

Primary School Teachers' Opinions on the Challenges of Academically Integrating Children with Autism into Regular Elementary Classrooms and Ways to Overcome Them

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Receiving article date:22-05-2025 Revision date:25-07-2025 Publication date:05-10-2025

Abstract :

The study aimed to identify primary school teachers' opinions on the cognitive, technical, and communicative (praxological) challenges associated with the academic inclusion of children with autism in regular elementary classrooms, as well as ways to overcome them, as these difficulties pose an obstacle to achieving inclusive, equitable, and effective education that develops the potential of every student regardless of their differences. To achieve these objectives, the study employed a descriptive methodology and open-ended interviews with a purposive sample of 18 elementary school teachers (5 male and 13 female), all of whom shared the common experience of "teaching a child with autism" either during the 2025–2026 school year or over the past five school years.

After analyzing the data quantitatively by calculating frequencies and percentages, and qualitatively through psycho-educational analysis, the most significant findings were: primary school teachers recognize the importance of academic inclusion for children with autism, but they face cognitive, technical, and communicative (praxological) difficulties that hinder effective implementation. They believe that overcoming these difficulties requires a comprehensive approach that combines specialized training, sustained human support, and genuine partnership with families and specialists.

Keywords: opinions, difficulties, academic inclusion, children with autism, elementary school, teachers.

1. Introduction and Research Problem

Inclusive education has emerged as a central paradigm in special education, experiencing significant theoretical and practical evolution in recent decades. Inclusion models were developed to dismantle the isolation of segregated special schools, positioning mainstream classrooms as the natural social and pedagogical environment for all learners. As educational philosophies evolved, particularly from the latter half of the 20th century, growing criticism of segregation in specialized institutions catalyzed a global shift toward mainstream inclusion (Al-Adl, 2013).

The conceptualization of autism traces back to Leo Kanner, an American child psychiatrist, who in 1943 identified atypical behavioral patterns in a group of children previously labeled as intellectually disabled. Kanner noted profound self-absorption, withdrawal from reality, social isolation, and lack of responsiveness to environmental stimuli, coining the term early infantile autism (Al-Adl, 2013). In Algeria, the prevalence of autism was estimated at approximately 140,000 children as of June 4, 2015, following a joint agreement between the Ministry of National Solidarity and the Ministry of National Education mandating the enrollment of autistic children in public schools (Hwam, 2015). This policy was further operationalized by the joint ministerial decree of March 13, 2014, which established specialized classrooms within mainstream public schools to reduce individual differences and challenge societal misconceptions that children with autism are uneducable. As these children reach school age, critical pedagogical questions emerge: Where and how should they be taught? While academic inclusion in Algeria has been welcomed by parents and shown positive outcomes for children and families, teachers report significant implementation challenges. This study addresses this gap by investigating: **Primary school teachers' perceptions of the barriers to academically including children with autism in mainstream classrooms and strategies for overcoming them.**

2. Research Questions

Main Question: What difficulties hinder the academic inclusion of children with autism in mainstream primary classrooms according to teachers' perceptions, and how can these barriers be addressed?

Sub-Questions:

1. What cognitive difficulties impede the academic inclusion of children with autism in mainstream classrooms according to teachers?
2. What technical (pedagogical-procedural) difficulties impede this inclusion according to teachers?
3. What praxiological (practical-execution and communicative) difficulties impede this inclusion according to teachers?
4. What strategies do teachers propose to overcome these barriers?

3. Significance of the Study

The academic inclusion of children with autism has become a focal topic for international research, university studies, and scientific conferences. Most special education scholars view inclusion as a strategic investment in children's quality of life and a catalyst for developing comprehensive educational systems that accommodate diversity and neurodiversity. The specific significance of this study lies in its empirical documentation of the cognitive, technical, and praxiological barriers faced by teachers in Algerian mainstream primary schools, alongside practitioner-informed strategies for overcoming these challenges.

4. Study Objectives

Main Objective: To identify the barriers to academically including children with autism in mainstream primary classrooms and to document teachers' proposed strategies for overcoming them.

Specific Objectives:

1. To identify cognitive barriers to inclusion as perceived by teachers.
2. To identify technical (pedagogical-procedural) barriers to inclusion as perceived by teachers.
3. To identify praxiological (practical-execution and communicative) barriers to inclusion as perceived by teachers.
4. To document teachers' recommended strategies for mitigating these barriers.

5. Operational Definitions

- **Difficulties/Barriers:** All pedagogical, organizational, or interpersonal challenges that impede teachers' ability to achieve learning objectives, establish effective communication, or facilitate skill acquisition for children with autism in mainstream classrooms.

- **Academic Integrating:** The placement of children with autism alongside typically developing peers in regular classrooms, participating in shared lessons, activities, curricula, instructional methods, and assessment procedures adapted to mainstream educational standards.

- **Child with Autism:** A student formally diagnosed with autism spectrum disorder who is enrolled in a mainstream primary classroom alongside typically developing peers.

- **Mainstream Classroom:** A regular educational environment fostering teacher-student and peer interactions among both typically developing students and students with autism, designed to deliver shared curricular goals while accommodating diverse learning needs and facilitating social-academic integration.

- **Teacher:** The central agent of the instructional process, responsible for knowledge transmission, classroom management, and administrative duties. In this study, the term refers specifically to primary school teachers

who have taught children with autism in the current or previous five academic years.

6. Literature Review and Critical Commentary

6.1. Previous Studies

- **Darawsheh (2014)** examined attitudes of teachers and educational counselors toward including students with autism in Jordanian public primary schools. Using a descriptive design and questionnaires (N = 98 teachers, 32 counselors, 27 inclusive education coordinators, 5 educational advisors), findings revealed minimal differences in inclusion attitudes among professional roles.

- **Abu Fattouh (2014)** investigated Egyptian primary teachers' attitudes toward autism inclusion across demographic variables. A sample of 60 teachers (38 male, 22 female) showed 85% held negative attitudes, with demographic factors showing no significant influence.

- **Park & Sehitoglu (2011)** surveyed 127 teachers and found inclusion attitudes were significantly shaped by gender, age, teaching experience, and workshop exposure. Female teachers and those with higher academic qualifications demonstrated more positive attitudes.

- **Al-Haznawi (2010)** identified barriers to autism inclusion in Saudi Arabian mainstream schools, involving 23 special education specialists, 23 school principals, and 22 educational supervisors. Findings categorized barriers into academic, school-service, and social domains.

- **Siegel (2008)** reported that 75% of surveyed U.S. public school teachers and principals held negative views toward full inclusion, attributing this to inadequate pre-service training and limited professional development in autism-specific pedagogy.

- **Al-Mubarak (2007)** found Saudi teachers held positive attitudes toward partial inclusion but negative views toward full mainstreaming. No significant demographic differences were detected.
- **Othman (2002)** compared teachers with and without autism experience in Saudi Arabia. Experienced teachers held more positive attitudes, though expected outcomes did not differ significantly between groups.
- **Mavropoulou & Bailey (2000)** demonstrated that teaching experience significantly influenced British teachers' inclusion attitudes, though experience alone did not ensure understanding of modern diagnostic and intervention frameworks without targeted training.

6.2. Critical Synthesis

- **Objective:** Most studies focused on teacher attitudes toward autism inclusion, except Al-Haznawi (2010), which centered on systemic barriers.
- **Sample:** Darawsheh (2014) and Siegel (2008) included counselors and administrators, while others focused exclusively on teachers. Al-Haznawi (2010) uniquely sampled specialists, principals, and supervisors.
- **Instrument:** All prior studies relied on questionnaires.
- **Design:** All employed descriptive methodologies. Gap Addressed: The present study shifts from attitudinal surveys to qualitative-practical inquiry, using open-ended interviews to uncover granular cognitive, technical, and praxiological barriers, alongside context-specific mitigation strategies rarely explored in questionnaire-based research.

7. Theoretical Framework

7.1. Autism Spectrum Disorder: Conceptualization and Typology

Autism is defined as a profound self-absorption marked by detachment from reality and retreat into imaginative coping (Sillamy, 2003). Kanner described it as the preservation of isolated cognitive strengths alongside

marked deficits in specific perceptual or higher-order executive functions (Al-Zaree, 2005). The DSM-IV (1994) characterizes it as a chronic developmental impairment affecting social, linguistic, sensory, and motor functions, with onset within the first three years, featuring rigidity toward routine changes and atypical responses to novel stimuli (Abdel-Ghaffar, 1999). Contemporary definitions emphasize neurological underpinnings, with central nervous system dysfunction leading to impaired social interaction, communication deficits, restricted imagination, and atypical interests (Ibrahim, 2011; Farouk & Al-Sharabini, 2011). Consensus across definitions confirms autism as a neurodevelopmental condition manifesting in early childhood, disrupting typical brain maturation and core adaptive functions.

Typology (Sivon, Matson, & Kuvevich, 1991):

- **Atypical Group:** Fewer autistic traits, higher cognitive functioning.
- **Mild Autism:** Social challenges, strong preference for routines, mild intellectual disability, functional language use.
- **Moderate Autism:** Limited social responsiveness, pronounced stereotypies (e.g., hand-flapping, rocking), restricted functional language, intellectual disability.
- **Severe Autism:** Profound social withdrawal, absent functional communication, significant intellectual disability.

7.2. Academic Inclusion and Children with Autism

Academic inclusion entails full-time placement of neurodivergent students in regular classrooms with shared curricula, requiring peer acceptance, collaborative teaching between general and special educators, and adapted assessment protocols (Al-Qamash, 2011). Theoretical assumptions underpinning inclusion include: (1) physical co-presence naturally enhances social interaction; (2) mainstream placement increases

mutual social acceptance; (3) exposure to typical peer behaviors facilitates behavioral modeling (Al-Hussein, 2004).

Paul's (cited in Al-Qamash, 2011) Minimum Inclusion Prerequisites:

- Following teacher instructions (proximal or distal) and turn-taking.
- Sitting calmly during group activities, raising hands for assistance.
- Navigating the classroom and using restrooms independently.
- Expressing needs appropriately, engaging in structured play.
- Accepting peer presence, initiating interaction, transitioning smoothly between tasks.
- Sustaining attention, completing tasks within time limits.
- Tolerating delayed reinforcement, demonstrating self-care independence.
- Imitating, recognizing colors, matching, identifying numbers/letters.

Not all children acquire these skills within 1–2 years. Progress depends on cognitive capacity, language acquisition, family engagement, and instructional methodology. Research indicates children who master prerequisites before age six have higher inclusion success rates. Co-occurring intellectual disability reduces inclusion feasibility; approximately 75% of autistic individuals experience intellectual impairment. Successful inclusion typically requires mild intellectual disability or average cognitive functioning. Recommended inclusion conditions (Al-Fawzan, 2003):

- Inclusion should occur in general activity classes (PE, art, field trips).

- Students with autism or multiple disabilities should not be placed in regular academic classrooms; specialized resource rooms within mainstream schools are preferable.
- Teachers need not be special education certified but must receive targeted inclusion training. Incentivizing trained teachers with financial bonuses improves retention and motivation.

Benefits of Inclusion (Amer, 2008):

1. Mitigates negative effects of segregation.
2. Compensates for inadequate specialized services.
3. Reduces economic costs of segregated systems.
4. Affirms the right to a natural, community-based educational experience.
5. Minimizes misdiagnosis risks.
6. Fosters mutual learning, normalizes neurodiversity, and enhances teacher pedagogical awareness. Caution: Rushed, poorly planned inclusion may lead to physical integration without meaningful participation, exacerbating isolation.

8. Methodology

8.1. Study Scope

- **Human Scope:** Primary school teachers instructing children with autism in mainstream classrooms.
- **Geographical Scope:** Five public primary schools in Skikda Municipality, Skikda Province, Algeria: Ismail Merabtine (08 May 1945 Quarter), Hallaj Hassan (Bouaali Quarter), Chikil Mohamed (Marj Aldib Quarter), Laifa Rabah (Lassia Quarter), Boumalta El-Aidi (20 August 1955 Quarter).

- **Temporal Scope:** November 8–21, 2025.

8.2. Research Design

A descriptive qualitative-quantitative design was employed to map teachers' perceived barriers and proposed solutions regarding autism inclusion in mainstream primary settings.

8.3. Sample

A purposive sample of 18 teachers (5 male, 13 female) was selected based on direct experience teaching children with autism during 2025–2026 or within the preceding five academic years in mainstream classrooms.

8.4. Data Collection Instrument

An unstructured open-ended interview protocol was developed, focusing on four dimensions:

Cognitive Dimension: Learning-related challenges affecting information processing and academic engagement.

Technical Dimension: Pedagogical-procedural barriers hindering instructional delivery.

Praxiological Dimension: Practical-execution and communicative-motor challenges in coordinated task performance.

Mitigation Strategies: Teacher-recommended solutions.

8.5. Data Analysis

Quantitative: Frequency counts and percentages.

Qualitative: Psycho-educational thematic analysis aligned with theoretical frameworks and prior literature.

9. Results and Discussion

9.1. Cognitive Barriers (Sub-Question 1)

Table 1
Cognitive Barriers to Academic Inclusion of Children with Autism

No.	Cognitive Barrier	Frequency	Percentage
1	Application of a standard mainstream curriculum	21	9%
2	Curriculum misalignment with autistic learners' profiles	21	9%
3	Assessment methods incompatible with autistic profiles	20	9%
4	Teachers' limited expertise in autism characteristics	19	9%
5	Class duration misaligned with autistic learning needs	19	9%
6	Curriculum objectives overlook autistic cognitive capacity	19	9%
7	Co-occurring dyscalculia, dyslexia, dysgraphia	18	8%
8	Lack of engaging, differentiated instructional strategies	17	8%
9	Limited classroom attention and working memory deficits	16	7%
10	Difficulty focusing on detailed or complex explanations	14	6%
11	Challenges distinguishing shapes, colors, and letters	14	6%
12	Comprehension difficulties, even with simple concepts	13	6%
13	Inability to link signifiers and signified concepts	12	5%
	Total	223	100%

Note: Percentages are rounded. Total frequencies reflect cumulative mentions across 18 interviews.

Discussion: Items 1–6 emerged as primary barriers (9% each), reflecting consensus that standardized curricula, rigid pacing, conventional assessments, and insufficient teacher training fundamentally impede inclusion. Teachers noted that autistic learners require differentiated pacing, adapted objectives, and specialized instructional expertise. Items 7–8 (8%) highlighted co-occurring learning disabilities and lack of engaging

pedagogy. Items 9–13 (5–7%) underscored executive function and symbolic processing limitations. These findings partially align with Hellis et al. (1999) and Farouk & Al-Sharabini (2013), emphasizing that pre-service and in-service autism-specific training is prerequisite to successful inclusion.

9.2. Technical (Pedagogical-Procedural) Barriers (Sub-Question 2)

Table 2
Technical Barriers to Academic Inclusion of Children with Autism

No.	Technical Barrier	Frequency	Percentage
1	Inability to participate in theatrical/group performances	20	24%
2	Limited engagement in artistic activities (singing, drawing, storytelling)	19	23%
3	PE teachers’ inadequate training in autism pedagogy	17	20%
4	Difficulty constructing 3D models or fine-motor tasks	16	19%
5	Absence of extracurricular activities (e.g., field trips)	12	14%
	Total	84	100%

Discussion: Theatrical participation (24%) and artistic engagement (23%) were top barriers, attributed to social withdrawal and restricted imaginative play. PE teachers’ training gaps (20%) and fine-motor limitations (19%) highlight systemic pedagogical misalignment. Lack of extracurricular activities (14%) reduces peer interaction opportunities, hindering social integration.

9.3. Praxiological (Practical-Communicative) Barriers (Sub-Question 3)

Table 3
Praxiological Barriers to Academic Inclusion of Children with Autism

No.	Praxiological Barrier	Frequency	Percentage
1	Limited verbal communication with peers	21	20%
2	Teachers’ lack of effective communication strategies	20	19%

No.	Praxiological Barrier	Frequency	Percentage
3	Language impairment and restricted expressive use	18	17%
4	Delayed or slow response to questions	16	15%
5	Use of idiosyncratic gestures/signs difficult for teachers to interpret	15	14%
6	Inability to collaborate in peer groups	15	14%
	Total	105	100%

Discussion: Verbal communication deficits (20%) and teachers' inadequate interaction strategies (19%) dominated responses. Language limitations (17%) align with Farouk & Al-Sharabini's (2011) observation that autistic learners typically possess restricted lexicons. Delayed responses (15%), unconventional gestures (14%), and group collaboration challenges (14%) reflect praxiological-executive and social-communication barriers. These findings corroborate Al-Haznawi's (2010) identification of communication skill deficits as central inclusion obstacles.

9.4. Mitigation Strategies (Sub-Question 4)

Table 4
Teacher-Recommended Strategies to Overcome Inclusion Barriers

No.	Strategy	Frequency	Percentage
1	Establish dedicated resource classrooms for autism	21	17%
2	Adapt curricula to address individual differences	21	17%
3	Provide targeted teacher training in autism pedagogy	20	16%
4	Assign school-based psychologists for continuous support	19	15%
5	Implement teaching methods aligned with autistic profiles	18	14%
6	Introduce inclusive activities and assistive technologies	17	13%
7	Schedule supplemental support sessions	10	8%
	Total	126	100%

Discussion: Dedicated resource spaces (17%) and curriculum differentiation (17%) were top recommendations, reflecting the need for structural and pedagogical flexibility. Teacher training (16%) and school-based psychologists (15%) highlight systemic support gaps. Differentiated methods (14%) and assistive/inclusive activities (13%) emphasize pedagogical adaptation. Supplemental sessions (8%) were less frequently cited but acknowledged as necessary for skill consolidation. These findings align with Siegel (2008), underscoring that inadequate training drives negative inclusion attitudes.

10. Conclusion

This study identified a hierarchical structure of inclusion barriers: cognitive (223 cumulative mentions), praxiological-communicative (105), and technical-procedural (84). These barriers collectively impede meaningful academic participation and skill acquisition for children with autism in mainstream primary classrooms. Teachers consistently advocated for systemic, multi-tiered interventions encompassing structural adaptation, pedagogical training, psychological support, and curriculum differentiation.

11. Recommendations

Based on theoretical insights and empirical findings, the following recommendations are proposed for policymakers, teacher educators, and school administrators:

1. **Establish specialized resource** classrooms in mainstream schools, equipped with adaptive materials and sensory-friendly environments.
2. **Implement mandatory pre-service and in-service** training on autism spectrum characteristics, differentiated instruction, and inclusive classroom management.
3. **Develop intersectoral coordination** networks (Education, Health, Social Affairs) to ensure holistic support for autistic learners.

4. **Integrate school-based multidisciplinary** teams (teachers, psychologists, social workers, special educators, parents) for continuous case monitoring and problem-solving.

5. **Launch awareness campaigns and professional** workshops to transform negative teacher attitudes into evidence-based inclusive practices.

6. **Adopt flexible assessment** frameworks aligned with neurodiverse learning profiles, reducing reliance on standardized testing.

7. **Foster inter-ministerial** collaboration to secure sustainable funding, infrastructure, and personnel for inclusive education initiatives.

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