Expressions of Children with Autism while Learning and Interacting in a Non-Formal Learning Environment with Other Children with Special Needs

Dinah Adawiyah[a], Yahdinil Firda Nadirah[b]

[a,b]*Universitas Islam Negeri Sultan Maulana Hasanuddin Banten*
Corresponding Author:
[a]*adawiyahdinah0410@gmail.com*

ABSTRACT

This study aims to describe the learning behavior and expressions of children with autism during learning activities and interactions in the non-formal Widya Wicara educational environment. The research subject was one child with autism with one companion as the main informant. The study used a descriptive qualitative approach through direct observations and structured interviews lasting 45 minutes with the companion. Data were analyzed using the Miles and Huberman descriptive analysis technique which includes data reduction, data presentation, and conclusion drawing. The results showed that the learning behavior of children with autism is strongly influenced by rapid mood swings and sensory sensitivity to the surrounding environment. Children tend to have difficulty maintaining focus and only respond to instructions or greetings when in a stable emotional state. When showing negative expressions such as rejection or tantrums, companions need to provide flexible responses and adapt to the children's needs to prevent emotional escalation. The non-formal educational environment provides a more conducive, flexible space and does not demand the achievement of specific academic targets, so children can learn and interact at their own pace, comfort, and readiness. Thus, non-formal learning is an effective approach in supporting the development of behavior, social interaction, and learning expressions of children with autism.

Keywords : Autism, Learning Behavior, Social Interaction, Non-formal Education

INTRODUCTION

Education is a fundamental right of every citizen without exception. This is stated in Law Number 20 of 2003 concerning the National Education System, article 5 paragraphs 1-5, which emphasizes that every citizen, including those with physical, emotional, mental, intellectual, and social disabilities, has the right to quality education and special education services according to their needs.

Children with special needs (ABK) are children who experience obstacles in their growth and development, whether physically, cognitively, emotionally, or socially, and who require special treatment that differs from that of children in general. One category of ABK that requires special attention is children with autism spectrum disorder (ASD). According to the American Psychiatric Association in DSM-5, ASD is a neurological developmental disorder characterized by persistent deficits in communication and social interaction, as well as limited and repetitive patterns of behavior, interests, or activities.

Communication and language development in children generally occurs optimally between the ages of 1 and 5. According to (Marisa, 2015), children begin to accumulate a large vocabulary between the ages of 1 and 3, and at the age of 3, children begin to apply words to interact. Children who experience language development barriers at this age will have difficulty communicating with their environment. One condition that causes delays in communication and language development is autism.

Children with autism have unique characteristics in the way they process sensory information and respond to their social environment. (Lord et al., 2018) explain that individuals with ASD often have difficulty recognizing and responding to social cues, maintaining eye contact, and understanding other people's perspectives. High or low sensory sensitivity to certain stimuli is also a characteristic of children with autism, which can affect their behavior and responses in learning situations. Research by (Desiningrum, 2017) states that children with autism are usually very limited in their language skills and tend to do repetitive and monotonous things. Nonverbal behaviors such as hiding hands, shaking pencils, or hitting the head are often exhibited in the learning process (Putro, 2017).

Social interaction is an important aspect of child development. According to (Humaira & Mawardah, 2024), social interaction requires two main conditions, namely social contact and communication. Children with autism experience complex barriers in communication and social interaction due to brain nerve disorders that make them prone to isolation and lack the skills or desire to interact with others (Chairunnisyah & Monang, 2023). Communication limitations in children with autism result in difficulties in expressing their needs and desires, making it difficult for others to understand the information conveyed (Saleh & Mutahara, 2023).

Until now, most research on children with autism has focused on formal education such as inclusive schools or special schools. However, many children with autism participate in additional activities at non-formal institutions such as learning centers, study houses, or inclusive communities that offer a more flexible and socially-based approach. These non-formal environments offer a more free, creative, and interactive atmosphere, allowing children to express themselves more spontaneously and naturally.

In this context, the interaction between children with autism and other children with special needs is an interesting phenomenon to study because it can show how they express themselves in various social situations. However, there is still limited research describing the learning behavior and interactions of children with autism, especially in non-formal education with other children with special needs. Previous studies have only discussed the communication or social interaction abilities of children with autism in formal schools, without describing in depth how their learning expressions emerge in a more natural non-formal context.

Based on this, this study aims to describe the expressions of children with autism while learning and interacting in a non-formal learning environment with other children with special needs, focusing on learning behavior, sensory responses, social interaction patterns, and the assistance strategies applied.

METHODS

This study was conducted at the Widya Wicara non-formal educational institution located in Taman Banten Lestari, Serang. The research used a descriptive qualitative approach, which is research that aims to describe in depth the learning expressions and interactions of children with autism in a non-formal learning environment. Qualitative research is a research process that produces descriptive data in the form of narrative conclusions from observed behaviors, phenomena, or attitudes (Moha & Sudarajat, 2019).

The main subject of the study was an 8-year-old child with autism who participated in learning activities at Widya Wicara, with one companion as the main informant who also acted as a teacher and person in charge of learning activities. The subjects were selected purposively based on the following criteria: the child was diagnosed with autism, actively participated in learning activities at non-formal institutions, and the companion had at least one year of experience accompanying the child.

Data collection techniques were carried out through:

Structured interviews were conducted with caregivers to obtain information about the learning expressions, behavior, and social interactions of children with autism. The interview process was carried out for approximately 45 minutes using a pre-prepared interview guide, covering questions about the characteristics of the child, caregiving strategies, emotional responses, and patterns of social interaction.

Direct observation was conducted to directly observe the children's behavior in learning activities and interactions with other children with special needs. Observations were conducted during 4 learning sessions (a total of 6 hours) by recording verbal and nonverbal behavior, responses to instructions, and the children's social interaction patterns.

This study complied with research ethics procedures by obtaining informed consent from the children's parents/guardians and assistants. The subjects' identities were kept confidential, and the research data was used only for academic purposes.

The data were analyzed using Miles and Huberman's descriptive analysis technique, which consists of three stages: Data reduction: sorting, focusing, and simplifying raw data from interviews and observations; Data presentation: presenting data in the form of systematic and structured descriptive narratives based on emerging themes; and Drawing conclusions: drawing conclusions based on the data presented and verifying the findings with relevant theories.

To ensure data validity, researchers triangulated sources by comparing interview results with direct observation results, and conducted member checking by requesting confirmation from assistants regarding data interpretation.

RESULTS

This study produced findings regarding the expression and interaction of children with autism in non-formal learning environments, obtained through interviews with caregivers and direct observation. The findings are presented in the following main themes:

Characteristics and Learning Behavior of Children with Autism

Based on the results of observation and interviews, children with autism in Widya Wicara non-formal education showed characteristics that tended to be restless with unpredictable moods. A caregiver explained: "*The autistic child I accompany often shows rapid mood swings. Sometimes he seems calm when he arrives, but a few minutes later he suddenly throws a tantrum after entering the room.*" (Caregiver, November 15, 2024)

Observations indicate that these sudden mood changes are common, especially when children begin to feel sensory discomfort or encounter certain stimuli in the learning environment that do not align with their preferences. The companion added that understanding children with autism is not only based on theory, but develops more through direct experience: "*Every child with autism is different, so the approach we use must be flexible and cannot be standardized with just one technique.*" (Companion, November 15, 2024)

Sensory Responses and Learning Focus

When children with autism lose focus during the learning process, their caregivers do not immediately ask them to return their attention to the material. Interview results show: "*If a child loses focus, I don't immediately force them to return to learning. I follow their wishes first, because forcing them can cause a tantrum.*" (Caregiver, November 15, 2024)

When children do not want to continue an activity, they usually show expressions of refusal such as silence, avoidance, or even tantrums. At the Widya Wicara institution, the learning process for children with autism is not fixed on achieving specific targets. The assistant explained: "*Here, there is no requirement to complete the material. Children are given the opportunity to learn based on their readiness, because their moods can fluctuate very quickly.*" (Companion, November 15, 2024)

This approach is chosen so that children continue to feel safe, comfortable, and unpressured in a non-formal learning environment.

Individual Assistance Strategy

In learning practice, the assistant explained that the strategy used is more individualized: "*I adjust the learning method based on the child's communication skills and interests. If he prefers visuals, I use picture cards or visual schedules. If he is more responsive to physical activities, I choose a practice-based learning method.*" (Assistant, November 15, 2024)

Observations show that mentoring children with autism in this place requires at least two mentors when they are learning. The mentor explains: "*Usually, one mentor gives lessons and the other accompanies the child so they don't have a tantrum. This does require extra attention.*" (Mentor, November 15, 2024)

Social Interaction and Communication Barriers

The most common challenge is social interaction, both with teachers and peers. The assistant explains: "*Some children have difficulty understanding facial expressions, eye contact, and certain social rules. New situations or crowded rooms can make them anxious.*" (Assistant, November 15, 2024)

Observations show that when another child cries in the room, children with autism experience the same anxiety. This indicates that children with autism need a safe and comfortable place to learn.

Children with autism in this learning environment are generally unable to initiate social interactions spontaneously. Observations show that "*they tend to wait for others to take the initiative. When greeted first, only then do they respond—and even then, it depends greatly on their mood at the time.*" (Companion, November 15, 2024)

If their mood is good, they can accept greetings calmly; however, if their mood is unstable, their response can be minimal or even non-existent.

Managing Negative Expressions

During the learning process and interactions, when children show negative expressions such as restlessness, refusal, or loss of emotional control, caregivers immediately provide support. The mentor explains: *"I have to quickly read the early signs, such as when the child starts to avoid interaction or exhibits repetitive behavior. I immediately give them space or switch to an activity they enjoy to prevent a prolonged tantrum."* (Mentor, November 15, 2024)

The companion highlights that family involvement is an important factor in the success of the mentoring process*: "Communication with parents is usually done after the child has finished learning. I show them the notes from that day so that the strategies implemented at the learning center can also be applied at home."* (Companion, November 15, 2024)

However, the mentor also mentioned challenges in parental involvement*: "There are still differences in the level of understanding, time, and emotional readiness of parents in accepting their child's condition. So, in addition to mentoring the child, we also need to educate the parents."* (Mentor, November 15, 2024)

DISCUSSION

The findings of this study reinforce current theories regarding the characteristics of children with Autism Spectrum Disorder (ASD). Rapid mood swings and high sensory sensitivity are consistent with the research by (Lord et al., 2018), which states that individuals with ASD experience difficulties in regulating emotions and processing sensory stimuli. This has a significant impact on children's ability to maintain focus and respond to learning instructions.

The sensory sensitivity demonstrated by children with autism in this study is related to the concept of sensory processing disorder. Research by (Baranek et al., 2019) explains that children with ASD often experience hyper- or hyposensitivity to sensory stimuli such as sound, light, or touch, which can trigger negative emotional responses such as tantrums or avoidance behaviors. In the context of non-formal learning at Widya Wicara, understanding this sensory sensitivity is the basis for designing a more conducive learning environment.

Behavioral rigidity, or inflexibility in behavior manifested through difficulty adapting to changes in routine, is also an important finding. (Leekam et al., 2017) state that children with ASD tend to require structure and predictability in their daily activities. However, in the context of non-formal education, flexibility is actually a more effective approach because it allows children to learn according to their emotional readiness without the pressure of targets academic.

The difficulty autistic children have in initiating spontaneous social interactions is consistent with the social motivation theory proposed by Chevallier et al. This theory explains that individuals with ASD have lower social motivation than neurotypical children, so they tend not to seek or respond to social interactions unless they are in a stable emotional state. The findings of this study show that children with autism only respond to greetings when they are in a good mood, indicating that emotional regulation plays an important role in their social interaction abilities.

Non-formal educational environments have been shown to offer several advantages in supporting the development of children with autism. First, flexibility in the learning structure allows children to learn at their own pace and readiness without the pressure of achieving academic targets. This is in line with the research by (Anwari et al., 2025), which states that individualized and flexible approaches are more effective in improving the behavior and cognitive abilities of children with autism.

Second, non-formal environments provide opportunities for more natural and unforced social interaction. The presence of other children with special needs acts as a social stimulus that helps children with autism build social tolerance and perform social imitation. (Fajrin & Rustini, 2022) explain that the right interpersonal communication approach can improve the social interaction of children with autism in inclusive settings.

Third, non-formal education allows for the use of mentoring strategies that are more personalized and responsive to the individual needs of children. The use of two mentors in the learning process demonstrates the institution's commitment to providing special attention and preventing emotional escalation that can disrupt the learning process.

CONCLUSION

This study shows that the learning behavior and expressions of children with autism in non-formal educational environments are greatly influenced by changes in their mood and sensory sensitivity. Children often display emotional instability, so the learning process cannot be forced with specific targets and must follow their readiness and comfort level. In social interactions, children with autism do not initiate greetings and only respond when they are in a good mood. When negative expressions such as refusal or tantrums arise, caregivers need to immediately provide support so that children feel safe.

Non-formal environments have proven to be more flexible and able to adapt to children's needs compared to formal education, thus helping them learn and interact more naturally and without pressure. Responsive individual mentoring strategies, the use of multiple mentors, and family involvement are key factors in the successful learning of children with autism in non-formal settings.

This study has limitations in terms of the limited number of subjects (one child with autism) and the relatively short observation period. Further research is recommended to involve more subjects with different autism characteristics and conduct longitudinal observations to see long-term development. In addition, comparative research between formal and non-formal education is needed to gain a more comprehensive understanding of the effectiveness of each approach.

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