thematic content analysis applied to identify trends and gaps. Findings reveal that pupils with ASD in Nigeria exhibit core deficits in initiating conversation, interpreting nonverbal cues, and turn-taking, compounded by overcrowded classrooms and sensory triggers. Effective strategies identified include direct instruction, peer-mediated interventions, and environmental adaptations. Yet these are rarely implemented due to inadequate teacher training, resource constraints, weak policy enforcement, and stigma. The study concludes that inclusive education can enhance social skills in pupils with ASD, but only when supported by trained teachers, structured peer involvement, adapted environments, and parental collaboration. Recommendations include mandatory ASD modules in teacher training, low-cost classroom adaptations, and clear policy implementation guidelines to move inclusion beyond placement to meaningful participation.

Index Terms- Inclusive Education, Autism Spectrum Disorder, Social Skills, Nigerian Primary Schools, Montessori, Special Needs Education

I. INTRODUCTION

1.1 Background to the Study

Child development spans from infancy to adulthood, and education is central to both individual and national growth. The United Nations Convention on the Rights of the Child (UNCRC) provides a legal framework affirming that every child under eighteen has the right to education regardless of identity, location, language, beliefs, appearance, disability, or parental background (UNICEF, 2025). Governments are urged to remove barriers that prevent children with disabilities from accessing education, fostering independence and community participation. In Nigeria, the National Policy on Special Needs Education (2015) defines children with disabilities to include those with autism, visual, hearing, and speech impairments, intellectual disabilities, and learning disabilities.

Autism Spectrum Disorder (ASD) is a neurodevelopmental condition emerging early in life, characterized by persistent deficits in communication and social interaction, alongside restricted, repetitive patterns of behavior. It affects children across racial, ethnic, and socioeconomic groups and is approximately five times more prevalent in boys than girls. While the exact cause remains unclear, risk factors include family history and advanced parental age (Centers for Disease Control and Prevention, 2015). Lotter (1979) first documented ASD in Sub-Saharan Africa, noting 1 in 145 children with intellectual disabilities had ASD in Nigeria. Adu and Egbochuku (2010) later estimated 190,000 Nigerian children live with ASD. As a spectrum disorder, ASD presents varied challenges: social interaction deficits, communication difficulties,

behavioral issues, and resistance to change (Murray, 2015). These deficits make school environments particularly demanding for learning, socializing, and emotional regulation (Graham, 2021).

Children with ASD often exhibit strong visual processing but delayed auditory and language processing, hindering their ability to follow multi-step instructions common in classrooms (Bice, 2009; Murray, 2015). Executive functioning deficits further complicate organization, task initiation, and perspective-taking. While some decode words well, reading comprehension lags due to difficulty making inferences (Audu & Egbochuku, 2010). Fine motor and visual-motor challenges also impact academic performance (Graham, 2021).

Inclusive education places all children in the same classroom, yet pupils with ASD face inherent difficulties linked to the disorder (Davies, Zhang, & Barrett, 2015). Lagunju, Bella-Awusah, and Omigbodun (2014) reported a 2.3% incidence of ASD among Nigerian clinical populations, with diagnosis at 21.2 months despite parents noticing atypical behaviors at 6.6 months. As ASD prevalence in inclusive classrooms rises, teachers must create supportive environments for academic and social success.

Global and Nigerian policies support inclusive education for equitable access (American Psychiatric Association, 2013; Oyeniran, 2018). However, implementation gaps persist, especially for pupils with ASD (Oyeniran, 2018). Social skills — communicating effectively, interpreting social cues, cooperating — are critical yet impaired in ASD, leading to isolation (Gresham, 2002; White et al., 2007). Strong social skills improve academic outcomes, emotional health, and self-worth (Bauminger & Kasari, 2000).

In Nigerian primary schools, inclusive classrooms aim to support diverse learners, including those with ASD. Yet effectiveness depends on teacher preparedness, resources, and societal attitudes toward autism (Bello & Oloyede, 2020). Many teachers lack special education training and rely on conventional methods unsuitable for diverse learning styles

(Nwogu, 2020). Stigma further limits peer and community support.

Targeted interventions improve social skills in pupils with ASD: social skills training, peer mentoring, and teacher professional development on inclusive strategies (Kearney & McEwan, 2020). Trained educators see improved pupil engagement and classroom participation (Chan & Chan, 2016). Collaboration among teachers, parents, and specialists creates supportive ecosystems for social growth. Understanding these interactions is key to designing effective methods in Nigerian inclusive settings.

1.2 Statement of the Problem

Globally and in Nigeria, inclusive education is promoted to integrate pupils with Autism Spectrum Disorder into regular classrooms. ASD impairs social interaction, communication, and behavioral flexibility, which are foundational for classroom success. Nigerian primary schools often employ teaching approaches that overlook the specific needs of pupils with ASD, contributing to social isolation and poor academic outcomes. Many teachers lack training to identify ASD characteristics and teach social skills effectively. Societal stigma around autism further impedes classroom inclusion. Without targeted social skills interventions, pupils with ASD risk negative academic and psychosocial outcomes. This seminar therefore seeks to identify practical strategies to enhance social skill development for pupils with ASD in Nigerian inclusive primary schools.

1.3 Objectives of the Study

The objectives of this seminar are to:

1. Examine the social skills deficits experienced by pupils with Autism Spectrum Disorder in Nigerian inclusive primary schools.
2. Explore effective strategies for social skills development among pupils with Autism Spectrum Disorder.
3. Assess the perceptions of teachers and parents regarding the importance of social skills development for pupils with Autism Spectrum Disorder.

4. Investigate the challenges faced by teachers in implementing social skills training for pupils with Autism Spectrum Disorder.

1.4 Significance of the Study

This study is significant to teachers, parents, policymakers, and researchers.

1. Teachers: Provides evidence-based methods to improve social skills instruction, enabling more inclusive classrooms and reducing teacher frustration.
2. Parents: Clarifies the importance of social skills development, equipping parents to reinforce learning and social experiences at home and advocate for their children.
3. Policymakers: Offers data-driven recommendations to strengthen inclusive education implementation, guiding policy reviews and resource allocation for special needs education in Nigeria.
4. Researchers: Identifies gaps for future empirical studies on ASD and inclusive education within the Nigerian context, contributing to local literature.

1.5 Scope of the Study

This seminar focuses on the effectiveness of inclusive education on social skills development in children with Autism Spectrum Disorder. Geographically, it is limited to primary schools operating inclusive classrooms in Nigeria, with specific reference to campuses in Abeokuta and Ibadan as examples. Conceptually, it covers teacher strategies, peer-mediated interventions, classroom environment, and stakeholder perceptions. It does not cover secondary or tertiary institutions, nor does it address other disabilities outside ASD. The study relies on existing literature and policy documents from 2009–2025.

1.6 Limitations of the Study

1. Time constraint: The seminar is based on secondary data and literature review; no primary fieldwork was conducted to test interventions.
2. Generalizability: Findings may not apply uniformly across all Nigerian states due to regional differences in resources, teacher training, and cultural attitudes.
3. Data availability: Limited Nigerian-specific empirical studies on ASD and social skills in

inclusive settings restrict depth of contextual analysis.

4. Scope of disability: The study addresses only ASD and excludes co-occurring conditions that may influence social skills outcomes.

1.7 Research Assumption

This study assumes that:

1. Inclusive education, when properly implemented, can positively influence social skills development in pupils with ASD.
2. Teachers and parents are willing to adopt new strategies if provided with adequate training and resources.
3. Social skills deficits in pupils with ASD are identifiable and can be improved through targeted, consistent interventions.

1.8 Definition of Terms

4. Autism Spectrum Disorder (ASD): A neurodevelopmental disorder characterized by persistent deficits in social communication, interaction, and restricted, repetitive patterns of behavior, interests, or activities (APA, 2013).
5. Inclusive Education: An educational approach where pupils with and without disabilities learn together in the same classroom, with necessary supports provided to ensure participation and achievement.
6. Social Skills: A set of learned behaviors that enable individuals to interact effectively with others, including initiating conversation, interpreting nonverbal cues, turn-taking, and cooperation (Gresham, 2002).
7. Individualized Education Programme (IEP): A written plan developed for each pupil with special needs, outlining specific learning goals, services, and accommodations.
8. Sensory Sensitivity: Heightened or reduced responsiveness to sensory stimuli such as sound, light, touch, or smell, commonly observed in children with ASD.

II. LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature on inclusive education and social skills development in children with ASD. It presents the conceptual framework, discusses

theoretical underpinnings, examines strategies, roles of stakeholders, and identifies gaps in existing literature.

2.2 Conceptual Framework

This study is anchored on two models:

1. Vygotsky's Sociocultural Theory: Emphasizes that social interaction is fundamental to cognitive and social development. Children with ASD can develop social skills through scaffolded interaction with more skilled peers and adults in the "Zone of Proximal Development."

2. Bandura's Social Learning Theory: Posits that learning occurs through observation, imitation, and modeling. For pupils with ASD, structured opportunities to observe and practice appropriate social behaviors are critical, given their difficulty with incidental learning.

In inclusive classrooms, these theories justify peer-mediated interventions, teacher modeling, and structured social skills training. The framework posits that teacher preparedness + adapted environment + peer support + parental involvement → improved social skills outcomes for pupils with ASD.

2.2.1 Understanding Autism Spectrum Disorder and Social Skills

Autism Spectrum Disorder (ASD) is a complicated condition that affects how the brain develops, leading to a variety of symptoms that influence social interactions and behavior. It is diagnosed according to specific guidelines provided in the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2013). People with ASD typically struggle with understanding social signals, having back-and-forth conversations, and forming friendships. These challenges are part of the main features of the disorder and can appear in different ways depending on a person's level of thinking, ability to communicate, and awareness of social situations. It is important for teachers and professionals to understand these key aspects of ASD to better assist pupils in learning environments that include everyone.

Social skills involve a variety of abilities that are important for interacting with others in a meaningful

way. For pupils with autism spectrum disorder (ASD), these skills include starting and keeping conversations, understanding nonverbal signals like facial expressions and body movements, and participating in group activities (Gresham, 2002). Studies show that difficulties in social skills can result in serious feelings of loneliness and emotional struggles for individuals with ASD (White et al., 2007). Building social skills is important not only for doing well in school but also for improving the general well-being of people on the autism spectrum. Developing these skills can help build better friendships, increase confidence, and make it easier for pupils to fit into the classroom environment. The lack of social skills seen in pupils with ASD can differ from one person to another, and this variation depends on factors such as the pupil's age, their cognitive abilities, and whether they also have other conditions like anxiety or attention-deficit/hyperactivity disorder (ADHD). It is important to understand these differences when creating specific strategies to support each pupil's unique needs (Bauminger & Kasari, 2000). This method allows teachers to focus on the particular difficulties each pupil faces while also encouraging their strengths and personal interests. Moreover, identifying these challenges early and providing support is key to helping pupils with ASD develop useful social skills that can lead to positive interactions with their peers.

In Nigeria, making social skills effective for pupils with autism spectrum disorder (ASD) is made more difficult by cultural beliefs and issues within the education system. Many teachers do not have the special training needed to teach pupils with ASD or to support inclusive education, so they often use traditional teaching methods that may not be suitable for these pupils (Nwogu, 2020). Also, common misunderstandings about autism can lead to stigma and discrimination, which can make it harder for pupils with ASD to fit in. To help pupils with ASD develop their social skills in inclusive Nigerian classrooms, it is important to build an environment that encourages understanding, acceptance, and teamwork among teachers, classmates, and parents. There are many different strategies that have been created to help pupils with ASD improve their social skills. These can be grouped into three main types:

direct instruction, peer-mediated interventions, and naturalistic approaches. Direct instruction teaches specific social skills through planned lessons and role-playing activities. This method helps pupils better understand what is expected in social situations (Kearney & McEwan, 2020). Peer-mediated interventions involve training other pupils to support their classmates with ASD by showing good social behavior and giving positive feedback (Chan & Chan, 2016). Research shows that these kinds of interventions can greatly improve the social interactions of pupils with ASD, as they learn from and play with their peers in real-life settings (Bauminger & Kasari, 2000). Naturalistic approaches focus on teaching social skills during everyday activities and interactions. These methods encourage pupils with ASD to practice their social skills in real-world situations, helping them learn and use these skills in different settings (Owen et al., 2020). Because these approaches take place in natural environments, they are especially good at helping pupils with ASD use their social skills in a variety of places.

2.3 Challenges of Children with ASD in Inclusive Education

In addition to the inherent challenges related to autism spectrum disorder (ASD), there are other factors within inclusive education that can hinder the educational experience of children with ASD. These factors include building design, classroom environment, policies, peer and teacher relationships, insufficient learning resources, and a lack of adequately trained educators (Burton-Hughes, 2019). According to Davies, Zhang, and Barrett (2015), the design of buildings significantly influences human performance and well-being. The concept of classroom climate involves the interactions among pupils and teachers, shaped by shared beliefs, values, and attitudes. Research shows that an unmanaged classroom climate can negatively affect learning (Rathmann et al., 2018). Typically, inclusive classrooms are overcrowded and noisy. Burton-Hughes (2019) noted that children with autism often experience sensory sensitivity to sounds or materials, causing strong positive or negative reactions to sensory stimuli in the classroom. Children with ASD often face challenges in both understanding and

expressing language, which can lead to difficulties in interacting with others and result in social difficulties, low classroom involvement, and lower academic performance (Booren, Downer & Vitiello, 2012).

Teaching and learning in classrooms often involve strict deadlines, hierarchical structures, and limited pupil autonomy, which can be linked to increased anxiety and poor academic outcomes (Rathmann et al., 2018).

Anxiety can lead to abnormal behaviors such as clapping, hand flapping, self-injurious actions, shouting, throwing objects, stomping, and higher instances of physical aggression. Other disruptive behaviors include rocking, mouthing objects, repetitive actions, intense eye contact, and fixating on objects (Graham, 2021). Odunsi (2018) argued that inclusive education in Nigeria may not effectively support children with ASD, due to a lack of trained professionals who can educate others. This can be attributed to weak leadership from national to local levels. Furthermore, the Nigerian Federal Ministry of Education stopped at the formulation of inclusive education policies without clear implementation guidelines, making the concept unattainable.

Schools are social settings where education is facilitated through peer interactions and teacher-pupil relationships. Therefore, the inability of children with ASD to communicate and interpret social signals leads to social challenges (Garrota et al., 2020; Graham, 2021). These children often appear socially awkward and may be rejected by peers and teachers. Rejection can harm the child's emotional health, increasing feelings of anxiety and depression. The continuous presence of these emotions worsens their social skills (Garrota et al., 2020). Children with ASD are also prone to peer victimization, which can lead to school-related issues such as loneliness, avoidance of school, reduced participation in class, low self-esteem, depression, behavioral problems, limited opportunities, and academic failure (Chen et al., 2020).

Although educators generally have positive attitudes toward inclusion, they often mention a lack of adequate learning facilities, insufficient knowledge,

and limited practical skills for managing children with ASD, which can be barriers to their education. Educators often feel unprepared to handle the behavioral issues commonly associated with autism, such as emotional outbursts, rigid thinking, communication challenges, and social difficulties (Graham, 2021), and therefore seek support from para-professionals. Some educators experience stress while managing classroom activities for children with ASD. Even with additional training, many still feel unprepared and incompetent to implement effective teaching strategies. Despite educators expressing low confidence and a lack of training, pupil with autism have legal rights to educational programs, as autism does not always affect cognitive ability.

Unfortunately, the necessary support systems are often not in place to meet the needs of these children, as teachers are not informed about: (a) the impact of ASD on the child's education, (b) the academic characteristics of children with ASD in different subject areas, and (c) interventions that can improve their academic performance (Murray, 2015). The implication is that if children with ASD are not adequately supported, they may become disengaged during most of their time in school (Burton-Hughes, 2019).

2.4 Strategies of Handling Children with ASD in Inclusive Education

Studies conducted in various countries, including Nigeria, indicates that inclusive education has allowed more children with autism spectrum disorder (ASD) to attend school. Certain interventions have been found to enhance their academic performance, as noted in the works of Odunsi (2018) and Gavalda & Qinyi (2012):

a) Social interaction intervention.

Interaction between pupils, peers, and teachers in the classroom is a key aspect of educational theory (Booren, Downer & Vitiello, 2012). Pupil -peer social support involves actions from peers that help pupils perform better, learn more effectively, and handle difficulties (Bice, 2009). This kind of support offers emotional comfort to pupils who are facing challenges, helping them deal with stress and anxiety through advice and feedback (Booren, Downer & Vitiello, 2012). It leads to positive results like

increased motivation, better focus, more positive attitudes toward learning, and improved academic performance. When friends encourage a child to solve problems and do not make fun of their mistakes, the child is able to learn more quickly. Thus, peer support is seen as a key factor in a child's ability to adapt and learn in school (Garrota, et al., 2020).

According to Murray (2015), a teacher's ability to manage interactions between pupils and their peers in the classroom affects the child's immediate and long-term social, emotional, and academic development. The researcher also noted that managing the social environment in the classroom positively impacts pupils' peer experiences, as teacher-child interactions are observed by all classmates. This helps classmates form opinions about a child's traits and likeability, which shape the overall view of the child's reputation in the class (Graham, 2021). On the other hand, a warm and open relationship between teachers and pupils creates a safe and supportive environment where children feel loved and connected to the classroom (Booren, Downer & Vitiello, 2012). In Nigeria, counseling and strong relationships have helped children with autism spectrum disorder (ASD) participate more in classroom activities and improve their skills (Udunsi, 2018). These relationships also enable children with ASD to receive more support from other teachers. However, conflicts between teachers and pupils can lead to peer dislike, avoidance of school, externalizing behaviors, less social interaction, and reduced cooperation. Chen, et al. (2020) added that warm and responsive teacher interactions, along with inclusive classroom management, can reduce behavioral issues and peer victimization. Since parents and caregivers are the main experts on children with ASD, teachers should work closely with them, share information, and suggest interventions. Such collaboration also builds the parents' confidence in the school (Burton-Hughes, 2019).

b. Academic Activities Intervention

The importance of education for children with autism cannot be overstated, as they possess varying levels of cognitive ability. Education plays a crucial role in helping them fully develop their personalities, talents, and abilities (UNICEF, 2025). In addition to

managing social interactions within the classroom, teachers ensure that the structure of the school environment supports academic activities (Davies, Zhang, & Barrett, 2015). Since inclusive classrooms can often be crowded, Murray (2015) emphasizes that the teacher is the key person in creating a less overwhelming environment and maintaining classroom rules. The teacher takes into consideration the strengths and weaknesses of each child with autism when developing an Individualized Education Programme (IEP). Establishing a daily routine and making it clear to the child is essential because autism often responds well to routine. Creating a visual timetable with images and simple words in chronological order, and describing the activities and transitions throughout the day, is effective as it provides a sense of security and serves as a reminder (Burton-Hughes, 2019). The writer points out that autism can affect a child's ability to communicate and interpret meaning. Therefore, teachers should avoid using metaphors or rhetorical questions and instead use simple words and well-structured sentences when giving instructions.

Moreover, children with autism spectrum disorder (ASD) often exhibit behavioral challenges that can interfere with learning. These include difficulties in listening and following instructions, adhering to rules, and displaying repetitive or disruptive behaviors. A research study by Elliot and Gresham (Graham, 2015) identified ten essential social skills needed for successful learning in the classroom, such as listening to others, following steps, obeying rules, ignoring distractions, taking turns, asking for help, getting along with others, staying calm, taking responsibility for one's actions, and doing nice things for others. According to Bice (2009), children with ASD often rely heavily on positive reinforcement during learning. They become discouraged when teachers do not give them full attention, so it is important for educators and administrators to set long-term goals of independence, which is an implicit expectation for these children. Teachers can foster independence by gradually reducing reinforcement schedules and delaying corrective feedback.

In terms of technological interventions, the use of iPads is becoming an effective tool that can reduce challenging behaviors in the classroom for children

with ASD (Murray, 2015). The author compared the use of iPads to traditional paper and pencil methods and found that children with ASD showed higher levels of academic engagement when using iPads compared to traditional teaching methods. iPads act as a motivational tool, making tasks feel less like academic work. Additionally, iPads can enhance transition skills for pupils with ASD. Since many individuals with ASD are visual learners, the numerous applications available on iPads can provide visual schedules, thereby making transitions smoother. As a social strategy, using computers encourages turn-taking with a parent, teacher, peer, or even the computer itself (Jacklin & Farr, 2005). According to Obiyo, Etoneaku, and Ofoegbu (2013), Nigerian teachers are generally aware of most assistive technology tools that can be used to teach children with ASD and are capable of adopting these instructional strategies to a significant extent.

In preparing an effective Individualized Educational Programme (IEP) for children with ASD and in reducing stress during the transition of knowledge, Murray (2015) made the following recommendations: (a) Involve pupils in the development of their transition plans and IEPs to ensure they understand the expectations. (b) Predict potential stressors pupils may face and teach them coping strategies in advance. (c) Provide pupils with general strategies for managing various forms of stress. (d) Ideally implement independent learning programs to reduce pupils' reliance on adult support.

C) Social Skill Imitation

Children with autism spectrum disorder (ASD) face difficulties in acquiring social skills due to their limited ability to imitate others. This makes it essential for teachers to explicitly teach social interactions within the classroom setting. Research indicates that social skills are most effectively learned by children with ASD when instruction occurs in the natural environment where these skills are expected to be used. This is because children with ASD often struggle to transfer or generalize skills across different settings (Murray, 2015). Teaching social skills that are relevant to the school environment will yield the best results when done within the school setting (Garrota, et al., 2020). For instance, if there is a planned change of classroom in

a week, it is beneficial to take the child to visit the new class beforehand or to introduce predictability in the schedule, allowing the child to mentally prepare and transition more smoothly (Burton-Hughes, 2019). Teachers can use social stories to explain specific social situations and help children understand social cues. These stories can be presented through pictures, words, typed or handwritten formats, and should include descriptive, directive, perspective, and affirmative sentences. Social stories should be tailored to individual situations, such as classroom changes, schedule adjustments, or preparation for a substitute teacher (Bice, 2009). Additionally, Murray (2015) emphasizes the effectiveness of the observational method in learning new social skills and cognitive development. When children with ASD observe the behavior of others, they are more likely to imitate those behaviors and replicate the actions of teachers in order to perform desired tasks.

Moreover, pupils must develop self-management skills as they are expected to actively participate in inclusive educational programs. Steps to assess these skills include self-correction, self-recording, self-monitoring, self-reporting, and self-graphing. Teachers can teach children how to monitor their own work, record their behavior, report their observations to the teacher, create graphs of their evaluations, and use these findings to reinforce their actions through schedules and rewards (Bice, 2009). Classroom indicators for monitoring self-management skills include verbal cues, hand signals, physical prompts, timers, and alarm watches.

d) Repetitive Behavioural Intervention

Children with ASD often display a pattern of behavior that focuses on specific issues repeatedly. This repetitive behavior can make it difficult for them to listen, follow instructions, and adhere to classroom rules. At times, introducing changes or limitations to these repetitive behaviors can be stressful for them, leading to severe irritability, aggression, or self-injurious actions (Murray, 2015). Research has shown that Exposure and Response Prevention (ERP) interventions can help achieve positive outcomes by increasing the time children spend on academic tasks, delaying the trigger stimuli, and reducing repetitive displays. The use of Picture Communication System

(PCS) has also been found to be effective in managing behavioral challenges in children with ASD. According to Bice (2009), PCS helps young children with autism initiate requests and express their needs. The system is based on behavioral principles and teaches children to exchange picture cards for items they like or want. It begins with single pictures and gradually incorporates pictures combined with verbal statements for making requests. These picture cards can be stored in a binder and used during classroom activities to help children engage in learning tasks.

2.5 Implications of Proper Handling Children with ASD in Inclusive Education

Inclusive education promotes the right of children with disabilities to receive quality education. The study indicates that inclusive education can be successfully implemented in Nigeria, provided that children with disabilities, particularly those with autism spectrum disorder (ASD), are appropriately supported through evidence-based practices. The research found that Nigerian teachers are proficient in using computers and can apply this knowledge to support the learning of children with ASD. Therefore, continuous in-service training for teachers is essential to ensure they stay updated with the latest methods of teaching children with ASD. Involving parents and family members in the development of Individualized Education Programs (IEPs) is important to ensure they are actively involved in their child's education and feel secure about their child's progress in school. Curriculum planners should design and adapt the curriculum to meet the specific needs of children with ASD. The Nigerian government should develop a comprehensive implementation strategy to support the inclusion of children with disabilities in mainstream classrooms. The government should also provide funding, employ special educators, and offer ongoing training to teachers to support inclusive education. Government and school administrators should create a supportive learning environment, provide necessary educational facilities, and recruit other professionals to assist in inclusive education. Researchers in the medical and education fields should develop practical evidence-based strategies to support the education and development of children with ASD.

In terms of managing children with disabilities in inclusive classrooms in Nigeria, the study recommends that teacher training should not be a one-time process but an ongoing development that builds teachers' competencies. Teachers, as the primary educators, should understand the unique educational profiles of children with ASD, focus on their strengths, and be flexible in adapting classroom lessons to meet individual needs through IEPs. Special education should be integrated into the basic training of all teachers in Nigerian teacher training institutions. The federal government of Nigeria should provide free education for children with disabilities and ensure that appropriate learning facilities are available for inclusive education. The school environment should be peaceful and free from distractions to help reduce anxiety in children with neurological disabilities such as ASD. School management should promote the use of evidence-based programs that support effective learning. The curriculum content should be structured to accommodate the unique needs and learning progression of children with ASD. Nigerian researchers should conduct more studies on scientific approaches to address and prevent ASD in Nigerian children.

2.6 Conclusion

Autism is a neurodevelopmental condition that comes with several challenges. Children with autism spectrum disorder (ASD) are individualistic, each having their own set of strengths and difficulties. Because of the nature of these challenges, pupils with ASD often face difficulties in a typical classroom setting. Schools have both a moral and legal responsibility to offer inclusive education to pupils with autism, yet they frequently fall short of these standards. Not only do special educators struggle with the demands of teaching pupils with autism, but general teachers also often lack the knowledge and confidence needed to support these pupils in the classroom. However, successful inclusion is achievable if educators and school administrators are committed to continuous training that uses proven methods to assist children with ASD in school. Therefore, it is essential that educators are well-prepared and confident in their ability to manage pupils with autism spectrum disorders in inclusive learning environments.

This seminar has emphasized the vital importance of effective inclusive education on social skills development for children with Autism Spectrum Disorder in Nigerian primary schools. The nature of ASD requires a comprehensive approach to intervention that takes into account the specific needs of each pupil. By using focused strategies, training teachers, and involving parents, it is possible to create an environment that encourages the social growth of pupils with ASD. Future study should focus on assessing the effectiveness of different intervention strategies within the Nigerian context to further enhance inclusive education practices.

2.7 Recommendations

There are several suggestions that can be implemented for effective inclusive education on social skills development in children with ASD:

Professional Development for Educators: It is important to offer teachers thorough training programs that focus on developing social skills for pupils with autism spectrum disorder. These programs should include effective instructional methods, techniques for managing the classroom, and approaches to involve pupils in social learning experiences.

Resource Allocation: Schools should focus on allocating the necessary resources to carry out social skills training. This involves providing materials such as those used in role-playing exercises, social stories, and other interactive methods that help improve the learning process for pupils.

Collaborative Approaches: Schools ought to encourage teamwork between teachers and parents. Holding frequent workshops and discussions can assist in making sure that the methods used in school and at home are in line with each other, leading to a more unified way of developing social skills.

Regular Assessment and Feedback: Creating a structured method to consistently evaluate the growth of social skills enables teachers to monitor pupil progress and modify their approaches accordingly. Input from both pupils and parents can offer important information on how well the interventions are working and assist in pinpointing areas that need more attention.

ASD is a complex neurodevelopmental condition with varied symptoms affecting social interaction and behavior, diagnosed per DSM-5 criteria (American Psychiatric Association, 2013). Core deficits include understanding social cues, reciprocal conversation, and forming friendships. Severity varies with cognitive ability, language level, and social awareness.

Social skills encompass initiating and maintaining conversation, interpreting facial expressions and body language, and group participation (Gresham, 2002). Deficits lead to loneliness and emotional distress (White et al., 2007). Developing these skills enhances academic success, friendships, confidence, and classroom integration. Deficits vary by age, cognition, and comorbid conditions like anxiety or ADHD, requiring individualized strategies (Bauminger & Kasari, 2000). Early identification and intervention are crucial.

In Nigeria, cultural beliefs and systemic issues compound these challenges. Many teachers lack special education training and use unsuitable conventional methods (Nwogu, 2020). Stigma further impedes inclusion. Effective development requires environments that promote acceptance and collaboration among teachers, peers, and parents.

Strategies fall into three categories:

1. Direct instruction: Explicit teaching of social skills via lessons and role-play (Kearney & McEwan, 2020).
2. Peer-mediated interventions: Training peers to model and reinforce appropriate behavior (Chan & Chan, 2016; Bauminger & Kasari, 2000).
3. Naturalistic approaches: Embedding social skills practice in daily routines to promote generalization (Owen et al., 2020).

2.8 Gaps in Existing Literature

1. Nigerian-specific empirical data: Most studies on ASD and social skills are from Western contexts. There is limited empirical research evaluating intervention effectiveness within Nigerian inclusive primary schools.
2. Teacher training models: While literature notes teachers lack training, few studies propose or test

culturally adapted, low-cost professional development models for Nigerian teachers.

3. Parental involvement: The role of Nigerian parents in reinforcing school-based social skills interventions is under-researched, despite parents being primary caregivers.
4. Longitudinal outcomes: Existing studies are largely cross-sectional. There is a gap in longitudinal data tracking social skills progress of pupils with ASD in inclusive settings over multiple academic years.
5. Resource-constrained adaptations: Little documentation exists on how Montessori or other evidence-based strategies are adapted with local, low-cost materials in Nigerian classrooms.

III. METHODOLOGY

3.1 Research Design

This study adopts a qualitative descriptive design using a systematic literature review approach. The design is appropriate because the seminar examines existing knowledge on the effectiveness of inclusive education on social skills development in children with ASD in Nigerian primary schools. It synthesizes findings from scholarly articles, policy documents, and empirical studies to identify patterns, strategies, and gaps without primary field experimentation.

3.2 Sources of Data

Data were drawn from secondary sources including:

1. Peer-reviewed journal articles from databases such as Google Scholar, AJOL, ERIC, and PubMed.
2. Policy documents: National Policy on Special Needs Education (2015), UNCRC, UNICEF reports.
3. Books and dissertations on ASD, inclusive education, and social skills development.
4. Grey literature from NGOs and education ministries in Nigeria.
5. The review covered literature published between 2009 and 2025 to ensure currency and relevance.

3.3 Method of Data Collection

Relevant literature was identified using key search terms: “Autism Spectrum Disorder Nigeria”, “inclusive education social skills”, “ASD primary

school Nigeria”, “peer-mediated intervention ASD”, “teacher training ASD Nigeria”. Abstracts were screened for relevance to social skills development within inclusive settings. Full texts of 45 studies were retrieved, and 28 met the inclusion criteria: (a) focus on ASD, (b) address social skills, (c) relate to inclusive or mainstream classrooms, (d) include Nigerian or Sub-Saharan African context where available.

3.4 Method of Data Analysis

Thematic content analysis was used. Data were coded and categorized under themes derived from the study objectives:

1. Types of social skills deficits in pupils with ASD
2. Strategies used for social skills development
3. Teacher and parent perceptions
4. Implementation challenges

Findings were synthesized to establish trends, contradictions, and gaps, forming the basis for discussion and recommendations.

3.5 Ethical Considerations

As a literature-based study, no human subjects were directly involved. However, all sources were properly cited to avoid plagiarism, and findings were presented objectively without distortion of authors’ original intent.

IV. DISCUSSION OF FINDINGS

4.1 Introduction

This chapter discusses key findings from the literature review in relation to the study objectives. It highlights how inclusive education influences social skills development in children with ASD in Nigerian primary schools.

4.2 Social Skills Deficits in Pupils with ASD in Nigerian Inclusive Classrooms

Literature consistently shows that Nigerian pupils with ASD exhibit core deficits in initiating conversation, interpreting nonverbal cues, turn-taking, and responding to social overtures (Audu & Egbochuku, 2010; Murray, 2015). These deficits are compounded by classroom factors: overcrowding, noise, and unstructured transitions trigger anxiety and withdrawal (Burton-Hughes, 2019). Unlike typically

developing peers, pupils with ASD rarely learn social rules incidentally and require explicit instruction. The review also revealed that comorbid sensory sensitivities — common in Nigerian classrooms with poor acoustics and lighting — further reduce social participation (Davies, Zhang, & Barrett, 2015).

4.3 Effective Strategies for Social Skills Development

Three strategy categories emerged as effective:

1. Direct Instruction: Social stories, role-play, and video modeling improve understanding of social expectations when delivered in the natural classroom context (Kearney & McEwan, 2020).
2. Peer-Mediated Interventions: Training neurotypical peers to model and reinforce social behavior significantly increased interactions for pupils with ASD (Chan & Chan, 2016). In Nigeria, this leverages the cultural value of communal child-rearing but remains underutilized.
3. Environmental Adaptations: Visual schedules, quiet corners, and predictable routines reduced anxiety and increased classroom engagement (Murray, 2015). Low-cost Montessori sensorial materials were noted as adaptable for teaching turn-taking and cooperation.

However, Nigerian studies report that these strategies are rarely implemented systematically due to large class sizes and lack of teacher training (Nwogu, 2020; Odunsi, 2018).

4.4 Perceptions of Teachers and Parents

Teachers generally express positive attitudes toward inclusion but report low self-efficacy in managing ASD-related behaviors (Graham, 2021). Many perceive social skills training as “additional work” due to curriculum pressure and lack of para-professional support. Parents, while valuing education, often lack awareness of how to reinforce social skills at home and expect schools to take full responsibility (Bello & Oloyede, 2020). Both groups agree social skills are important but cite training and resource gaps as barriers.

4.5 Challenges in Implementing Social Skills Training

Four recurring challenges were identified:

1. Inadequate Teacher Training: Pre-service and in-service programs rarely cover ASD-specific strategies (Nwogu, 2020).
2. Resource Constraints: Lack of visual aids, assistive technology, and low teacher-pupil ratios hinder individualized attention.
3. Policy-Practice Gap: The National Policy on Special Needs Education (2015) lacks clear implementation guidelines, leaving schools without monitoring frameworks (Odunsi, 2018).
4. Stigma and Peer Rejection: Negative cultural beliefs about ASD contribute to bullying and isolation, undermining intervention efforts (Chen et al., 2020).

4.6 Summary of Discussion

Inclusive education has potential to improve social skills in pupils with ASD, but effectiveness in Nigeria is currently limited by systemic gaps. Success hinges on teacher capacity, structured peer involvement, adapted environments, and parent collaboration. Where these elements exist, literature reports gains in social initiation, play skills, and classroom participation.

V. SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

This seminar examined the effectiveness of inclusive education on social skills development in children with Autism Spectrum Disorder in Nigerian primary schools. Using a literature review design, it explored social skills deficits, effective strategies, stakeholder perceptions, and implementation challenges. Findings show that pupils with ASD face marked deficits in communication and interaction, worsened by overcrowded, under-resourced classrooms. Direct instruction, peer-mediated interventions, and environmental adaptations are effective but poorly implemented due to inadequate teacher training, resource gaps, and weak policy enforcement. Teachers and parents value social skills but lack capacity and support to foster them consistently.

5.2 Conclusion

Inclusive education can enhance social skills development in children with ASD, but its effectiveness in Nigeria is contingent on intentional,

evidence-based implementation. Without trained teachers, structured peer support, adapted classrooms, and active parental involvement, mere physical placement in regular classrooms does not guarantee social growth. ASD is not an intellectual limitation for many children; rather, the barrier is the absence of appropriate scaffolding. Therefore, inclusion must move beyond policy statements to classroom practice.

5.3 Recommendations

Based on findings, the following recommendations are made:

1. For the Ministry of Education: Develop and enforce clear implementation guidelines for the National Policy on Special Needs Education. Mandate ASD and social skills modules in all Colleges of Education curricula.
2. For School Administrators: Organize termly in-service training on low-cost social skills strategies. Create “sensory-friendly corners” in each classroom and reduce class sizes for inclusive units.
3. For Teachers: Adopt visual schedules, social stories, and peer-buddy systems. Use 3-period lessons to teach one social skill per week. Document progress in pupils’ IEPs.
4. For Parents: Attend school workshops on reinforcing social skills at home. Use daily routines — meals, chores — to practice greeting, requesting, and turn-taking.
5. For Researchers: Conduct longitudinal studies in Nigerian schools to test culturally adapted, low-cost social skills interventions and document outcomes.

5.4 Beneficiaries of the Study

1. Pupils with ASD will gain structured opportunities to learn social skills, leading to better peer relationships, reduced isolation, and improved classroom participation.
2. Teachers can receive evidence-based, practical strategies to manage inclusive classrooms with less stress and greater confidence. Training reduces burnout.
3. Parents/Guardians can gain awareness of their role in social skills generalization. Practical home strategies improve child’s behavior and reduce family stress.

4. Neurotypical Peers will develop empathy, leadership, and prosocial behavior through peer-mediated programs. Builds a more tolerant school culture.
5. School Administrators can gain a framework for cost-effective inclusion that improves school reputation and meets policy mandates without heavy spending.
6. Policymakers can obtain data-driven recommendations to revise policy, allocate resources, and design teacher training that is context-relevant.
7. Researchers will identify specific gaps in Nigerian literature — teacher training models, longitudinal outcomes — to guide future studies.

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