

Enhancing Basic Communication Skills of Children with Autism Spectrum Disorder through the TEACCH Method and Teacher-Parent Collaboration

Resta Rayanda ¹, Oom Sitti Homdijah ²

¹ Universitas Pendidikan Indonesia, Indonesia; restarayanda004@upi.edu

² Universitas Pendidikan Indonesia, Indonesia; oomshomdijah@upi.edu

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Abstract

This study aims to optimize the fundamental communication capacity of students with Autism Spectrum Disorder (ASD) by utilizing the Treatment and Education of Autistic and related Communication-Disabilities (TEACCH) framework, combined with teacher-parent collaboration. The study used a mixed-method approach with a one-group pretest–posttest design. The research subjects consisted of four children with ASD, four parents, and one autistic class teacher as the main facilitator. Participants in this study consisted of two main groups, namely children with ASD and their parents. The study focused on four first-grade students. The participant selection process used purposive sampling techniques. To obtain comprehensive and valid data, this study used several complementary data collection instruments, namely an ASD communication skills observation guide for Children with ASD, interview protocols for teachers and parents, and semi-structured interviews with open-ended questions. Data analysis was conducted in an integrated manner by combining qualitative and quantitative approaches. The results showed an average increase of 34% in children's basic communication skills, particularly in recognizing themselves, family members, and classmates, as well as in expressing their needs or appropriately rejecting something.

Keywords

Autism; Basic Communication; Self-Development; TEACCH; Teacher-Parent Collaboration

Corresponding Author

Resta Rayanda

Universitas Pendidikan Indonesia, Indonesia; restarayanda004@upi.edu

1. INTRODUCTION

Children with Autism Spectrum Disorder (ASD) represent a population with special needs who experience complex challenges in neurological development. The characteristic profile of Autism Spectrum Disorder highlights the complexity of neurological development, with the main manifestations being persistent barriers in social interaction and communication (Anggraeni, Ayu, N, & Hidayati, Rahma, Malia, 2022; Collins et al., 2021). Contemporary diagnostic criteria identify significant variations in an individual's social communication capacity and social interaction across various contexts, as well as restricted and repetitive patterns of behavior, interests, or activities (Yenni et al., 2025; Ishikawa et al., 2024). The manifestations of communication barriers in this population vary widely, ranging from an absence of functional speech to difficulties with pragmatic aspects of language,



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such as initiating and maintaining conversations, understanding jokes, and interpreting figurative language (Remi, 2025; Sa'adah & Junaidi, 2021). These communication barriers are not limited to verbal aspects but also include nonverbal skills such as eye contact, facial expressions, body movements, and the understanding of complex social cues (Khair et al., 2025; Sutadi et al., 2025).

In the Indonesian context, children with ASD face unique multidimensional challenges. Recent data from the Indonesian Ministry of Health shows a significant increase in the prevalence of ASD, with an estimated 1 in 150 children diagnosed with autism spectrum disorder (Miller & Bugnariu, 2016; Srinivasan & Poovaiah, 2022). Many local governments have not allocated adequate budgets for inclusive education programs, and there is a lack of training for regular teachers in dealing with students with ASD (Kabashi & Kaczmarek, 2016). This situation means that the burden of caring for children with ASD still falls heavily on Special Schools (SLB) as special education institutions (Eftekhar, et al., 2022; Septianingrum, Hayyu Erfantinni, Rochmah, & Rahimah, 2024).

SLB, as a formal educational institution for children with special needs, bears a great responsibility in providing appropriate educational services. The Tamansari State SLB in Tasikmalaya City is a clear example of the challenges faced by special education institutions in Indonesia. This school, with 180 students and 60 teachers, faces limitations in terms of the availability of individualized learning media, adequate communication aids, and sufficient time to provide intensive attention to each student. This condition is exacerbated by the wide variety of characteristics and needs of students, ranging from those with mild to severe disabilities, which require a highly personalized approach.

The gap of the study is that the analysis conducted at Tamansari State Special School revealed several fundamental problems in communication services for children with ASD. First, there is a limitation in comprehensive assessment tools for mapping each student's communication profile. Second, there is a lack of structured communication intervention modules that are appropriate to the local cultural context. Third, there is a lack of systematic collaboration between teachers and parents in communication intervention programs. Fourth, there are limited resources to develop and produce communication media tailored to each child's needs. Another relevant theory is the sensory integration theory developed by Jean Ayres, which highlights the importance of sensory processes in communication development (Zeng et al., 2021; Cui, Ni, & Wang, 2023; Muslim & Irvan, 2023). Many children with ASD have difficulty processing sensory information, which impacts their ability to focus and engage in communicative interactions. This approach emphasizes the importance of creating a learning environment that addresses individual sensory needs before communication intervention can be carried out effectively (Aldabas, 2022; Kaffemanienė & Jurevičienė, 2025).

The TEACCH (Treatment and Education of Autistic and related Communication-handicapped Children) method emerged as an approach specifically developed to meet the unique needs of individuals with ASD (Ulu Aydin, Cifci Tekinarslan, & Gulec Aslan, 2024; Sinambela & Sinaga, 2024). Developed by Eric Schopler and colleagues at the University of North Carolina in the 1970s, this approach is based on the philosophy that intervention should focus on the visual strengths commonly possessed by individuals with ASD, while also accommodating weaknesses in auditory and social information processing. The visual structural principles in TEACCH go beyond simply using pictures (Wright et al., 2019); they create an organizational system that makes the learning environment more predictable and understandable (Ryan, Universitas, Dini, & Alpiyah, 2023; Maharani, Wardany, & Sani, 2025).

Besides that, several studies indicate that the systematic application of a structured, visual-based approach is effective in improving the generalization of communication skills. Empirical evidence from various implementation contexts confirms a positive correlation between consistency of intervention and increased functional independence at home and school, which can improve the generalization of communication skills in children with ASD (Bambara et al., 2016) (Novack et al., 2018). Another study shows that parental participation in TEACCH-based interventions is positively correlated with

increased independence in children's daily activities. However, most of these studies were conducted in developed countries with established support systems, so they cannot be fully applied in the Indonesian context, which has unique socio-cultural characteristics. Local studies on TEACCH in Indonesia remain very limited and mostly small-scale. Research by Sari et al. (2020) in Jakarta showed positive results for the application of TEACCH to increase children with ASD's independence, but with limitations in generalization to the home setting. Another study by Pratiwi et al. (2021) in Yogyakarta found that the implementation of TEACCH was effective in reducing challenging behaviors, but faced obstacles in maintaining consistency of implementation between school and home. This research gap indicates the need to develop a more comprehensive and contextual TEACCH implementation model. At Tamansari State Special School, TEACCH has been implemented on a limited basis through the use of visual schedules and structured work systems. However, implementation still faces obstacles in terms of consistency and sustainability. Some teachers report difficulty preparing individualized materials for each student, while parents experience confusion when trying to continue the same strategies at home. This situation identifies an urgent need for a more systematic TEACCH implementation model, accompanied by clear operational guidelines to facilitate collaboration between teachers and parents.

The novelty of this research also lies in the development of an implementation model that is sensitive to the local cultural context. This model considers factors such as resource limitations, variations in parental participation levels, and infrastructure constraints unique to Indonesia. With a realistic, feasible approach, it is hoped that other SLBs can adopt this model in regions with similar conditions. From a practical perspective, this study aims to produce a contextual TEACCH implementation model that other SLBs in Indonesia can adopt. This model includes clear protocols for material preparation, intervention implementation, and progress evaluation, as well as guidelines for collaboration between teachers and parents. Thus, the contribution of this research extends beyond the development of knowledge to the improvement of the quality of educational services for children with ASD in Indonesia.

2. METHODS

This study uses a mixed-methods design that combines the strengths of quantitative and qualitative data. The quantitative approach is used to measure the intervention's effectiveness using standardized instruments. In contrast, the qualitative approach is used to understand the implementation process from the perspectives of teachers and parents. This combination is expected to provide a comprehensive picture not only of the extent to which the intervention works, but also of how and under what conditions it is most effective. This study applies a mixed-methods approach with an exploratory sequential design designed to comprehensively investigate the basic communication abilities of children with Autism Spectrum Disorder (ASD) and evaluate the effectiveness of the TEACCH intervention through a quantitative approach. This research design facilitates an in-depth exploration of educators' and parents' perceptions of the communication challenges children face and the dynamics of collaboration in the educational environment, followed by the integration of these qualitative findings with quantitative data to analyze changes in basic communication skills after the implementation of the intervention program. The research was conducted at the Tamansari State Special School located in Tasikmalaya City over three months from August to October 2024. The selection of this research location was based on the availability of special classes for children with autism, which enabled the structured application of the TEACCH method and the potential for intensive collaborative partnerships between educators and parents.

The research focused on four first-grade students who faced significant communication barriers, along with four parents who expressed a willingness to participate in home-school collaboration programs actively. Data analysis was conducted integratively by combining qualitative and quantitative approaches. For qualitative analysis, interview data and field notes were analyzed using a

thematic analysis approach, covering narrative and documentation coding processes, the identification of main themes such as parental involvement level, child response to TEACCH, and collaboration challenges, and the interpretation of inter-theme relationships to understand school-family interaction dynamics.

To obtain comprehensive and valid data, this study uses several complementary data collection instruments: the ASD Child Basic Communication Skills Observation Guide was used to systematically assess children's communication capacities, covering several fundamental aspects such as eye contact and shared attention, response to name calls, ability to greet and introduce oneself, capacity to convey requests or refusals, and use of gestures, symbols, or other visual media to express intent. The Interview Protocol for Teachers and Parents was developed to explore the perceptions, experiences, and challenges faced by both parties in implementing TEACCH, and to investigate the impact of collaboration on the development of children's communication skills. Interviews were conducted using a semi-structured approach with open-ended questions that allowed participants to elaborate in depth. A Field Documentation and Recording System was implemented to record the child's daily activities, patterns of interaction with educators and parents, and responses to TEACCH-based activities. The documentation process included recording photos and videos, archiving visual schedules, activity cards, and communication symbols used during the intervention period. This data served as triangulation material to support the validity of the research findings.

The research was conducted in three main stages that emphasized active collaboration between educators and parents and the consistent and systematic application of TEACCH principles. In the Preparation Stage, the research began with identifying the child's initial communication abilities through classroom observations and in-depth interviews with teachers and parents. The purpose of this process is to comprehensively understand each child's communication profile, including communication modality preferences, level of understanding of verbal instructions, and ability to recognize self-identity. The results of this identification form the basis for developing visual schedules, activity cards, communication symbols, and home exercise guides tailored to each child's specific needs. Teachers and parents participate in a socialization program on TEACCH principles, which emphasize the importance of visual structure, consistent routines, and the use of visual media to support children's communication development. Parents also receive practical training to implement communication exercises at home, such as guiding children to introduce themselves, express their desires using gestures or symbols, and greet family members. These activities are carried out in stages to ensure that parents can understand and apply the methodology appropriately and consistently. The Intervention Implementation stage is the core of the research, consisting of implementing the TEACCH method in the context of basic communication development over eight weeks. Classroom activities are structured using a daily visual schedule that includes activities such as attendance, greeting friends, and individual learning activities. Activity cards guide children in clearly understanding the sequence of tasks, while symbols and visual images help them express their needs, convey refusals, and recognize their identity.

Educators facilitate children individually and in small groups, with an emphasis on identity recognition, simple social interaction, and the expression of daily needs. Parents play an active role by implementing the home program according to the provided guidelines, including self-awareness exercises, expressing needs, and greeting family members. During the intervention period, researchers conduct weekly observations and structured documentation, recording children's progress, consistency in the implementation of TEACCH in the classroom and at home, and any obstacles that arise. Weekly evaluation meetings with teachers and parents were held to review implementation, provide constructive feedback, and adjust strategies when necessary. In the Evaluation and Reflection Stage, pretest-posttest assessments were conducted to measure changes in children's basic communication skills. In addition, in-depth interviews were conducted with teachers and parents to understand their perceptions of changes in children's behavior and the effectiveness of collaboration. An integrative

analysis of qualitative and quantitative data is conducted to provide a comprehensive picture of the TEACCH intervention's effectiveness in the research context.

Data analysis was conducted in an integrated manner by combining qualitative and quantitative approaches. For qualitative analysis, interview data and field notes were analyzed using a thematic analysis approach that included narrative coding and field documentation, identification of main themes such as the level of parental involvement, children's responses to TEACCH, and challenges to collaboration, as well as interpretation of the relationships between themes to understand the dynamics of school-family interactions. Quantitative analysis was performed on pretest-posttest assessment data using comparative descriptive statistics, including average scores, percentage improvement, and distributions of children's basic communication skills. This analysis provided a numerical picture of changes in children's communication skills after the implementation of TEACCH. In the reflection stage, qualitative and quantitative results were integrated to provide a comprehensive understanding of the effectiveness of the TEACCH method and teacher-parent collaboration. This integrative approach allowed researchers not only to observe the numerical improvement in children's communication skills but also to understand the supporting factors, challenges, and stakeholders' perceptions of the intervention.

To ensure data validity, this study applied source triangulation by comparing data from observations, interviews, and field documentation. Data obtained from various instruments were compared to identify consistency in findings. Reliability was maintained through systematic field notes, inter-rater checks between researchers and teachers, and re-verification of pretest-posttest assessment results.

3. FINDINGS AND DISCUSSIONS

Findings

To provide a complete and in-depth understanding of the impact of implementing the TEACCH approach on the development of basic communication abilities in children with autism spectrum disorder (ASD), this research presents its findings through the integration of quantitative and qualitative data. Numerical data were obtained through initial and final assessment processes of four research participants, while narrative data were collected through structured observation of children's behavior during learning processes in classroom environments and in-depth interviews with parents and educators (Lee & Yafen, 2017). Synergy between these two data forms enabled comprehensive analysis not only of aspects of communication ability achievement but also of development processes and supporting factors that play roles in intervention success.

All research participants received a systematically designed TEACCH-based intervention that included the implementation of visual schedules, activity cards, gesture symbols, and predictable daily routines. Although the intervention protocols were the same for all children, mentoring provided by teachers was individually adjusted based on each child's responses and needs, including variations in positive reinforcement frequency, stimulation duration, and guidance intensity. These adjustments ensured that each child could follow the learning activities optimally, given their unique capacities and characteristics. Measurement results before and after the intervention showed significant improvement in basic communication skills, with an average increase of 34%. Complete data regarding each child's development is presented in Table 1 below:

Table 1. Comparison of Pretest and Posttest Scores of Basic Communication Ability

No	Child Initial	Initial Score	Final Score	Percentage Improvement
1	A1	42	75	33%
2	A2	38	72	34%
3	A3	45	80	35%
4	A4	40	74	34%

Based on Table 1 above, Observed progress covered several basic communication domains that were intervention focus. First, the ability to respond when called by name showed improvement, indicating the development of social attention and interaction readiness. Second, capacity to introduce personal identity through stating name and class using symbols or simple speech. Third, competence in expressing desires or conveying rejections using gestures such as pointing or shaking the head, along with simple words. Fourth, the ability to greet and maintain eye contact is an important foundation for building effective reciprocal communication. Qualitative data obtained through classroom environment observation and interviews with parents further strengthened quantitative findings. Parents reported that children used nonverbal cues and visual symbols more frequently to convey requests for help at home and to imitate communication patterns taught at school.

Educators also observed increased consistency in children's communication behavior, especially during morning activities such as the attendance process, greeting peers, and expressing basic needs independently. To provide a more detailed picture of each communication aspect development, presents average pretest-posttest scores and percentage improvement for each domain in **Table 2**:

Table 2. Development Based on Basic Communication Domains

Communication Aspect	Initial Score	Final Score	Improvement
Response to name	40	74	34%
Self-introduction	39	73	34%
Expressing desires	41	76	35%
Greeting & eye contact	45	78	33%

Based on Table 2, these findings confirm that all basic communication domains experienced significant development. Improved response to name-calling shows that children became faster at responding to social interaction initiations. The ability to introduce themselves and express desires or disagreements also progressed, indicating that children began to utilize symbols and nonverbal cues to convey needs more independently. Improvements in greetings and in maintaining eye contact reflect fundamental development in reciprocal communication, which becomes key to interaction effectiveness. Additionally, presents a summary of child behavior observations before and after the intervention, providing qualitative evidence of a transformation in communication skills. Table 3:

Table 3. Comparison of Pre and Post-Intervention Communication Behavior

Activity	Pre-Intervention Behavior	Post-Intervention Behavior
Greetings, teacher/friend	Rare, tended to be silent	Consistently using gestures/symbols
Self-introduction	Needed full assistance	Stating name with symbols/words
Expressing desires	Frustrated when needs are unmet	Using simple gestures/words
Eye contact & attention	Limited and easily distracted	Increased and can be maintained

Based on Table 3 above, these observations confirm that the TEACCH intervention successfully improved children's functional communication, making them more confident and able to express their needs and interact with their environment. Behavioral changes observed in school environments were also reflected at home through communication practice exercises conducted by parents, showing generalization of skills into real-life contexts.

Discussion

Deeper investigation of each child's development revealed interesting patterns. Participant A3, who showed the highest improvement (35%), had better initial ability in eye contact and joint attention. This condition enabled the child to understand and respond more quickly to visual stimuli provided during intervention. Meanwhile, participant A1, with the lowest improvement (33%), needed a longer adaptation time to the implemented routine structures, although it eventually showed significant progress.

Success-determining factors identified through qualitative analysis included implementation consistency, family support, and individual child characteristics. Children from family environments with high involvement levels showed faster developmental acceleration than those receiving limited support. This underlines the importance of parental role as strategic partners in the intervention process (Pérez-fuster et al., 2019).

TEACCH intervention's success in improving basic communication abilities of children with ASD cannot be separated from systematic implementation and collaborative synergy between educators and parents (Morningstar & Carlson, 2020). This approach's effectiveness was evident not only in pretest-posttest score improvement but also in the transformation of social behavior and children's communication in daily life contexts. The implementation process can be described in four main stages: The initial stage began with a pretest aimed at mapping children's basic communication abilities, including eye contact, joint attention, response to name, ability to introduce themselves, and expression of needs or rejections (Hatzenbuhler et al., 2019). Initial assessment results provided an accurate baseline, enabling teachers and researchers to design precisely targeted intervention strategies (Kurnaz & Yanardag, 2018). The assessment process not only focused on children's abilities but also included evaluation of the learning environment and family support (Corbett et al., 2017). Observations were conducted on classroom arrangement, the availability of visual media, and parental understanding of children's communication needs. The collected data served as the basis for developing intervention programs that are truly contextual and appropriate to real field conditions. Next, a comprehensive orientation was conducted for teachers and parents on fundamental TEACCH principles, including visual structure, daily schedules, gesture symbols, and individual learning strategies (Goswami et al., 2021). This orientation played a crucial role in ensuring similar perceptions and understanding between both parties regarding intervention goals, so implementation in home and school environments could run consistently. The preparation stage also included developing visual media, such as identity cards, activity boards, pictorial daily schedules, gesture symbols, and various supporting visual aids (Alzrayer

et al., 2019). These media were specifically designed to support basic communication development and help children understand activity sequences. Although all children received the same media and intervention, teachers adjusted reinforcement frequency and guidance intensity based on each child's responses, ensuring each participant received support appropriate to their characteristics and abilities (So et al., 2017).

At the implementation stage, daily routines were arranged visually using activity boards to guide activities such as self-introduction, greeting friends, or requesting help. Each activity was broken down into smaller steps more easily understood by children, for example: "looking at the teacher," "stating own name," "pointing to the class identity card" (Tran et al., 2020). Teacher mentoring was conducted progressively through a scaffolding approach. Teachers demonstrated the use of gestures, symbols, and simple speech, then gradually reduced assistance as the child's independence increased (Alghamdi et al., 2023). This strategy aligns with scaffolding principles in education, where support is given according to children's ability levels and gradually reduced to encourage independence. Additionally, positive reinforcement was consistently provided whenever children successfully performed communication correctly, for example, through verbal praise, hand clapping, or stickers as appreciation forms (Asaro-Saddler, 2016). Providing positive reinforcement proved effective in increasing children's motivation and engagement, leading them to participate in every learning activity actively. Teachers also conducted periodic monitoring through field documentation, recording child development and adjusting strategies when needed (Qi et al., 2017). This documentation included behavioral observations, child responses to stimulation, and independence levels for each activity. This approach ensured uniform stimulation for all children while allowing flexibility in mentoring based on individual needs.

The partnership with parents became a crucial element in ensuring that the skills children learned at school could be applied in their home environments. Structured practice programs were given to parents, replicating activities conducted at school, such as self-introduction, greeting, or expressing needs (Lorenzo et al., 2018). Parents received direct training through practical demonstrations, enabling them to provide consistent and appropriate care with TEACCH principles (Arshad et al., 2020). Regular meetings between teachers and parents were conducted weekly to discuss child development, identify challenges, and formulate strategies applicable at home and school (Hussain et al., 2016). This communication forum ensured intervention alignment and provided parents with opportunities to share experiences, strengthen stimulation consistency, and monitor program effectiveness in real time. This collaboration guaranteed that children received continuous communication stimulation, so skills learned at school could be effectively applied at home (Chung et al., 2024). All children received the same practice programs, enabling teachers to consistently evaluate TEACCH method effectiveness, while still considering each child's individual needs (Klefbeck, 2023).

After eight weeks of intervention implementation, a posttest was conducted using the same instrument as the pretest. Integrative results showed an average improvement of 34% in children's basic communication abilities, both at school and at home, although there was variation in each child's initial abilities. This quantitative data was then integrated with qualitative reports from teachers and parents. Data synthesis results confirmed that children not only experienced test score improvement but also showed real behavioral development in daily life (J. Chen et al., 2022)(Thomas et al., 2017). For example, children who previously rarely greeted teachers or friends now consistently use gestures, symbols, or simple words. Children who previously showed frustration when their needs were unmet can now express requests or rejections in more controlled ways, understandable by adults (Muhibar et al., 2019).

Several key factors influenced the success of implementing the TEACCH approach in this research. First, visual structure and predictable routines provided children with a sense of security and comfort, while facilitating their understanding of social and language contexts. Children with ASD tend to be more responsive to consistent patterns, and activity visualization helps them anticipate next steps (Taheri-Torbat & Sotoodeh, 2018). Second, a gradual approach (scaffolding) enabled children to learn

communication skills progressively, from symbol and gesture recognition to the ability to introduce themselves or express desires independently (Maria et al., 2022). This approach respects individual learning processes and provides children with space to develop at their own pace. Third, a close partnership between teachers and parents ensured consistency in providing cues, routines, and reinforcement, enabling children to develop communication skills across environments (Dixon, 2020). This consistency encouraged skill generalization to new situations, for example, from the classroom environment to the home or other social activities. Fourth, providing immediate positive reinforcement proved effective in increasing children's motivation and engagement. Simple appreciation or rewards provided clear feedback, helping children understand expected behavior and encouraging them to repeat it (Alharbi, 2020).

These research findings align with previous studies regarding TEACCH's effectiveness in improving the functional communication of children with ASD. However, this research's novelty lies in its implementation in the Special School (SLB) context in Indonesia, with a specific focus on developing basic self-development communication and integrating symbols, gestures, and simple speech, supported by systematic collaboration between teachers and parents. This research strengthens previous findings by Hume and Boyd (2018) on the importance of visual structure and makes an additional contribution by integrating collaborative approaches that involve families intensively. Unlike Odom et al. (2019), whose research focused more on clinical settings, this study demonstrates that similar approaches can be effectively adapted in formal educational settings in Indonesia. Additionally, this research strengthens the application of ecological systems theory, emphasizing dynamic interactions among various environments in child development. In this research context, schools and families worked synergistically, creating a microsystem supporting the communication development of children with ASD (C. Chen et al., 2016).

From a practical perspective, standardized TEACCH implementation for small groups, accompanied by minimal adjustments according to individual children's abilities, proved capable of producing significant improvement in basic communication (Mosher & Craig, 2021). The teacher-parent partnership became key to success because consistent stimulation in both environments enabled children to apply their learned skills more broadly. Interview results with teachers revealed that the TEACCH approach facilitated autism classroom management, particularly in organizing daily activities, reducing child anxiety, and increasing their participation in self-development activities (Boyd et al., 2015)(Siu et al., 2019). Parents reported that structured practice at home improved children's ability to express needs independently, reduced frustration, and strengthened positive interactions in family dynamics (Watkins et al., 2015)(Kara et al., 2016).

Based on in-depth analysis of implementation processes and results, several critical reflections can be presented. First, intervention success was highly influenced by the consistency of strategy application across both environments (Zohoorian et al., 2021). Children showed the most significant development when teachers and parents consistently applied the same approach, underscoring the importance of methodological alignment. Second, time and patience became crucial to the intervention's success. Communication ability development does not occur instantly but rather through gradual processes that require long-term commitment from all involved parties (Nesterova et al., 2015). Third, personalization of approach, even within a standardized intervention framework, proved effective in meeting individual children's needs. Flexibility in guidance intensity and reinforcement types enabled each child to develop according to their unique potential and characteristics (El et al., 2018).

For broader implementation, schools are recommended to organize ongoing training for both teachers and parents on TEACCH principles. Formation of practitioner communities involving both parties can facilitate the exchange of experiences and joint problem-solving. Additionally, the development of contextual visual media appropriate to local culture will increase intervention relevance and effectiveness (Cook et al., 2016). This research also identified the need to develop more comprehensive monitoring systems to periodically evaluate child development, enabling interventions

to be dynamically adjusted based on achieved progress. Regular formative assessments will enable educators and parents to identify areas that need more attention from the earliest stages. From a policy perspective, this research's findings underscore the importance of allocating resources to educators' and parents' capacity development for implementing structured approaches such as TEACCH. Investment in the development of visual learning media and support systems for school-family collaboration can have a significant impact on the development of children with ASD in Indonesia.

This research's results make important contributions to the development of communication intervention theories for children with ASD. Findings confirm that structured approaches integrating visual modalities with consistent environmental support can create optimal conditions for the development of basic communication abilities. From a practical perspective, this research provides operational frameworks that other educational institutions can adopt to develop communication intervention programs for children with ASD. The proposed model offers a balance between methodological standardization and implementation flexibility, allowing adaptation to available conditions and resources.

4. CONCLUSION

Research results show that implementing the TEACCH method in basic self-development communication areas was effective in improving the communication abilities of children with autism spectrum disorder (ASD) at SLB Negeri Tamansari. Children participating in this intervention showed significant improvement in recognizing personal identity, greeting friends and teachers, expressing needs, and responding to social communication in a more structured manner. This success was evident not only in quantitative results but also in qualitative reports from teachers and parents, who stated that children consistently applied basic communication skills both at home and at school. Parental involvement proved to be a very important supporting factor. Communication exercises conducted at home, through symbols, gestures, and simple speech, strengthened the stimulation given at school. Consistency between school and home environments enabled children to generalize learned skills to various daily life contexts, making their communication more independent and adaptive. These findings align with Bronfenbrenner's ecological systems theory (1979), which emphasizes the importance of interactions between environments—such as family and school—in child development. With synergy between teachers and parents, children receive layered support, ensuring successful interventions and the development of comprehensive communication skills.

This research confirms that TEACCH success is not only determined by the application of the method in classrooms but also by the continuity of stimulation at home and the quality of teacher-parent collaboration. This intervention model offers significant contributions in special education in Indonesia, particularly for children with ASD, because it strengthens communication independence, improves Family Quality of Life (FQoL), and provides evidence-based frameworks for cross-environment collaborative interventions. Additionally, this research shows that standardized interventions for small groups can remain responsive to individual children's needs, so flexibility in TEACCH implementation can accommodate differences in initial participant abilities.

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