

## HOW DO ADULTS WITH ASD MAINTAINING TOPIC ? : A LINGUISTIC ANALYSIS IN INCLUSIVE EDUCATION

**Ulfa Kurniasih**

*Institut Agama Islam Negeri Pekalongan  
ulfakurniasih@gmail.com*

### ABSTRAK

Penelitian ini merupakan perluasan dari penelitian sebelumnya yang meneliti anak-anak dengan Spektrum Autisme Disorder (selanjutnya disebut: ASD) (Manolitsi & Botting, 2011) dalam kaitannya dengan aspek wacana yang mempengaruhi kohesi dan koherensi wacana lisan (Bishop, 1999). ASD menunjukkan kesulitan dalam komunikasi sosial (defisit dalam komunikasi sosial) (Solomon, 2004), serta minat yang terpaku dan perilaku berulang yang dijelaskan dalam Manual Diagnostik dan Statistik untuk Gangguan Mental, edisi kelima (DSM-V ; APA 2013). Dalam komunikasi, individu dengan ASD yang mampu melakukan dialog timbal balik dengan orang lain umumnya merasa kesulitan untuk beralih secara fleksibel dari satu topik ke topik lainnya. Mereka sering memberikan tanggapan yang tidak tepat terhadap petunjuk yang diberikan oleh orang lain (Tager-Flusberg & Anderson, 1991; Volden, Coolican, Garon, White, & Bryson, 2008). Penelitian ini merupakan studi kebahasaan yang didasarkan pada aspek psikologis dan wacana interaksi verbal orang dewasa dengan ASD. Penelitian ini menggunakan tuturan spontan 2 orang dewasa dengan ASD sebagai data primer dan tanggapan 6 orang dewasa normal sebagai data sekunder. Tujuan penelitian ini adalah untuk melihat fitur-fitur yang digunakan orang dewasa dengan ASD dalam mempertahankan topik narasi dan bagaimana kelompok sekunder memahami topik. Hasil penelitian ini dapat digunakan sebagai langkah awal dalam mendiagnosis gangguan komunikasi yang dialami oleh orang dengan ASD.

**Kata kunci:** autisme, pemertahanan topik, pendidikan inklusi

### ABSTRACT

*This research is an extension of previous research investigating children with Autism Spectrum Disorder's (hereafter: ASD) spontaneous speech (e.g., Manolitsi & Botting, 2011) in relation with aspects of discourse that influence a spoken discourse's cohesion and coherence (e.g., Bishop, 1999). Individuals with Autism Spectrum Disorder, hereafter ASD (Solomon, 2004) show difficulties in social communication, as well as fixated interest and repetitive behavior explained in the Diagnostics and Statistics Manual for Mental Disorder, fifth edition (DSM-V ; APA 2013). In communication,*

*individuals with ASD who are able to do reciprocal dialogue with other people commonly feel difficulty to switch in a flexible way from one topic to another. They often give improper responses to the hints given by other people (Tager-Flusberg & Anderson, 1991; Volden, Coolican, Garon, White, & Bryson, 2008). This research is a linguistic study based on the psychological aspects and discourse of adult verbal interaction with ASD. This study used 2 adult spontaneous speech with autism spectrum as primary data and 6 normal adults as secondary data. The focus of this research is the features that adults with autism use in maintaining narrative topics and how the control group understands as listeners to the narratives produced by adults with ASD. Finally, the result of this research can be the first step in diagnosing communication disorders experienced by people suffering from ASD.*

**Keywords:** *autism, maintaining topic, inclusive education*

## INTRODUCTION

Autism Spectrum Disorder (ASD) is a developmental disorder experienced by someone since childhood, causing disability in communicating and expressing his/her feelings. The term autism comes from Dr. Kanner's research on the behaviours of 11 children who become his patients (Feinstein, 2010, p. 24) that was started in 1938-1943. Based on the research conducted, Kanner gives some features as diagnoses on his patients, which are less affective contact with others, obsessive desire to do the same and repeated routines, interest in things handled by soft motoric movement ability, and mutism or some situation in which someone is without the ability to talk (Feinstein, 2010, p.

24). Schopler, Yirmiya, Shulman, & Marcus (2002) state that autism is defined as social spectrum intrusion, from the condition with less awareness toward the surroundings, mental retardation, to *High Functioning* Autism (HFA). The use of the term spectrum can also cover various symptoms and level of impairment (weakening) experienced by people having *Autism Spectrum Disorder* (ASD) in different levels. Frith (2003, p. 2) states that autism suffered by someone can affect all levels of intelligence, language, as well as the level of severity of the disorder experienced. In a different explanation, Frith (2008, pp. 3-4) states that autism starts when the fetus is in the womb, in relation with the development of the brain. When children's body sensors are active,

those having ASD start experiencing difficulties in responding to social signals. Those with ASD lack emotion toward social condition, have difficulties in doing actions, reactions, and other signals supposedly done by normal people. Consequently, people with ASD cannot adjust themselves socially and they do not do physical contact nor reactions toward small matters.

This research is use qualitative method based on interpretation (Creswell, 2014) to see features that adults with autism use in maintaining narrative topics and how the control group understands as listeners to the narratives produced by adults with ASD.

### **Cohesion and coherence**

Discourse is usually related to a language study in a text and conversation. McCarthy (1991, p. 12) stated by that discourse is related to not only description and oral interaction analysis but also writing. In the research about discourse, the communication form expected by McCarthy (1991) is a coherent communication. Coherent communication is when words or

sentences are related to one another in a proper way conventionally. Every discourse, both in oral and writing, has certain meaning and interpretation depending on (a) speaker and listener in oral discourse, (b) reader and writer in witing discourse, (c) language external factors related to all aspects starting from punctuation, vocabulary, to sentence structure, and (d) the discourse continuity between sentences and between paragraphs (McCarthy, 1991).

Halliday & Hasan (1989) states that a text must have unity to be able to be comprehended holistically. Such unity includes two main parts, which is cohesion unity and coherence unity. Cohesion unity is related to how a language functions in unifying the text in order that it can be comprehended by readers. Whereas coherence unity is related to how listeners can comprehend the meaning which is built and presented in a text.

Series of utterances in a conversation can be considered cohesive if the entities given refer to the same referents. Cohesion is a form of the relationship of literal

components in a text. Those components form sequences that are related with one and another in accordance with the grammatical convention so that the text reaches its unity. In other words, cohesion is gramatically dependent.

### RESEARCH PARTICIPANTS

Participants in this research are categorized into two groups, the first group as the speakers and the second group as raters. The first group have undergone psychology test using CARS test, Stanford Binet, and Grafis to see their level of intelligence and the autism severity. Based on the examination result, the two participants meet the ASD criteria with very low ability in taking care of themselves if compared with normal people of the same chronological ages. The test result shows that the two participants still need guidance or help from others to keep improving their skills (*requiring substantial support*).

Table 1. Psychological evaluation

Identity	A	B
<b>CARS</b> ( <i>Chilhood Autism Rating Scale</i> )	<i>Severe</i>	<i>Severe</i>
<b>Mental Age</b>	6	7;6

(MA)		
<b>Cronological Age (CA)</b>	25;3	22;9
<b>IQ</b>	24	34
<b>Clasificasion IQ</b>	<i>Mentally defective</i>	<i>Mentally defective</i>

The two participants are selected due to some reasons. First, the two share the same background of having undergone psychology test and classified as people with ASD with mentally defective condition. Second, they both are individuals with ASD capable of using Indonesian language without any problems with their speech and hearing organs. Third, the two participants are able to respond and interact well in social context with people they just know.

The second group of this research consists of 12 adults who give scores on the audio recording produced.

### METHODS AND DATA COLLECTION TECHNIQUES

The research method used in this research is qualitative method based on interpretation (Creswell, 2014). In addition, this research uses case study method (*single case design*) involving the researchers in its further investigation and thorough

examination on one individual's attitudes.

This research uses verbal utterances as the means of preliminary data collection. The recording activity is conducted at the school for special needs people or Sekolah Luar Biasa (SLB) BCD Nusantara Berasrama (boarding) in Beji, Depok.

In conducting the research, two methods are employed. The first one is no aid(s) method and the second one is using aid(s). In the first method, the researchers prepare theme(s) to be asked to the research participants. The big themes are about holiday and favourite game(s). Whereas in the method using aid(s), researcher prepares *cookie theft* picture(s). *Cookie theft* picture(s) is used as the research aid(s) as it is considered as the common standard tool used to see language production in some language disorders such as aphasia (Goodglass, Kaplan, & Barresi, 2001).

### **EXPLAINING THE INCOMPREHENSIBILITY OF THE UTTERANCES OF SPEAKERS WITH AUTISTIC SPECTRUM DISORDER**

This section elaborates the findings that emerge based on the analysis done to the judgments of the adult listeners and utterances of the individuals with ASD.

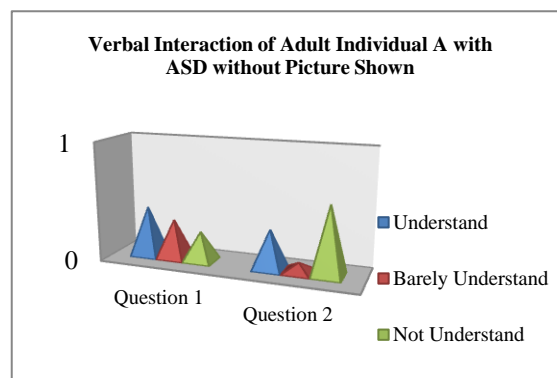
#### **Listeners' response towards the spoken discourse of individuals with ASD**

All verbal interactions that are listened to by the listeners are of two parts, spoken discourse with an aid and without aid. In the following analysis, visuals displaying listeners' response are shown in listeners' response towards the spoken discourse of individuals with ASD.

In the following figures, we can see the illustration of listeners' responses which consists of three scoring items, namely understand, do not fully understand, and do not understand. Furthermore, listeners are given two kinds of questions to see how far listeners comprehend the verbal interaction heard. In figure 1 without picture, individual A with ASD is asked by the interviewer to tell a story about holiday/vacation, and the listeners are asked to answer two questions, and those are (1) whether or not utterances on the theme heard are already in line with

the questions asked by the interviewer so that those can be understood by the listeners; and (2) whether or not the verbal interaction uttered can be understood by listeners as chronological. Based on the responses given, listeners tend to answer that the verbal utterance interaction produced by individual A with ASD takes place in a not chronological order. This not chronological condition occurs due to individual A's failure in telling the activities of the holiday/vacation in a chronological order, and the story tends to switch from one topic to another.

Meanwhile, the listeners listening to the speech of individual B who is ASD describing a picture shown in Figure 2 are given two questions, those are (1) whether or not the theme heard already represents the picture so that it can be understood by the listeners; and (2) whether or not the message heard by the listeners is in line with the message in the picture. Based on the listeners' responses, they tend to agree that the theme by individual B already represents what is in the picture. Such comprehension is



closely related to the appropriateness between the topic uttered and the one in the picture, which shows situation in *cookie theft*. Such appropriateness occurs as there is unity that holds the story as one entity, known as topic maintainance.

The discussion of listeners' response is after the following figure. The figure gives an illustration on listeners' comprehension towards the spoken discourse of individuals with ASD without aid and with aid.

Figure 1 Verbal interaction of adult A

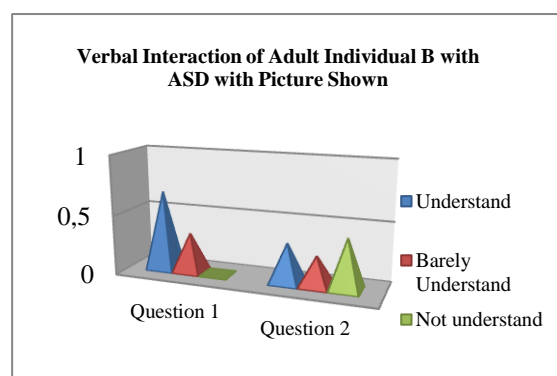


Figure 2 Verbal Interaction of adult B

Maintaining a topic is obviously observed if an object mentioned at the first turn is repeated in the next sentence. Such repetition can take place in the same form or can also be sequences referring to the first object mentioned. The model of topic maintenance of individual B who is ASD can be seen in the following data. In the following tables, excerpts of utterances are labelled P for those uttered by the researchers, A and B for the ones uttered by the participants with ASD.

Table 3. Participant B's topic maintenance

<p>(1) [...]</p> <p>(1B) I understand why I <b>don't want to like the picture that chaos.</b></p> <p>(2) Plates and cups.</p> <p>(3) Plates on cupboard.</p> <p>(4) That <b>confused</b> (points to picture).</p> <p>(5) Friends take the cookie that <b>its chair falls.</b></p> <p>(6) This <b>now becomes flood</b> this (points to picture). [...]</p>
<p>(2) [...]</p> <p>(1P) <b>Remember this?</b> (shows <i>cookie theft picture</i>)</p> <p>(2B) Oh, <b>already remember.</b></p> <p>(3) If <b>remembers</b> then we already finish that who still commits chaotic things.</p> <p>(4) <b>Already already already. Already remember</b> [...]</p>

Source: Authors' data

The utterance segment above tells the reasons why B does not like the *cookie theft* picture offered by the researcher. B since the first of his story has shown his dislike toward the picture. When asked about the reasons behind his dislike on the picture shown, B states some reasons which are linked one and another on why he dislikes the picture, by saying *I don't like* as an early signal followed by *confused, chaos, chair falls, and flood.*

The action of maintaining a topic can also be observed by noticing the use of form repetition. Repetition can occur on the answers coming from questions that are categorized as closed questions. The way to maintain a topic by repeating the form is as follow.

Maintaining topic in verbal interaction segment above is marked with the conversation topic repetition. In that segment, repetition occurs when participant B answers questions coming from the interviewer about whether or not he still remembers *cookie theft* picture shown a moment ago. Participant B answers *remember* with repetition in every part of answers (2)-(3) whereas

part (4) and (5) share meaning related to *already remember* as asked by the interviewer (1).

**Listeners' Failure in Comprehending the Topic Unity in A Discourse**

Listeners' failure in comprehending the audio recording heard is assumed to happen because of two reasons: topic drift and topic shift. Based on the graph previously shown, it shows that in general listeners do not fully understand the verbal interaction of the individual participant with ASD in every topic.

a. Topic Drift

Topic drift can be categorized as a drift that is related to certain topics and the one related to general topic. Topic drift commonly shows certain relations noticed due to the semantics aspect between one topic to another in one topic outline. Topic drift on the utterances coming from the adult individual with ASD is shown below.

Table 4: Topic drift in the speech of participant A

(4) [...]
(1B)Dad is home.
(2) If the water becomes flood for sure will be scolded.

(3) Like that.
(4) Because turn off water.
(5) <b>If broken flooded again.</b>
(6) <b>Clothes become wet</b> if don't want to turn off water.
(7) <b>Do not cause trouble.</b>
(8) <b>Become good house people/keeper.</b>
(9) <b>Must not exist a lot of problems with water.</b>
(10) Remember. [...]

Source: Authors' data

In the segment above, the participant drifts from one topic to another. Such topic drift in (1) *Dad is home* drifts into (2) *If the water becomes flood for sure will be scolded* and to (5) *If broken flooded again*, (6) *clothes becomes wet*, (7) *do not cause trouble*, (8) *become good house*, and again (9) *Must not exist a lot of problems with water*. The data show that there is a tendency of the participants not to go back to the first topic such as 'Dad is home'. It then experiences the topic *flooded and trouble* twice. In the narration segment above, the word *water* which shows relation with flood is repeated four times. The topic drift shown above is marked with the use of conjunction at the beginning of the sentence showing the topic drift.



The case of topic drift as seen above is an example of the phenomenon of topic drift by the adult individuals with ASD, both A and B. In individual A, the general topic uttered is topic about holiday/vacation. Based on utterances produced, participant A drifts the topic once. Whereas, in individual B, the general topic produced is about *cookie theft*.

Based on the above calculations, the case of topic deviation is closely related to the level of listeners' understanding of the verbal interactions that occur. In individual A with ASD, the listeners have varying levels of understanding and are less likely to perceive the chronology of the resulting verbal interactions. This is because individual A with ASD does a lot of jumping topics or known as the *topic shift*. Unlike the case with individual B with ASD who tells a story based on a picture, the listeners have a high level of understanding of the theme relationship with the *cookie theft* image. However, in general, the listener has varying degrees of understanding of the message

delivered. This is reflected in the number of topical deviations done.

#### b. Topic Shift

Topic shift is a switch from one topic to another topic. The switch from one topic to another different topic is referred to as topic shift.

Table 5: Topic shift in the speech of participant B

(5) [...]
(1P) <b>Where do you go for holiday?</b>
(2A) Ususally on holidays I go <b>to the Purbalingga statue.</b>
(3) Sometimes <b>to the Purbalingga statue.</b>
(4) Sometimes <b>strolling in a mall.</b>
(5) Then in the mall get on <i>tak (...)</i> <b>get on a car.</b>
(6) Then if get on the car <b>buy.</b>
(7) <b>In the mall go to (...)</b>
(8) <b>Buy whatever.</b>
(9) <b>A lot of things. [...]</b>

Source: Authors' data

The verbal interaction segment above is a form of topic shift caused by participant's sudden memory on something, as shown in (6) and (7), about unfinished utterances in one sentence and then moves to another utterance. Signs of something unfinished are shown by the presence of pauses and sentences with no final intonation.

The case of topic shift as explained above is an example of the

topic shift phenomenon by adult individual with ASD. The topic shift, as seen on the example of individuals both A and B who suffer from ASD. In individual A's speech, the general topic produced is about holiday/vacation. Based on the 33 utterances produced, participant A shifts as many as five times. Whereas, individual B shifts the topic as many as 12 times in 143 sentences uttered.

Based on the above calculations, we can see a relationship between topic shift and the level of listeners' comprehension of the verbal interactions that occur. In individual A with ASD, the individual tends to produce a lot of topics. This is what causes the listeners to generally have a low understanding of the theme being said and not understand the existence of a chronological relationship between one story with another story. Meanwhile, listeners are able to understand the theme spoken by individual B with ASD through the inducement of the picture even though the understanding of the message conveyed tends to vary. Such diverse judgments occur due to

the presence of a shift in the verbal interactions that occur.

### **Listeners' understanding of adult individuals with ASD's verbal interactions**

The discourse of verbal interaction listened to by the listeners gives rise to differing assessments between adult individuals with ASD. In adult individuals with ASD, the listeners tend to not comprehend the message being delivered (verbal interaction with picture stimulus) and does not see a chronological series of a story (interaction without picture). The difference in comprehension is hypothesized to occur because of three things, namely (1) the transition of topics in the conversation conducted by adult participants with ASD, (2) a speech incoordination that causes the listeners to try more to relate an event to another event, and (3) the presence of more than one powerful theme that causes listeners to find it difficult to find the main theme as the core of the resulting speech.

## CONCLUSION

Identification for topics in each verbal interaction produced by adult with ASD receive the same data analysis process. The process eventually shows the ways the listeners comprehend the verbal interactions that are induced to hold a certain topic. Meanwhile, the topics that cannot be held is analyzed further to know whether the topics are drifted and shifted or not. Topic drift and shift happen more often when the participants tell a story based on the *cookie theft* picture than when they respond to the spoken stimulus/question given by the researchers. It is caused by several conditions that shift the attention of the research participants, such as the new topic appears to have been caused by unfinished story from the previous story, echolalia that appears in the middle of an utterance, until the shifting attention.

Besides, in the above explanation, we can see that context, in this case topic with pictures or without pictures, is a kind of information that affects the listener understanding to audio recording that is being listened to. Without looking

at the situation directly, the listener can directly understand the conversation through the information provided. The information later becomes the basis for the listeners' assessment to the utterances of the adults with ASD. This is highly related to the text cohesion and coherence Halliday, M. A., & Hasan, R. (1989).

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