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Application of Fading in Expressive Language E-Learning for Autistic Children

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ABSTRACT
Language is a means of communication that gives symbols and meaning to thoughts and feelings to convey messages or information to others, but children with autism have difficulty in expressive language communication. This happened to children with autism in one of the special schools in the city of Sidoarjo who felt it was necessary to intervene with fading stimulus to reduce behavioral and expressive language disorders in children with autism. This study aims to determine the effectiveness of fading when applied to children with autism who have expressive language disorders. Identification of the subject, the subject in this study was a boy aged 12 years old who had an autistic spectrum disorder, specifically DSM V. The research instrument used is the observation technique of tallying behavior and rating scale to measure the behavior of autistic children who experience expressive language barriers. Observation guidelines were compiled based on the characteristics of autism contained in DSM V. This research method used a quantitative approach with experimental methods and used an experimental single-case design. Experiments were carried out by providing Fading intervention on autism subjects who had behavioral and expressive language disorders. The intervention was carried out in 5 sessions (1-2 hours per session, depending on the subject's response) within 10 days. The data analysis technique that has been collected is analyzed descriptively to describe behavioral changes that show symptoms of expressive language behavior disorders in children with autism. So that it can be concluded. Based on the results of the descriptive analysis, it can be concluded that the fading stimulus can provide a positive response to children with autism who experience expressive language behavior disorders. In this study, after being given the intervention for approximately 10 days, the subjects showed a decrease. Suggestions This research has limitations in its implementation, namely the teacher is less cooperative in carrying out the intervention process. Even so, this study showed a positive change experienced by the subject after giving the intervention for 5 sessions.

Keywords: *Autism, Fading, Expressive language.*

1. INTRODUCTION

Autism spectrum disorder (ASD) is a lifelong neurodevelopmental disorder defined by qualitative impairment in the social field [1]. Individuals with ASD show considerable heterogeneity in problems with different language components, such as phonology, grammar (morphology and syntax), semantics and/or pragmatics of interaction and communication, and repetitive and stereotyped patterns of behavior, interests, and activities [2]. There are three barriers in children with autism, namely behavior, social interaction, communication, and language. The three aspects of disorders in autistic children are interrelated [3]. The main characteristic of autism is the inability to communicate with others, as well as reduced and frequent repetition of words or such as whispering without words [3].

A person will be able to carry out social processes if he can interact with other people. The social process is an interaction or reciprocal relationship between humans with one another. But this is not owned by autistic children [4]. Disorders in autistic children are pervasive with abnormal functional characteristics in social interaction, communication, and behavior. In general, people do not understand the emergence of autistic symptoms [5]. Abnormal language development in the expressive and receptive domains occurs in most children with Autism Spectrum Disorder (ASD), although language deficits are not a core symptom of ASD [6]. For them, speaking is not easy because they experience obstacles in language development, even though the language is the main means of communication [7]. Communication is closely related to language skills, communication will

be difficult for them if they do not have the ability or language skills first [8].

Autism can be defined as a developmental disability that most affects verbal and non-verbal communication social interactions [3]. Interaction and communication, and behavior patterns of children with autism are hampered, due to stereotypes in children with autism spectrum disorders [1]. Communication has a relationship with language skills, it is impossible for a human being to communicate if he does not have language skills or language skills. Language is a means of communication that gives symbols and meanings to thoughts and feelings to convey messages or information to others, but children with autism have difficulty in communicating with expressive language. This happened to children with autism in one of the special schools in the city of Sidoarjo who felt the need to intervene with fading stimulus to reduce expressive language behavior disorders in children with autism.

There are two main aspects of language, namely receptive language, and expressive language. Receptive language is the ability to receive and understand language, while expressive language is the ability to express oneself verbally. Receptive ability is when someone can receive the message conveyed by the other person well and carry it out. While expressive ability is when a person can express the desire to be conveyed through body language or symbols that have been agreed upon. Expressive language is also said to be the ability to use the language both orally, in writing, signs, symbols, or body movements. [8] Explaining that expressive language skills or the ability to pronounce are very important in everyday life because when children need help or want something, children will easily convey it to those around them and other people can also easily understand what is happening. what children need and want. However, in children with autism, the ability to use expressive language in speaking is experiencing obstacles. As it is known that autism is a developmental disorder that includes disturbances in language/communication, social interaction, and behavior.

Some children with autism do not make an effort to communicate verbally. Meanwhile, if a child with autism can speak but is not used to communicate and the language used cannot be understood and repeated. [1] describes individuals with ASD children showing variability in receptive and expressive language scores on average with the majority scores lower in general children. The script-fading procedure, however, is an effective behavioral analysis technique that can be used to teach social interaction skills to people with autism. The script-fading procedure incorporates many of the responses required to engage in social interaction, such as approaching other people, initiating conversation, orienting to those speaking, waiting while the other person is speaking, and understanding, initiating reciprocal responses [9]. The script-fading procedure aimed to observe an increasing number of unscripted social interactions emitted by participants as scripts. Unscripted social interaction is usually defined as a distinct statement from.

The scripts provided in teaching are more than just verb tenses, conjunctions, articles, prepositions, or pronouns [9]. Many researchers have increased the number of unscripted social interactions emitted by people with autism by using script-fading procedures [9]. Fading stimuli have been used to improve adherence in children with autism [10]. Based on the results of observations carried out by research in the field, it was found that the condition and characteristics of one of the children with autism experienced barriers to the development of expressive language. The subject is a twelve-year-old boy with autism. The subject has impaired expressive language development which is indicated by the inability to show the desire for objects around him.

The subject only mumbled which was difficult for the teacher and the surrounding people to understand. The subject does not give a refusal if his wish is not fulfilled, just shut up and accept this. The subject here is a child with autism who is only able to say one word such as, "mama", "thank you" and "what". The subject's inability to express language makes people around him unable to understand what will be conveyed, therefore the subject has difficulty in fulfilling his desires and needs. The subject here is a child with autism who prefers learning with a visual learner learning style, seen in his learning, one subject is more enthusiastic and focused when the teacher uses visual media such as flashcards which contain pictures with colors that are very attractive to the subject.

Based on the problems that exist in the research subject will use E-learning learning media with a full picture display to increase children's motivation in learning, and make it easier for them to understand it. The researcher chose social media, youtube, and flashcards, which were very popular with the subject, which presented the introduction of the names of objects around them.

This YouTube social media displays moving images about objects that are around the subject, with this moving image, it can focus more and produce the subject's attraction to the media. Then the flashcard functions to combine images that match the appearance in the youtube video. This study aims to determine the effectiveness of fading when applied to children with autism who have expressive language disorders. Which is applied with the help of technology following the current developments.

2. METHOD

The subject in this study was a boy aged 12 years who had autistic spectrum disorder regarding DSM V.

The research instrument used is the observation technique of tallying behavior and rating scale to measure the behavior of autistic children who experience expressive language barriers. Observation guidelines are based on the characteristics of autism contained in DSM V.

This research method uses a quantitative approach with experimental methods and uses an experimental single-case design. Experiments are carried out by providing intervention Fading on the subject of autism with behavioral disorders Expressive language. The intervention was carried out in 5 sessions (1-2 hours per session, depending on the subject's response) within 10 days.

The analysis technique of research data that has been collected is analyzed descriptively to describe behavioral changes that show symptoms of behavioral disorders Expressive language in children with autism

3. RESULTS AND DISCUSSION

The intervention given to the subject was a fading stimulus method to help the subject reduce the expressive language behavior disorder he was experiencing. The target of this intervention is to reduce the expressive language behavior disorder displayed by the subject at school. The researcher cooperates with the homeroom teacher and parents in implementing the fading stimulus. The researcher asked the homeroom teacher and parents to monitor the changes or progress experienced by the subject.

Table 1. List of expressive language of ASD

Expressive Language	H1	H2	H3	H4	H5	H6
Make noise when asked about stationery preparation		1	3	5	5	6
Do not play and join with his friends.	9	8	6	5	5	3
Silent or not responding when his friend took his writing instrument	12	9	8	7	7	5
Turns around when his friend calls him in class	2	4	7	7	8	11
respond when disturbed by his friends in class			1	1	2	2
Asking for coloring tools during art lessons			1	1	2	2

Based on the results of observations made, it can be concluded that there is an expressive language behavior disorder, about how children cannot express their wishes to the people around them. Like when a child wants an object, the child only reacts unruly and loses focus in learning, this certainly interferes with the learning process at school. So here the subject shows the difficulty of expressing what the subject wants. Meanwhile, when at school, the subject was more silent. The silent behavior is shown by the subject consistently occurs in social situations where the subject is expected to be able to express his desires at school and home.

The explanation of the intervention process will be described as follows:

Session 1,

The researcher tried to make the subject comfortable with the presence of the researcher, at first, the researcher approached the subject slowly at school, namely when the subject's family came to pick him up from school.

At first, the subject always avoided the researcher and refused to make eye contact. When the researcher approaches the subject by applying a fading stimulus, the subject can slowly show his acceptance of the presence of the researcher even though his parents are not nearby.

Session 2,

After the subject felt quite comfortable with the presence of the researcher, the researcher then introduced himself to the subject. At first, the subject seemed aloof, when introduced the subject still seemed shy and avoided interaction with the researcher.

Session 3

After looking quite comfortable with the researcher, then the researcher gave a YouTube video with the introduction of the names of objects at school, the subject seemed to focus on seeing moving images, becoming the subject's attraction so that the situation was still well controlled. The video was played, the researcher explained the names of the objects that appeared in the video verbally. The subject follows the name of the object that has been mentioned. In the video, objects that exist in school are shown and also show uses such as one example is "pencil". The pencil in the video scene shows a child writing on paper.

Session 4

After the subject received a video presentation about the introduction of objects in the classroom, after that, the subject did the activity of matching the images on the flash-card with the objects displayed in the video. This is so that children can remember more about objects around them at school.

Session 5

After the subject can match the flash-card, the picture of the stationary object with the image with the video, then the child is given writing activities, which have provided a notebook correctly and well, this is to stimulate the child's response to ask for what he wants in his needs, for example, ask the teacher for a pencil, the subject, in this case, can still communicate by "pointing" the object, the subject has not displayed verbal communication to ask the researcher for a pencil.

Table 2. ASD students' behavior

Behavior	Behavior				
	Never	Seldom	Once in a while	Often	Always
Make noise when asked about stationery preparation			✓		
Do not play and join with his friends.		✓			
Silent or not responding when his friend took his writing instrument		✓			
Turns around when his friend calls him in class				✓	
respond when disturbed by his friends in class				✓	
Asking for an i-coloring tool when teaching art			✓		

Based on the results of the diagnosis concerning the DSM V, it is known that the subject has autism. Autism is characterized by deficiencies in nonverbal communicative behaviors used for social interaction, ranging, for example, from poorly integrated verbal nonverbal communication to abnormalities in eye contact and body language or to a lack of understanding and use of gestures and difficulties in facial expression and communication. non-verbal. One expert explained that many children with autism child disorder continue to show language skills below their peers and most do not acquire good speaking skills. The fading stimulus intervention process given to the subject took place from April 25 to May 5, 2021. After applying the fading stimulus,

The subject's behavior has decreased, although not much. Marked by showing that the subject can ask the teacher for objects at school. This is under the results of a previous study conducted by [12] that the application of fading stimulus as an effective classroom intervention in reducing expressive language barrier disorders in children with autism. And fading can be proven that fading is an intervention program that can overcome the obstacles that occur in children with autism.

4. CONCLUSION AND SUGGESTIONS

Based on the results of the descriptive analysis, it can be concluded that the fading stimulus can provide a positive response to children with autism who experience expressive language behavior disorders. In this study, after being given the intervention for approximately 10 days, the subjects showed a decrease.

This study has limitations in its implementation, namely, the teacher is less cooperative in carrying out the intervention process. Even so, this study showed a positive change experienced by the subject after giving the intervention for 5 sessions. Therefore, it can be suggested to parents/teachers to apply stimulus fading strategies to children with autism.

AUTHORS' CONTRIBUTIONS

All authors conceived and designed this study. All authors contributed to the process of revising the manuscript, and at the end all authors have approved the final version of this manuscript.

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