

COMMUNICATION SKILLS EXHIBITED BY A CHILD WITH ASPERGER SYNDROME

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Abstract

Autistic children experience verbal and nonverbal communication disorders categorized as primary language disorders and secondary language disorders. The disorder can affect all levels of language and persist into adulthood. In addition, the disorder can have a wide impact on the life of sufferers. On the other hand, the number of people with autism in Indonesia is increasing every year. This study aimed to examine an Asperger Syndrome child's communication skills using Scovel's theory which includes four stages, namely conceptualization, formulation, articulation, and self-monitoring. The research design used in this study is qualitative descriptive with the Single Subject Research (SSR) method. Data were gathered from an Asperger Syndrome child registered at SLB 1 in Makassar, through observation, interviews, and documentation. The research instruments were composed of the researcher as the primary instrument, and supporting instruments, which comprised an instrument to assess autism ability, observation guides, interview guides, and recording devices. The autism ability instrument is guided by the Diagnostic and Statistical Manual of Mental Disorders. Data analysis techniques are data transcription, data reduction, data presentation, and conclusion withdrawal. The findings revealed that the child's level 2-conceptualization ability (requires great support) was influenced by his level of focus, frequency of learning topics, and expression of desire. The child's formulation ability was at level 2 (needs considerable assistance) and was influenced by his attentiveness and comprehension of a topic. The articulation ability exhibited by the child was at level 1 (needs support) with several articulation disorders, including substitution (sound changes), omission, addition, and distortion (clutter). Due to the child's inability to recognize speech errors, his self-monitoring ability was classified into level 3 (requires enormous support). Variations in the level of ability shown by the child are a manifestation of deficits in Asperger's Syndrome.

Keywords: Communication, autistic child, asperger syndrome

Abstrak

Anak autis mengalami gangguan komunikasi verbal dan nonverbal yang dikategorikan sebagai gangguan bahasa primer dan gangguan bahasa sekunder. Gangguan ini dapat mempengaruhi semua tingkat bahasa dan bertahan hingga dewasa. Selain itu, gangguan tersebut dapat berdampak luas pada kehidupan penderitanya. Di sisi lain, jumlah penyandang autisme di Indonesia semakin meningkat setiap tahunnya. Penelitian ini bertujuan untuk mengkaji kemampuan komunikasi anak Sindrom Asperger dengan menggunakan teori Scovel yang meliputi empat tahap, yaitu konseptualisasi, formulasi, artikulasi, dan pemantauan diri. Desain penelitian yang digunakan dalam penelitian ini adalah deskriptif kualitatif dengan metode Single Subject Research (SSR). Data dikumpulkan dari seorang anak Sindrom Asperger yang terdaftar di SLB 1 Makassar, melalui observasi, wawancara, dan dokumentasi. Instrumen penelitian terdiri dari peneliti sebagai instrumen utama, dan instrumen pendukung, yang terdiri dari instrumen untuk menilai kemampuan autisme, pedoman observasi, pedoman wawancara, dan alat perekam. Instrumen kemampuan autisme berpedoman pada Diagnostic and Statistical Manual of Mental Disorders. Teknik analisis data adalah transkripsi data, reduksi data, penyajian data, dan penarikan kesimpulan. Temuan mengungkapkan bahwa kemampuan konseptualisasi tingkat 2 anak (membutuhkan dukungan besar) dipengaruhi oleh tingkat fokus, frekuensi topik pembelajaran, dan ekspresi keinginan. Kemampuan formulasi anak berada pada level 2 (membutuhkan bantuan yang cukup besar) dan dipengaruhi oleh

perhatian dan pemahamannya terhadap suatu topik. Kemampuan artikulasi yang ditunjukkan anak berada pada level 1 (perlu didukung) dengan beberapa gangguan artikulasi, antara lain substitusi (perubahan suara), penghilangan, penambahan, dan distorsi (kekacauan). Karena ketidakmampuan anak untuk mengenali kesalahan bicara, kemampuan pemantauan dirinya diklasifikasikan ke tingkat 3 (membutuhkan dukungan yang sangat besar). Variasi tingkat kemampuan yang ditunjukkan oleh anak merupakan manifestasi dari defisit dalam Sindrom Asperger.

Kata kunci: *Komunikasi, anak autis, sindrom Asperger*

INTRODUCTION

The ability to produce and comprehend language influences the success of communication. Incapacity in one of these areas can wreak havoc on the communication process (Fimawati et al., 2017). When communicating, the brain's functioning process assists an individual in thinking, and this process results in the ability to talk for everyone (Saodi et al., 2021). The brain's functioning results in a variety of unique speaking abilities. Language disorders are responsible for the differences that develop. Language disorders are abnormalities of the brain and speech organs that result in difficulty with both productive and receptive language. Snowling et al. (2020) demonstrated a correlation between language impairments and phonological difficulties related with decoding. Language disorders are divided into two factors, namely medical and environmental factors. Language disorders caused by medical factors are those caused by aberrant brain function and speech apparatus abnormalities, whereas language disorders caused by environmental factors arise when an individual is excluded or isolated from society's natural environment (Chaer, 2015). Language disorders can also impair basic interpersonal communication between humans (Paul, 2020). One group that suffers from language disorders are children with autism.

Autism affects both verbal and nonverbal communication in children. Autism disorders are classified as primary language disorders and secondary language disorders (Ritonga & Hasibuan, 2016). Primary language disorders are those caused by congenital abnormalities, and secondary language disorders are those induced by environmental circumstances. Autism is characterized by neurological issues that impair a child's thoughts, perceptions, and attention, so impeding the child's development in talking, interacting, and envisioning. Children with autism have a proclivity to live in their own worlds, oblivious to the world around them. According to Kandouw et al. (2018), individuals with autism spectrum disorders have difficulties with social interaction, communication, and repetitive behavior. Autism behavior is classified into two types: excessive behavior and deficit behavior (deficiency). Hyperactivity and tantrums, in the form of screaming, biting, clawing, hitting, and self-harm are all examples of excessive conduct (self-abuse) in autistic children. Meanwhile, behavioral deficiencies are defined by speech abnormalities, incorrect social conduct, sensory deficits to the point of deafness, and inappropriate emotions such as spontaneous laughter, spontaneous crying, and daydreaming (Handojo, 2004).

Autism can impact all levels of language ability performed by a child and continue to do so until the child reaches

adulthood (McMurray et al., 2019). Autism also impairs a child's language on all levels, as the process of language involves a variety of cognitive, physical, psychological, and emotional components. As a result, language abilities in children with autism are prone to delays or systemic harm. If not treated early, these disorders can have a significant influence on the lives of children with autism (Sekarsari et al., 2021). Unfortunately, the number of people with autism in Indonesia has increased every year (Wardiani, 2018). In 2015, around 12,800 children, or one in every 250 children, had autism (Naibaho et al., 2017). Numerous studies have been undertaken on speech difficulties in individuals with autism. Fimawati et al. (2017) discovered that an autistic child with PDDNOS at *SLB Muhammadiyah Sidayu Gresik* struggled with language production, constantly repeating the same words, phrases, or sentences from the other person when they were unable to understand the meaning of the discussion. The results of Pujiati & Yulianti (2018) research showed that there are various language disorders such as phonological problems (phoneme addition, phoneme reduction, and phoneme alterations) and pragmatic problems (difficulty communicating and understanding speech well) experienced by Attention Deficit Hyperactivity Disorder (ADHD). Additionally, study conducted by Setyawan et al. (2019) indicates that autistic children have challenges with expressive language, including difficulty articulating words containing the phonemes *k*, *n*, *m*, *r*, *t*, and *ng*, speaking in short sentences, and being unable to engage in discussion.

Previous research on language disorders in autistic children, as noted above, has been confined to elucidating the difficulties associated with several kinds of autism. Similar to the research conducted by Fimawati et al. (2017), this study applied Scovel's theory of language production to the analysis of an autistic child's linguistic abilities. However, this study focused on a distinct subtype of autism in terms of subject selection. The current study also shared a research objective with Pujiati & Yulianti (2018) and Setyawan et al. (2019), which was to evaluate linguistic impairments in autistic children. The distinction between this study and the previous ones is in the type of autism investigated and the theory employed to assess the autistic child's language impairments.

A critical aspect that has not been revealed, as well as a distinction between earlier and present research, is the communication skills demonstrated by individuals with Asperger Syndrome (AS) and the theory upon which the study is based. The difference becomes the uniqueness of this research so that it has an element of novelty. In addition, the theory used to examine research problems has been done. Therefore, this study has the feasibility and state of the art. As a result, this study examined the communication skills exhibited by an autistic child with Asperger Syndrome. Asperger Syndrome is a disorder that alters how persons on the autistic spectrum's brain responds to information. Individuals with Asperger Syndrome have trouble comprehending their thoughts, feelings, and modes of communication with others, as well as

sensory difficulties that can trigger anxiety and panic (Indah, 2017).

The disclosure of communication skills of autistic children with Asperger Syndrome in this study used Scovel's theory. According to Scovel's thesis, people produce language in four stages: conceptualization, formulation, articulation, and self-monitoring (Fimawati et al., 2017). The purpose of this study was to analyze the communications skills demonstrated by an autistic child with Asperger Syndrome using Scovel's theory of communication. This research is critical because it will provide insight on the communication skills of autistic children diagnosed with Asperger Syndrome.

METHOD OF RESEARCH

The current study was designed as a descriptive qualitative study that employed the Single Subject Research (SSR) method. The focus of this study was to analyze the communication skills performed by an autistic child with Asperger Syndrome based on Scovel's theory of communication that consists of

four stages, namely conceptualization, formulation, articulation, and self-monitoring. The source of the research data was a child with Asperger Syndrome who was attending Public Special School Number 1 (*SLB Negeri 1*) in Makassar. Data collection in this research was performed through observation, interview, and documentation. The autism ability instrument is guided by the Diagnostic and Statistical Manual of Mental Disorders. Data analysis techniques are data transcription, data reduction, data presentation, and conclusion withdrawal.

DISCUSSION

Conceptualization ability

Conceptualization is the stage at which language is conceptualized or designed in communication. Conceptualization ability is influenced by the level of focus, frequency of learning topics, and disclosure of desires. The following sections describe the research findings regarding the subject's conceptualization ability, where GPK refers to Special Education Teacher and L refers to the research subject's initial.

Datum (1)

GPK : Read again number 5, L!

L : The "biru" (blue) color *dicampukan* (is mixed) with the yellow color will produce the color? dengan wana

GPK : What color?

L : Wall paint

GPK : (*laugh*) will produce? what color?

L ; *Wana* (color)

GPK : What color?

L : *Wana*

GPK : Green. Sit! Sit! (K.TK.TF-1)

Context:

The student was participating in a cultural art session centered on color combinations. L sat in the front seat, clutching a reading paper, and making unfocused or restless gestures.

Datum (1) demonstrates that L was able to comprehend the GPK instruction for reading the question. However, when L was not in a focused condition, he

struggled to conceptualize the speech. This is evidenced by his spoken behavior, namely repeating the words, or parroting the GPK.

Datum (2)

GPK : What are your friends' names?

L : Landa, Uya, Qadri

GPK : When were you born?

L : May 6, 2004

GPK : What is your school Principal's name?

L : *Pak* Andi Hamjan

GPK : Good! (K.FT.R-1)

Context:

Datum (2) illustrates learning using word cards that contain both pictures and words. The questions asked by the GPK were related to the word elements on the cards. The GPK asked while pointing at the picture on the card. L focused on the card.

Datum (2) shows that L was able to conceive speech in response to GPK's questions concerning the name of his friends, his date of birth, and the principal's name. According to the

interview results, the learning procedure including the flashcards was used in the classroom every week. Therefore, L was able to conceptualize the speech correctly.

Datum (3)

GPK : Write "Mango"!

L : Mango, M

GPK : M, yes

L : Mango

GPK : A, mango

L : mango (K.MK-1)

Context:

The GPK was showing paper displaying a picture of a mango tree. The GPK instructed L to write down the word "mango"

Datum (3) suggests that L conceptualized speech in order to articulate his wish. According to the observation, the speech was made when L attempted to write the word "mango" but was unable to. Then, L repeated the word numerous times to communicate his wish to ask the teacher how to write the word

"mango" since he was unable to articulate it in the form of imperative and interrogative speech.

The results indicate that L possesses a level 2 conceptual ability. At level 2, conceptual ability indicates "needs considerable assistance." This conclusion is influenced by a variety of factors,

including communication circumstances and surroundings. The attention element influences the ability of an individual to conceptualize speech. A high degree of focus results in a good concept, whereas a low degree of attention results in a weak concept, as shown in Datum (1). Autism sufferers' syntactic thinking is also impacted by their lack of attention. Lin et al. (2021) discovered that individuals with autism spectrum disorder have trouble understanding speech in poor or unfocused environments, which in turn interfered with their speech processing. Additionally, Tarigan (2019) argues that autistic people tend to generate syntactic patterns when they can comprehend the meaning of speech yet parrot it if they are unable to interpret it.

Subject L displayed a distinct level of conceptual capacity when the frequency of discussion topics was considered. In Datum (2), Subject L could conceptualize the speech very well if the topic of conversation were frequently discussed or taught to him. This is, of course, related to the memory storage of the information. The GPK employed flashcards that contained familiar words and questions to get to know the student, his family, and his environment as part of the learning process. The learning process facilitated the child's information retention through three stages: encoding, storage, and retrieval. Encoding is the technique by which data are stored in memory. Storage is the process of retaining data through time. Retrieval is the process of retrieving data from memory stores (Santrock, 2017).

Datum (2) demonstrates how the subject decoded information on the name of a friend, the date of birth, and the principal's name. Subject L showed a good conceptualization of the material because it was frequently delivered to him. Additionally, Datum (2) demonstrates that the stage of retrieving information occurred automatically and without any assistance or effort on the part of the user. These findings imply that information that is provided in a routine and repetitive manner could assist L in developing a sound notion.

Datum (3) explains that when a child with autism communicates a desire for something, s/he uses declarative statements because s/he is unable to explain his meaning in interrogative or imperative sentences. These impairments or deficiencies in expressive language are referred to as expressive language limitations or deficits. According to Gunardi et al. (2019), individuals with Asperger Syndrome have difficulties with social engagement and communication, as well as poor coordination. Then, So et al. (2022) argue that children with autism spectrum disorder lack receptive and expressive language skills.

Formulation ability

Formulation is a response that is given according to what is heard or seen. The following sections display the research findings regarding the subject's formulation ability, where GPK refers to Special Education Teacher and L refers to the research subject's initial.

Datum (4)

GPK : L, what is this?

L : Eye

GPK : How many are there, L?

L : Two

GPK : This? (*Pointing at the object*)

L : Ear two, ear two

GPK : Yes, this? (*pointing at the object*)

L : *Hidung* (nose) one (*the phoneme /g/ is inexplicit*)
(F.TK.F-1)

Context:

The student learned about parts of body every week. Before beginning the lesson, the GPK helped L to focus by sitting face to face with Subject L.

Datum (4) demonstrates that L was able to answer the question correctly. Subject L was able to respond to the

GPK's question because he focused on the lesson.

Datum (5)

GPK : In what year Indonesia gained its independence?

L : Year one

GPK : One thousand...nine hundred

L : Nine *latus* (hundred with weak "r")

GPK : One thousand nine hundred forty...

L : Forty (F.PT.TP-1)

Context:

The question posed by the GPK was categorized as an essay question. Subject L made a bewildered gesture and attempted to pick up a smartphone that was on the table.

In Datum (5), L repeated the phrase expressed by the GPK with the utterances of nine *latus* (hundred with weak "r") and forty. Based on observations, L tended to parrot when he could not understand the topic being discussed, namely the year of independence of the Republic of Indonesia. Subject L did not understand the topic, so he repeated the word pronounced by the teacher.

The results indicate that L possesses a level 2 formulation ability (requires big support). The data analysis demonstrated a correlation between formulation and conceptualization abilities. A strong conceptual ability results in an effective formulation,

whereas a weak conceptual capacity results in an ineffective formulation. Both abilities are mutually exclusive. The response elicited by speech has been processed in the brain. This relates to syntactic and creative thinking, both of which are conceptual in nature. Additionally, the findings of this study indicate that L's ability to reply enables just one-way communication. The autistic youngster lacks the ability to respond to questions in order to establish a two-way communication pattern. The inability to establish two-way communication is a symptom of communication impairments.

Formulation ability is determined by a person's capacity to concentrate and

the regularity with which the subject of conversation comes up. In Datum (4), Subject L and the GPK discussed body parts. This is a subject that is frequently taught in class. Additionally, the data demonstrate that L's response was proper and occurred spontaneously without any effort on his part. These situations imply that such information is routinely retrieved from the brain (Santrock, 2017). Automatic information retrieval is influenced by the subject's capacity to concentrate. Prior to beginning to learn the names of body parts, GPK trained and increased L's attentiveness. By assisting L in focusing on the topic, the teacher could raise his attention to the lesson and improve his communication weaknesses. The GPK's efforts shown in Datum (4) are consistent with research undertaken by Ballerina (2016), which indicates that boosting the focus of children with autism can help them engage in learning activities and improve their learning outcomes.

However, children with autism have transient and fluctuated level of focus that can impact their subsequent response. Additionally, a lack of comprehension of the conversation's subject may lead in varied reactions. The consequent response inclination is to parrot the speech heard. These conditions refer to deficits in the development, maintenance, and

comprehension of relationships necessary for adapting behavior to the context.

Judging from the aspect of the number of words produced, there are differences in the form of response on topics that are routinely discussed with non-routine topics. Reactions to frequently discussed issues are frequently in the form of single sentences, whereas responses to infrequently discussed topics are manifested in the form of words or phrases. The distinction is due to changes in vocabulary processing in the brain memory of children with autism, who engage in repetitive behavior and are accustomed to answering in single sentences. In comparison, due to a lack of comprehension and low frequency of issues mentioned in the classroom, children with autism prefer to imitate the speech spoken by the interlocutor (APA, 2013).

Articulation ability

Articulation refers to the pronunciation of words. The articulation ability of children with autism has various deficits, namely substitution (sound change), omission, addition, and distortion (clutter). Data on the subject's articulation ability are presented in the following sections, where GPK refers to Special Education Teacher and L refers to the research subject's initial.

Datum (6)

GPK : Number ten, L!

L : In the Papua *daelah* (area with weak "r") (A.Sub-2)

Context:

The lesson discussed in the classroom was region's name. Subject L lost his focus on the lesson. He often turned his body facing backwards or sideways.

Datum (6) shows that L was not fluent in pronouncing the phoneme /r/. Because he was not able to pronouncing

the phoneme, he substituted the phoneme with /l/ in the word *daerah* (area).

Datum (7)

L : *Banak orang berbeda* religions we *harus* (Many people with different religions, we must) (A.Om-1)

Context:

Subject L was studying Civic Education. He was reading a question on the question sheet provided by the GPK.

Datum (7) shows that L omitted the phoneme /y/ in the word *banyak*, hence pronouncing it *banak* (man).

Datum (8)

L : Deliber... (*interfered by the GPK*)

GPK : in

L : In *pemusyyawaratan* (deliberation) *pewakilan* (representation) (A.Ad-1)

Context:

The GPK asked L to recite Pancasila (the foundational theory of Indonesia)

Datum (8) shows that there is an addition of phonemes from the resulting speech, namely the addition of the

phonemes /y/ and /w/ into the word *permusyawaratan* (deliberation) so as to produce the word *pemusyyawaratan*.

Datum (9)

L : Lagu bakokoea baku dicakan dicitakan ole? (The song "bakokoea baku" was written by? (*the pronunciation is unclear*))

GPK : Who? A. T. Mahmud (A.Di-1)

Context:

The student was studying song writers. The GPK asked L to read the question that asked who wrote the song "*Balonku*" (My Balloons).

Datum (9) reveals that L was not fluent in pronouncing many words in Bahasa. Subject L "*lagu bakokoea baku dicakan dicitakan ole?*", which is supposed to be "*lagu balonku diciptakan oleh?*" (The song "Balonku" was written by?). Pronunciation errors occurred in the words *balonku*, *diciptakan*, and *oleh*. These errors belong to a distortion because there is a significant difference between the word produced with the correct word.

The results indicated that L possessed a level 1 articulation ability (requires support). According to the research findings, L could produce utterances up to the level of simple phrases, despite the presence of various articulation issues in his speech.

Articulation is critical in communication because the participants in the communication require clarity to comprehend the message given. Articulation is the process by which sounds are produced in the form of utterances of phonemes that combine to form words. Speech production involves an understanding of the phonology of speech sounds and the ability to integrate articulatory motions (jaw, tongue, and lips) with breathing and vocalizations for speech. Speakers who have trouble producing speech are likely to have difficulties with their phonological knowledge of speech sounds (APA, 2013). Among these challenges are difficulty with speech sounds. These illnesses are symptoms of the neurodevelopmental problems that affect autistic children.

Siwi (2021) revealed that the articulation ability of people with autism was influenced by external and internal factors. The environment, such as teachers

and relatives, may have an impact on the articulation abilities of people with autism. The findings of this study emphasize the critical role of a teacher in helping autistic children develop their articulation ability. A teacher can achieve this by training the child with flashcards. Additionally, the ability of children with autism to communicate can be influenced by internal factors, including the severity of autism, which is associated with neurodevelopmental abnormalities.

Self-monitoring ability

Self-monitoring is a stage of communication in which the speaker is aware of the language generated to identify and correct errors. The following sections discuss the findings on the subject's self-monitoring ability, where GPK refers to Special Education Teacher and L refers to the research subject's initial.

Datum (10)

GPK : This? (*Showing a picture of hands*)

L : Touching the hand

GPK : Yes, what else? Yes, shake hands...

L : *Berjabata* (shakiking) hands

GPK : What else? *Me...*

L : *Me...memetan* hands (PD-1)

Context:

The student was introduced to names of body parts. The GPK showed the subject various pictures of body parts.

In Datum (10), L showed poor self-monitoring ability. Pronunciation errors were found in the words *berjabata* and *memetan*. In any case, L failed to see his

error or provide any explanation for the speech he delivered. The findings of this study indicate that L's self-monitoring ability is at level 3, requiring a great deal

of support. Self-monitoring is critical in communication because it enables the speaker to analyze the produced utterance. At this point, the speaker's sensitivity to speech accuracy must be extremely strong. The analysis result indicated that L was not responsive to the expressed speech problems, and hence was unaware of his own flaws. The inability to rectify speech problems consciously and directly without assistance from others is a manifestation of language development deficits in people with Asperger Syndrome. The impairment results in reduced adaptive function, specifically the capacity of an individual to do daily activities in accordance with his or her age development (Ismaya, 2021).

The variation in the level of communication ability shown by Subject L (child with Asperger Syndrome) at the four stages of communication is a manifestation of language deficits, including neurobiological disorders that cause deficiencies in social skills such as communication (Iwanami et al., 2011). The inability to produce two-way communication creates problems in establishing social contact and shows a lack of interest in establishing contact with peers (Volkmar et al., 2012). Various deficits that affect the level of communication skills of Subject L prove the existence of disturbances in communication and social interaction based on categories by the American Psychiatric Association.

CONCLUSION

According to the findings of this study, children with Asperger Syndrome demonstrate varying levels of communication abilities at each of the four

phases outlined by Scovel's theory of communication. Conceptualization ability is influenced by the child's ability to focus on a topic, the frequency of discussion of learning topics, and the expression of desires that have an impact on his syntactic thinking and imaginative thinking. The level of attentiveness and understanding of the topic has an impact on the child's ability to formulate a response, which in turn has an impact on the resulting response. Language abnormalities such as substitution, omission, addition, and distortion were discovered in the articulation of the autistic child. Various language disorders were found in the autistic child's articulation, including substitution, omission, addition, and distortion (speech sound disorder). The child's self-monitoring ability was so weak that he has impaired adaptive function.

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