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Structuring a Conducive Learning Environment in the Implementation of Tutoring for Children with Autism

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Abstract

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder characterized by impairments in communication, social interaction, and restricted or repetitive patterns of behavior. The global prevalence of ASD continues to rise, with the World Health Organization estimating that 1 in 100 children worldwide is diagnosed with ASD, while in Indonesia approximately 2.4 million children are affected. This condition necessitates specially designed tutoring services supported by truly conducive learning environments. Children with ASD experience differences in sensory processing that directly impact their ability to access instructional content, making the arrangement of physical learning environments including lighting, noise levels, spatial layout, and visual supports an indispensable aspect of their educational provision. This study aims to provide an in-depth description of the conducive learning environment arrangement in tutoring sessions for children with autism at SLB Yayasan Putra Pancasila, Malang City, covering: (1) the physical arrangement of the learning space, (2) the learning atmosphere and patterns of instructional interaction between teachers and children with autism, and (3) the forms of environmental support provided by both teachers and parents. This study employed a descriptive qualitative approach aimed at understanding and explaining the phenomenon in depth based on real-world conditions. Data were collected through direct observation, in-depth interviews, and documentation. Research subjects were selected using purposive sampling, comprising children with ASD enrolled in tutoring sessions, supervising teachers or therapists, and parents who support their children's learning at home. Data analysis followed the interactive model developed by Miles and Huberman, encompassing data reduction, data display, and conclusion drawing. Data trustworthiness was ensured through source triangulation and technique triangulation. The findings reveal that the tutoring room features a discernible separation between the learning area and a calming corner for self-regulation, although limited physical space constrains ideal zone delineation. Lighting relies primarily on natural daylight through windows with adequate brightness, yet becomes inconsistent on overcast days. In terms of acoustics, no dedicated sound-dampening materials are present, resulting in considerable external noise penetrating the room; several students were observed covering their ears in response to auditory hypersensitivity. Classroom walls are covered with students' artwork, which risks creating an overly cluttered visual environment for children with ASD. Seating arrangements place teachers and students face-to-face at close proximity to sustain children's attention. Instructional sessions follow a clear routine: each session opens with a greeting, proceeds to the main activity, and concludes with a closing greeting. Instructions are delivered concisely and simply, combining verbal and non-verbal communication, accompanied by immediate verbal praise as positive reinforcement. The calming corner proved effective as a regulatory response when children experienced overstimulation. Teacher–parent collaboration was found to be irregular, occurring primarily during report-card distribution and occasionally via WhatsApp messaging, resulting in suboptimal consistency between school and home learning environments. The school also lacked collaboration

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with occupational or speech therapists, while an insufficient teacher-to-student ratio placed additional strain on individualized support for children with ASD.

Keywords*: conducive learning environment; children with autism; tutoring; spatial arrangement*

1. Introduction

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder characterized by impairments in communication, social interaction, and restricted, repetitive patterns of behavior (Kemenkes RI, 2022). The global prevalence of ASD continues to rise significantly. The World Health Organization (WHO), in its 2023 publication, stated that on average 1 in 100 children worldwide is diagnosed with autism spectrum disorder. In Indonesia, an estimated 2.4 million children are affected by ASD, with a rate of 1 in every 100 births each year, and this number continues to grow, becoming a significant challenge for special education. This condition demands the availability of specially designed tutoring services that are responsive to the characteristics of children with autism and supported by a genuinely conducive learning environment. The learning environment plays a crucial role in supporting the success of the learning process for children with autism. Children with ASD experience differences in sensory processing and attention that directly affect their ability to access instructional material in educational settings (Mallory & Keehn, 2021). Furthermore, children with ASD frequently experience difficulty processing sensory information, which becomes a real obstacle when they participate in various learning contexts, including the school environment (Gentil-Gutiérrez, Cuesta-Gómez, Rodríguez-Fernández, & González-Bernal, 2021). Therefore, the arrangement of the physical learning space including lighting, noise levels, spatial layout, and the use of visual supports is an aspect that cannot be overlooked in the implementation of tutoring for children with autism.

The structured teaching approach developed through the TEACCH program (Treatment and Education of Autistic and Related Communication-Handicapped Children) affirms that a noisy, disorganized, and unpredictable environment can be a source of stress for students with autism, whereas a calm and structured environment has been shown to reduce anxiety and increase learning engagement (Esqueda Villegas et al., 2024). In the context of learning in Indonesian special schools (SLB), teachers need to apply a range of strategies such as creating a conducive classroom environment, utilizing visual aids, and providing clear, repeated instructions. Beyond physical aspects, individualized approaches, collaboration with parents, and routine evaluation are key to creating an effective and adaptive learning environment for children with autism. Parents also serve as an important component in building a learning environment that supports children with autism. Parents need to help their children in various ways, such as establishing organized routines, giving clear instructions, using visual supports, and teaching children self-regulation skills, as such support has been shown to increase the learning independence of children with autism. Meanwhile, accompanying teachers act as facilitators, motivators, and demonstrators, while parents act as reinforcers and collaborators in supporting focused-learning practice at home. Collaboration between teachers and parents in structuring the learning environment, both at school and at home, is a determining factor in the overall success of tutoring for children with autism.

Although research on the learning environment of children with autism continues to develop, studies that specifically describe the arrangement of the learning environment in the context of tutoring in Indonesian special schools that integratively examine the physical aspects of the space, instructional interaction, and parental support remain very limited. The scholarly novelty of this study lies in its attempt to describe in depth the real conditions of conducive learning environment arrangement in the implementation of tutoring for children with autism at SLB Yayasan Putra Pancasila, Malang City, using a descriptive qualitative approach with observation and interview techniques.

This study broadly aims to examine various important aspects related to the implementation of tutoring for children with autism at SLB Yayasan Putra Pancasila, Malang City. Specifically, the primary objective of this study is to describe how the physical arrangement of the learning spacein cluding furniture placement, lighting intensity, air circulation quality, wall color selection, arrangement of teaching aids, and efforts to reduce sensory disturbances supports the smooth implementation of tutoring for children with autism. The second objective is to carefully describe the learning atmosphere that is formed, such as the level of comfort, calmness, and room conditions that support the learning process, as well as the pattern of instructional interaction that occurs between teachers and children with autism during activities. This includes verbal and non-verbal communication, children's responses to instructions given, and the strategies used to build engagement and attention. The third objective is to explain the forms of environmental support provided by both teachers and parents in supporting the success of tutoring for children with autism. This support includes the teacher's role in providing flexible, needs-based teaching methods, positive reinforcement, and collaboration with therapists. Meanwhile, the role of parents is realized through providing a supportive learning environment at home, maintaining routine communication with the school, and providing motivation and learning assistance to the child.

2. Method

This study used a qualitative method with a descriptive research design. A qualitative approach was chosen because the aim of this study is to understand and explain a phenomenon in depth based on real conditions occurring in the field. According to Moleong (2017), qualitative research aims to understand the experiences of the people being studied uch as their attitudes, views, actions, and experiences by explaining everything in detail using words. This approach is therefore suitable for assessing the arrangement of a good learning environment in the implementation of tutoring for children with autism. The descriptive qualitative research in this study was used to explain the learning atmosphere, spatial arrangement, interaction during learning, and the types of environmental support given to children on the autism spectrum during tutoring activities. In this way, the researchers could gain a better understanding of how the learning environment is prepared and used to support the learning process of children with autism. Thus, the purpose of this research was not to measure numerically, but to understand the processes, conditions, and experiences occurring at the research site.

This research was conducted at Sekolah Luar Biasa (SLB) Yayasan Putra Pancasila, located in Malang City. This site was chosen because it conducts learning and tutoring activities for children who require special attention, including children with autism. In addition, the school environment was considered appropriate for the research objectives, as it provided the

researchers the opportunity to directly observe how the learning environment is arranged in the implementation of tutoring. The site was also used by the researchers to gather information from people directly involved in the tutoring activities.

Data sources in this study consisted of two types: primary and secondary data sources. Primary data were obtained directly through observation and interviews with people involved in the implementation of tutoring for children with autism. The main data came from children on the autism spectrum who attend tutoring sessions, supervising teachers or therapists, and parents who support their children's learning process. Meanwhile, supplementary data were obtained from supporting documents, such as the school profile, records of tutoring activities, documentation of the learning environment, and other data relevant to the research focus. Research subjects were selected using a purposive sampling technique, meaning that subject selection was based on specific considerations and criteria appropriate to the research needs. The criteria for subjects in this study were individuals directly involved in tutoring activities for children with autism who possessed important information about the arrangement of the learning environment. Children with autism were selected as the primary subjects because they directly experience the tutoring process. Supervising teachers or therapists were selected because they help organize, accompany, and facilitate the learning process. Parents, meanwhile, were selected because they play a role in supporting the child's learning environment at home.

Data collection methods in this study used observation, interviews, and documentation. Observation was conducted to directly examine the condition of the learning environment, spatial arrangement, use of instructional media, the learning atmosphere, and the interactions occurring during tutoring activities. Interviews were conducted with supervising teachers or therapists and parents to obtain information about their experiences, views, and the methods they use to create a good learning environment for children with autism. Documentation was used to add information to the study through photographs, activity records, or other supporting documents that reinforce the observation and interview results.

In this study, the data analysis technique used the interactive analysis model developed by Miles and Huberman. The process consists of three steps: data reduction, data display, and conclusion drawing. In the data reduction stage, the researchers selected, simplified, and grouped the data obtained from observations, interviews, and documentation in accordance with the research focus. After that, the summarized data were presented in the form of clear explanations to make it easier for the researchers to understand the results obtained in the field. The final step was drawing and verifying conclusions the process of formulating conclusions from the research results based on the data that had been analyzed, as well as conducting a re-examination to ensure the research results have good validity. To maintain data authenticity, this study used source triangulation and technique triangulation. Source triangulation was carried out by comparing data obtained from the child, the supervising teacher or therapist, and the parents. Meanwhile, technique triangulation was carried out by comparing the results of observation, interviews, and documentation. Through this approach, the data obtained were expected to be more accurate and to clearly depict the arrangement of a conducive learning environment in the implementation of tutoring for children with autism.

3. Results and Discussion

3.1 Result

Observations at SLB Yayasan Putra Pancasila, Malang City, show that the tutoring room has a clear separation between the learning area and the self-calming area. However, no play area was found in the room. Inside the room, there is a study desk used by students as well as a desk for the teacher. However, no shelf for teaching aids was found. All of this furniture is located within a single room without any wall or physical boundary separating them. In addition, there is also a special corner that children can use to calm themselves when they experience excessive stimulation from the surrounding environment. Interview results with teachers at the school regarding the zoning arrangement of the room indicate that they stated, "Actually we wanted there to be a separation between one area and another, but because the space is limited, we cannot separate them. The distance is only a few desks from the teacher's desk. Everything becomes one in this room." Based on observation, the walls of the tutoring room are covered with pictures that have been colored by the children at the school. The pictures vary in shape and size and depict daily activities. In addition, there is also a display showing the names of the days from Monday to Sunday. This condition results in a fairly busy display that can distract children with autism. On the other hand, labels were also found on each desk indicating the name of the child who uses that desk. Interview results with teachers regarding visual stimulation show differing opinions. The teacher stated, "The pictures do not disturb the students while they are studying." According to the observations, the learning room uses direct light from windows. There are several windows in the room that greatly affect the lighting. The light intensity is classified as bright. However, a problem arises when the weather is overcast, because the room becomes very dark and relies only on two small lamps. In terms of sound, it was found that there is no special sound absorber, such as thick carpeting, in the room. Sound from outside such as various activities occurring outside is heard very clearly and quite loudly inside the tutoring room. The observation results show that there is no illustrated daily schedule posted on the walls of the tutoring room. There is only a board used to explain the lesson material. In addition, no teaching aids such as picture cards were found either. In terms of safety, the furniture used in the learning room consists of wooden desks and chairs. The corners of the desks and chairs can be considered fairly sharp. No corner protectors were found on the desks or chairs in the room.

The tutoring room feels very calm and comfortable as a place to study. The condition of the room is very good because there is adequate lighting and good air circulation. The teacher stated that the room is actually comfortable for children with autism while learning. However,

there is still a problem experienced namely, noise from outside the room that is still audible even though the room is fairly quiet.

In terms of behavior, the children in the room appear calm. Some children were seen sitting quietly, and some even fell asleep during rest time. However, some children were also seen covering their ears when hearing loud sounds. During the observation, no children showed signs of excessive anxiety such as screaming or running out of the room. The teacher stated that the children do not show excessive anxiety. They generally begin to appear anxious when they hear loud noises, such as from other children, and they show signs such as covering their ears. Observation results show that during tutoring, the seating positions of teacher and students face each other and are closely locked in place. The teacher's desk and the students' desks are placed facing each other at a very close distance. In fact, the students' desks are pushed together, forming a square pattern. Interview results with the teacher revealed the reasoning behind this layout. The teacher explained that with facing positions and desks touching one another, the learning process becomes easier to carry out and children's attention can be better maintained. When giving directions, the teacher uses a mix of verbal and non-verbal communication. Instructions given tend to be short and simple. Regarding children's reactions, the teacher stated that a child's reaction to instructions greatly depends on the condition of the room at that moment. The teacher always gives positive praise when a child successfully follows a direction. The form of reinforcement given is verbal praise, delivered directly when the child has shown the expected behavior. When a child becomes overstimulated such as playing with their own fingers, losing focus, or covering their ears the teacher responds by first stopping the activity that caused the child to reach that state. The teacher then investigates whether the problem was caused by a misbehaving peer or by an uncomfortable classroom atmosphere. The teacher also emphasized how important the function of the calming corner is in such situations. With the calming corner available, children who feel overstimulated can calm down more quickly. The spatial arrangement for tutoring at SLB Yayasan Putra Pancasila, Malang City, is fixed. There is no change of location or furniture arrangement unless there is a highly dangerous situation or an emergency requiring relocation.

Based on observations and interviews at SLB Yayasan Putra Pancasila, Malang City, the teachers have used teaching methods suited to the needs of children with autism. Learning is carried out with a clear routine. Each learning activity is carried out one at a time according to a predetermined schedule, so that the child knows what they will do next. The teacher stated that lessons usually begin with a greeting, then continue to the main activity, and end with another greeting. This activity is always carried out so that children do not feel confused during

their day at school. In addition, the teacher also regularly gives positive praise to children who successfully follow the instructions given. Regarding collaboration with therapists, the school stated that so far they have not collaborated with occupational therapists or speech therapists. Although they have tried their best to educate the children, the teachers acknowledge that they face a major problem namely, a shortage of teaching staff at the school. The number of teachers available is very small, so the teaching burden becomes quite heavy. From the parents' perspective, it appears that some parents have prepared a simple study space at home for their children. However, regarding learning activities, parents acknowledge that they have not succeeded in establishing a fixed routine at home. Communication between parents and teachers is also not conducted regularly. Intensive communication usually only occurs during report-card distribution. Apart from that moment, communication occasionally occurs by phone via the WhatsApp application, although not very often.

3.2 Discussion

The observation results at SLB Yayasan Putra Pancasila, Malang City, show that the tutoring room has a clear separation between the learning area and the self-calming area, although no separate play area is available. Limited space is a real obstacle, so that all activities from the teacher's desk, students' desks, and the calming corner are concentrated within a single room without a clear physical divider. This finding is consistent with the research of Haya and Ashar (2026) at SLBN Pembina Tingkat Nasional Bagian C Malang, which concluded that classroom management for students with autism needs to consider accessibility, visibility, flexibility, comfort, and the aesthetics of the space. Well-structured classroom arrangement has been shown to help students with autism receive instruction according to their needs and ability level, which ultimately improves their understanding of learning material. From the perspective of the TEACCH method (Treatment and Education of Autistic and Related Communication-Handicapped Children), Hidayati and Anggraeni (2024), in their research at SLB Bhakti Pemuda, Kediri City, describe that classroom arrangement such as a clear division of areas for learning, playing, and resting has been shown to have a positive impact on the development of children with autism in the learning process. Structured spatial arrangement is not merely an aesthetic aspect, but also a pedagogical necessity that directly affects the engagement and learning comprehension of students with autism. Mallory and Keehn (2021), in their integrative review, explain that unstructured classroom settings can give rise to undesirable behavior in students with autism, because an unpredictable environment triggers anxiety and disrupts students' ability to process sensory information. Therefore, a clear division of zones such as work areas, rest areas, and calming corners is a primary requirement that must be met in the implementation of tutoring for children with autism.

One of the main challenges in structuring the learning environment for children with autism is managing visual stimulation. The research results show that the classroom walls are covered with pictures of various shapes and sizes created by the students. This condition has the potential to create a busy visual display that disrupts the learning focus of students with autism. However, the teacher believes that the pictures do not disturb students' concentration, even though the observation findings suggest otherwise. This difference between the teacher's

perspective and the observation findings reflects a common challenge also emphasized by Mallory and Keehn (2021) in their writing that classroom settings with excessive visual backgrounds correlate with lower learning scores, particularly for students with autism, because overly abundant wall decoration has been shown to increase students' off-task time and reduce learning gains. On the other hand, research summarized by Normawati et al. (2025) explains that individuals with autism actually show increased attention to background information displayed visually. This finding carries an important implication: children with autism may process more visual information simultaneously than typical children, so an overly rich visual display can divert attention away from relevant learning stimuli. Therefore, what is needed is not the removal of all visual elements, but careful selection of visual content displaying only what is relevant to learning and presenting it in an orderly, simple manner. Hidayati and Anggraeni (2024) found that the use of pictures as part of the TEACCH method helps children with autism focus on recognizing objects around them, while also noting the need for ongoing maintenance and management of visual media so that their function remains optimal.

Lighting and acoustic factors are two sensory dimensions that greatly influence the comfort and concentration of children with autism during learning. Observation results at SLB Yayasan Putra Pancasila, Malang, show that the tutoring room relies on natural light from several windows with intensity classified as bright, but becomes problematic on overcast days because it then relies only on two small lamps. This unstable lighting condition has the potential to disrupt the concentration of children with autism, who are sensitive to sudden sensory changes. Mallory and Keehn (2021) affirm that many individuals with ASD report sensitivity to lighting, and that the use of halogen lamps as a replacement for fluorescent lamps has been reported to increase the attention and engagement of students with autism. Furthermore, research comparing LED and fluorescent lighting conditions found that all students showed more engaged behavior under LED lighting conditions, with the most significant changes occurring among students with developmental delays.

From an acoustic standpoint, observation results show that there is no special sound absorber in the room, and outside sounds such as various activities occurring outside the classroom are heard quite loudly inside the room. Several students were even seen covering their ears when hearing loud sounds, a sign of auditory hypersensitivity typical of children with autism. This finding is consistent with various studies summarized by Mallory and Keehn (2021), who reported that auditory stimuli have the greatest negative impact on the engagement and academic performance of students with autism compared to other sensory modalities, with a significant positive correlation between classroom noise level and the frequency of repetitive behaviors in children with autism. In addition, Banire et al. (2021), in eye-tracking–based research in a virtual classroom, found that students with autism tend to shift their attention toward auditory distractions, which directly lowers their performance scores on attention tasks. This condition reinforces the need for installing sound-absorbing walls, using carpeting, and actively monitoring noise levels in tutoring rooms for children with autism.

Seating layout has a direct impact on the effectiveness of teacher–student interaction in the context of tutoring for children with autism. Observation results at SLB Yayasan Putra Pancasila, Malang, show that the teacher's and students' seating positions face each other at a very close distance, with students' desks even pushed together to form a square pattern. The

teacher explained that this arrangement was chosen so that the learning process could be carried out more easily and children's attention could be better maintained. This layout choice reflects the one-to-one approach commonly applied in special schools, and is in line with the findings of Banire et al. (2021), who found that students with autism attending mainstream school environments showed higher performance on attention tasks, suggesting that reducing physical distraction through appropriate layout can maximize the benefits of an individualized approach without sacrificing the social stimulation children need.

Research results at SLBN Pembina Tingkat Nasional Bagian C Malang show a relevant variation in classroom layout: Grade VIII uses a cluster arrangement recommended for children with autism, while Grades VII and IX use an auditorium-style arrangement. That study also emphasizes the importance of placing students with autism in positions that allow quick access to equipment storage and visual schedules, and far from excessive noise sources such as school bells, doors, and windows. A survey conducted by Cecilia et al. (2026) at PKBM Mata Hati, Bandar Lampung, revealed that 60% of teachers stated that a low-distraction learning environment is often incorporated into lesson planning, but only 40% of teachers stated that they always apply an integrated strategy in implementation. This gap between planning and implementation indicates the need to strengthen teachers' capacity to manage the physical classroom environment consistently and in a structured manner.

The availability of a calming corner (or sensory break space) is one important element in structuring a conducive learning environment for children with autism. Observation results at SLB Yayasan Putra Pancasila, Malang, show that there is a special corner children can use to calm themselves when experiencing overstimulation. The teacher emphasized how important the function of this calming corner is: when a child becomes overstimulated marked by covering their ears, losing focus, or playing with their own fingers the teacher directs the child to the calming corner before continuing the activity. Mallory and Keehn (2021) explain that when the classroom environment adds pressure to the attentional and sensory processing of children with autism, they are at risk of showing poorer performance and experiencing difficulty participating in classroom activities. Research by Vogel and Schwabe also shows that physiological responses to a complex environment critically affect the process of memorization and learning of new information, so that providing a self-regulation space has been shown to be an effective preventive strategy.

Hidayati and Anggraeni (2024), in their research at SLB Bhakti Pemuda, Kediri City, reported that when a child experienced a tantrum in class, the teacher seated the child in a special chair, and shortly afterward the child began to calm down and was able to resume participating in learning. This intervention illustrates the strategic role of spatial arrangement in supporting emotional and behavioral regulation in children with autism. Meanwhile, the research of Haya and Ashar (2026) at SLBN Pembina Malang found the absence of both high- and low-stimulus spaces to be one of the factors hindering optimal classroom management. This indicates that although the concept of a calming corner has begun to be understood and applied informally, not all schools have been able to implement it systematically and in accordance with the needs of children with autism.

The availability of an illustrated daily schedule is a visual element widely recommended in learning for children with autism, yet its implementation in the field still varies. Observation results at SLB Yayasan Putra Pancasila, Malang, show that there is no illustrated daily schedule

posted on the walls of the tutoring room only a board for explaining lesson material. Nevertheless, the teacher claims to run a clear routine: each session begins with a greeting, continues with the main activity, and ends with a closing greeting, so that the child can anticipate the flow of activities. Similar findings were found in the research of Hidayati and Anggraeni (2024), who noted that the implementation of visual schedules as part of the TEACCH method at SLB Bhakti Pemuda was not carried out comprehensively, and research at SLBN Pembina Malang found that only one of the three classes studied had a visual daily schedule in the form of pictures and text. The importance of visual schedules is strongly emphasized in the literature review conducted by Normawati et al. (2025), who found that the use of visual schedules is proven to be an effective evidence-based practice. Through the CHECK strategy (Consider the learner, Help with meaningful representations, Engage using model, Collaborate, Keep data), visual schedules consistently increase the independence of children with autism, help them understand routines, and reduce the need for verbal or physical prompting from educators. The survey findings of Cecilia et al. (2026) at PKBM Mata Hati further reinforce this argument: 70% of teachers stated that the application of visual schedules (TEACCH) is often carried out in the implementation of learning, and 70% of teachers also reported that the TEACCH structure increases children's independence. However, the consistency of implementation still needs to be strengthened, given that the integrated application of visual, ABA, and TEACCH strategies together was reported by only 40% of teachers as a frequently applied practice.

A conducive learning environment is determined not only by the physical condition of the room, but also by the pattern of communication and instruction applied by the teacher. Observation results at SLB Yayasan Putra Pancasila, Malang, show that the teacher uses a mix of verbal and non-verbal communication with instructions that tend to be short and simple, along with giving direct verbal praise as a form of positive reinforcement when a child successfully follows a direction. This pattern of short, simple instruction is consistent with the recommendations put forward in the research of Haya and Ashar (2026), who found that all teachers at SLBN Pembina Malang had already applied the principle of speaking in simple sentences, avoiding abstract words, figures of speech, and double meanings, and using words commonly heard by children. However, that study also noted that none of the teachers used visual media such as PECS (Picture Exchange Communication System) as a communication aid, relying instead solely on direct verbal communication.

Banire et al. (2021), in their eye-tracking study, found that children with ASD quickly pay attention to externally imposed stimulation, such as instructions to identify letters on the board, but spend less time and have fewer fixations on target stimuli compared to typical children. This finding implies that children with ASD require consistent support in redirecting attention from the teacher a role that can be facilitated by a physical environment with minimal distraction. Hidayati and Anggraeni (2024) emphasize the importance of interpersonal relationships between teachers and students in humanizing the learning of children with autism: by building a strong connection, teachers can better understand the needs of children with autism, create a climate of trust, and increase their engagement in learning activities. A physically comfortable environment supports the creation of a psychologically safe climate, which in turn makes it easier for children with autism to respond to instructions and participate actively in tutoring.

A conducive learning environment cannot be separated from consistency between the school and home environments. Research results at SLB Yayasan Putra Pancasila, Malang, show that although some parents have prepared a simple study space at home, they acknowledge that they have not succeeded in establishing a fixed routine. Communication between parents and teachers is also not conducted regularly occurring intensively only during report-card distribution and occasionally via WhatsApp. This condition represents a weak point that needs to be addressed, given that Hidayati and Anggraeni (2024) affirm that parental involvement in applying the TEACCH method at home plays a highly crucial role. Parents act as partners in supporting consistency between the home and school environments, monitoring the child's progress, and providing feedback to teachers.

Cecilia et al. (2026), in their survey, found that 70% of teachers discuss with other teachers or parents in the learning evaluation process, but systematic child-development records and data-based evaluation remain limited. This lack of systematic documentation hinders teachers' ability to make evidence-based strategy adjustments and maintain consistency in their instructional approach over time. Mallory and Keehn (2021) note that cross-environment consistency is highly important given that children with autism experience impairment in the ability to generalize that is, the ability to apply skills learned in one context to another context. A conducive learning environment at school needs to be replicated as much as possible at home so that skills gained during tutoring can be maintained and further developed.

The various studies referenced in this discussion identify a number of inhibiting factors still found in the structuring of learning environments for children with autism in Indonesia, particularly in tutoring institutions and special schools. These factors include limited physical space that prevents ideal zone separation, insufficient sound absorption and optimal lighting arrangement, the unavailability of visual communication media such as PECS and illustrated daily schedules across all classrooms, and minimal collaboration with occupational or speech therapists who could provide more specific sensory recommendations. At SLB Yayasan Putra Pancasila, Malang, teachers acknowledge a shortage of teaching staff as the main obstacle, resulting in a heavy workload and limitations in providing individualized attention. Meanwhile, at SLBN Pembina Malang, the identified inhibiting factors include the absence of visual supports specific to children with autism and classroom conditions that still create distraction.

Normawati et al. (2025), in their literature review, propose a multifaceted strategic framework as a solution: first, structured visual support through a systematic visual schedule; second, the utilization of advanced technology such as artificial intelligence and social robots for therapeutic mediation and diagnosis; and third, learning environment accommodations that include both pedagogical interventions (video self-modelling, instructional strategies) and psychosocial interventions (peer support, staff training). This framework affirms that optimizing the learning environment for children with autism requires a comprehensive approach involving all stakeholders. In the context of tutoring with limited resources, Cecilia et al. (2026) recommend strengthening the integration of learning strategies and the systematic documentation of children's development as a realistic first step. With consistent application of visual strategies, more carefully planned management of sensory stimuli, and more structured communication with parents, the quality of the learning environment for children with autism can be improved gradually, even though physical limitations have not been fully resolved. Overall, the results of this study show that structuring a conducive learning

environment for children with autism is an interrelated system, encompassing physical dimensions (spatial zoning, lighting, acoustics, layout), pedagogical dimensions (visual schedules, structured instruction, positive reinforcement), and social dimensions (teacher–parent collaboration, cross-environment consistency). Each dimension contributes significantly to the ability of children with autism to focus, understand material, and develop academically and socially in the implementation of tutoring

4. Conclusion

Based on the results of research conducted at SLB Yayasan Putra Pancasila, Malang City, it can be concluded that the arrangement of a conducive learning environment has an important influence on the implementation of tutoring for children with autism. A supportive learning environment is reflected not only in the physical condition of the room, but also in how the learning process unfolds and the support provided by the people around the child. The division between the learning area and the calming corner helps children reduce overstimulation and feel more comfortable during learning activities. In addition, adequate lighting, good air circulation, and a seating arrangement that allows direct interaction between teacher and students are also factors that support children's engagement in learning. This study also shows that a number of obstacles remain in achieving a truly optimal learning environment. Limited space, the not-yet-maximized use of supporting visual media, noise from outside the classroom, and a limited number of educators are among the challenges identified during the research. Nevertheless, teachers have made efforts to adapt learning to the needs of children with autism through the provision of simple instructions, consistent routine-building, positive reinforcement, and the provision of a calming corner as a place for children to calm themselves when experiencing overstimulation. On the other hand, parental involvement still needs to be strengthened, particularly in building learning habits at home and maintaining more routine communication with the school so that children's learning needs can be supported sustainably. Overall, structuring a conducive learning environment for children with autism is an important part of supporting the tutoring process. A structured, comfortable environment suited to children's needs can help improve their focus, engagement, and ability to participate in learning activities. Therefore, sustained collaboration is needed among schools, teachers, and parents to create a learning environment that is more adaptive, minimally disruptive, and able to optimally support the development of children with autism.

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