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Phonetics Speech Pattern Of 4-Year-Old Child: Dysarthria Study

Mega Witjaksana[1],
Sholihatul Hamidah Daulay[2]
[1,2] Universitas Islam Negeri Sumatera Utara Medan
mega.witjaksana@uinsu.ac.id

ABSTRACT

Language skills is an important component of the human ability as a tool to communicate starting from the age of children and adulthood. However, when a child experiences a language disorders, it will have an impact on his growth and development. The language disorders can be in the form of difficulty in pronouncing several words in forming words so that the word has a different pronunciation from the original, which is called dysarthria. The aim of this study was to determine dysarthria language disorders of 4 years old child in terms of phonetic speech pattern aspects, including vowels, consonants, and diphthongs. In addition, this research was also to assist parents in monitoring their children's language growth. Descriptive qualitative method was used in this study to examine the phonetics speech pattern in language disorders. The participant of this study were 4-year-old-child, observations and interviews of children and mother were conducted to obtain the necessary data. The findings of this study there are 5 words that are incorrect in pronouncing vowels which consist of 3 types of vowels changes, namely vowels “u” to “o”, “e” to “i”, “a” to “e”, and then, there are 22 words that are incorrect in pronouncing consonants which consist of 4 types of consonants changes, namely consonants “r” to “l”, “s” to “c”, “l” to “y”, “k” to “t”, and last, there are 9 words that are incorrect in pronouncing diphthongs which consist of 5 types of diphthongs changes, namely diphthongs “au” to “wu”, “ai” to “e”, “au” to “o”, “ua” to “uw”, and “ia” to “e”.

Keywords: ***Children, Dysarthria, Language Disorders, Phonetics***

INTRODUCTION

Language is a means of communication acquired by humans from birth. Mastery of language by a child begins with the mastery of the first language which is often called the mother tongue. Language is essentially a system of arbitrary sound symbols used by members of social groups to work together, communicate, and identify themselves (Kridalaksana, 2002). Language is a necessity for living things, especially humans. Language is a spoken activity that involves two or more people to provide

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information. The first person acts as a speaker (stimulus) and the second person will provide a response. Living things such as animals, only emit sounds that cannot be called language or speech. According to Chaer (2012: 56-57) the nature of language is human, which means that other living things such as plants and animals cannot carry out similar activities called language.

According to Tarigan (Kurniawan, 2015) language is a system of sound symbols that have arbitrary and conventional meaning and articulation (the resulting speech instrument), which is used to communicate with each other to create feelings and thoughts. In other words, language is a sound symbol used by the community as a medium for delivering messages with interpersonal or group speech aids. Chomsky pioneered the theory of nativism which says that every human being has a talent for language. This opinion is contrary to Watson's theory of behaviorism, namely humans can speak due to the stimulus and response. If these two theories are considered carefully, the two theories can be combined in language. Everyone is equipped with a complete language tool. However, if the linguistic device does not receive the stimulus and response in the form of language properly, it is called having a language disorder.

The case of language disorders has several causes which are certainly different for each person. According to Ahmadi (2015:145) broadly speaking, language disorders are divided into two factors or causes. The first factor due to language disorders is medical, and the second is social environmental factors. Disorders in speaking one of which is articulation disorders, this is referred to as phonological disorders. Articulation disorders, namely the substitution of one sound for another or the loss of one voice, or it could be that the sound has changed completely. The fact is that children who are active, cheerful, and enjoy socializing with other people may also experience language disorders, one of which is unclear articulation or can be called articulation disorders (dysarthria).

Dysarthria is a condition in which the muscles in humans that are active when speaking become weak or difficult to control. These muscles include the muscles of the lips, tongue, vocal cords and diaphragm (Mujianto, 2018b). Conditions that can cause a person to experience dysarthria are stroke, brain tumors, Parkinson's disease, autoimmune diseases of the nerves, old age, drug dependence or alcohol abuse, and side effects due to certain drugs. Speaking is a complex job so it requires good cooperation between the organs of speech. Disorders caused by dysarthria in the form of disturbances in speech speed, volume, pressure, pitch, timing and accuracy.

At the age of children, the speech apparatus is not yet fully formed so that it produces imperfect speech sounds as well. This phonetic disorder is a natural thing for children at the age of children considering

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the formation of speech organs that are not yet perfect. However, the imperfect phoneme pronunciation cannot be tolerated when it occurs in adulthood. Impaired pronunciation of the doors velar /r/ phoneme in adults is called dysertia. This disorder is a communication barrier that can reduce self-confidence in children with dysarthria.

Dysarthria is generally known as an imperfect sounding of the phoneme /r/ so that it sounds like the phoneme /l/. Rhotacism denotes the imperfect sounding of /r/ as by making it /l/ (Garner, 2009: 66). This means that rhotacism shows the imperfection of the sound /r/ so that it becomes the sound /l/. However, in the latest case. The phonetic disturbance in the lisp is not only limited to the phoneme /r/, but also to other phonemes that are produced with /r/.

Dysarthria language disorders are caused by two factors, namely physiological factors (anatomy of body organs) and neurological (brain nerve disorders). Factors such as neurological can be caused by trauma (injury to the head) while physiological factors can be caused by ankyloglossia (short tongue). Patients with lisp usually do not feel worried about the symptoms of dysarthria they experience because according to the sufferer it does not affect their health. This is certainly not a problem with the state of their bodies. However, a lisp will hinder the communication process. Messages conveyed by lisp patients in communicating are not easy to understand clearly, especially in acute lisp sufferers. The communication process can be hampered and the message in question is difficult to convey to the interlocutor.

In society, cases of language disorders due to dysarthria are often considered trivial. Few people understand the causes of this language disorder. Though dysarthria or brain injury can affect anyone regardless of age. Brain injuries often result from a blow to the head that is in direct contact with the left hemisphere. That is why as the current generation, we must be more vigilant in all things in order to be able to reduce the percentage of language disorders, especially those caused by dysarthria.

In fact, developing children's abilities is not as easy as we imagine. We find it difficult to detect whether a child has a language disorder or not. Because of this, as educators, of course, we are required to master the ability to detect early disturbances in the growth and development of children, especially in the language process. Many people think that children who are silent, have difficulty socializing, and don't want to talk to anyone have problems with their speaking abilities. Speech problems (discourse problems) are related to neuromuscular action disorders (Kusumoputro, 1992:12).

There are several studies that have been written related to the research that the author did this. First, research was conducted by Tiara Janella Julananda (2019) in the online journal “Psycholinguistics Studies Against Speech Mechanism Disorders (Raisya and Athaya Case Study). This research about language disorder in children’s sufferers of slurred

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speech in receptive language processes and expressive (productive), which is basically includes both linguistics and non-linguistics aspects. Linguistics aspect include semantics, morphology, syntax, and phonology. While aspects non-linguistics includes a person's speech patterns, suprasegmental elements, distances and movements body and touch. The object of this research is Raisya Zhafira Aqilatunnisa and Muhammad Athaya who each 5 years old.

Second, research was conducted by Bekty Tandanintyas Sundoro, Dinari Oktaria, and Rosinawati Dewi (2020) in the online journal "Speech Patterns of sufferers of lips and the cause: Psycholinguistics studies". The discussion of this research is more focuses on the speech patterns of people with slurred speech and the causes of lips. Which method used is descriptive qualitative method. There are four informants with lips as a data source. Data collection technique in this study using interviews and a discrete phoneme test. The analysis technique used are critical analysis technique and literature review.

So, for this research were expected to be useful theoretically and practically. Theoretically, it can be useful to increase knowledge about language disorders experienced by early childhood, especially dysarthria. Learning this can also be useful for parents to be able to understand and detect causes and early countermeasures for children's language processes during their development and growth. Therefore, the researcher is interested in examining the dysarthria language disorder in children aged 4 years in the aspect of phonetic speech patterns. The purpose of this study: (1) To describe the vocal acquisition of 4-year-old knight children. (2) describe the acquisition of consonant phonology for 4-year-old dysarthria children. (3) describe the diphthong acquisition of a 4-year-old dysarthria child.

METHOD

This study used descriptive qualitative method. According to Sugiyono (2017) the qualitative descriptive method is a method based on philosophy that aims to describe objects as they are. The qualitative descriptive method aims to make a description, meaning to make a description, a systematic, factual and accurate description of the data, the nature and interrelationships of the phenomena studied. This study used qualitative methods to get an overview of the phonology of language acquisition in Indonesian children aged 4 years. The study focus on Ahmad Raziqsyah Lubis, and he is three-year-old who lives in Kampung Satu village, Sawit Seberang area. Researchers use research instruments or research tools, namely recorders in the form of cell phones, notes and pens.

The data and data sources in this study are the subjects from which the data can be obtained. Therefore, the researcher used a tape recorder to record all conversations that were being discussed by the children. Thus,

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the technique used to make observations is to invite children to play while talking or chatting and seeking information from parents about their child's development. Activities carried out by children when speaking are recorded, which are then transcribed into data. The child has said a word in a certain communication situation and its meaning is understood by the other person, it is concluded that the child has mastered the sound of the language. Furthermore, the data that has been obtained is classified based on the phonetic acquisition group. From this activity, all data is described according to the data obtained. The results of interviews with the child's parents obtained the following data.

FINDINGS AND DISCUSSION

In accordance with the problem and research objectives, the researchers obtained data in the form of voice recordings of children aged 4 years, namely vowels, consonants and diphthongs. In terms of vocals, children are not yet fluent in pronouncing words. In the case of consonants in the recording, there are additional letters that are not vowels in some words. In the recording there are also word changes in the form of adding letters to each word or diphthongs. After getting data on language pronunciation in children with dysarthria, then it will be analysed in phonetics speech patterns which will be shown below.

1. Analysis of Pronunciation of Vowels

During the course of the research on Raziq, the first thing that was discovered the difference in pronunciation of words that have vowels, where the research subject did not pronounce the vowels as they should, but he changed them into another vowel form, but he still understood the meaning of the word and did not change the meaning of word itself. Therefore, below showed the results of the findings that have been analysed, especially on the pronunciation of vowels in spoken words.

Table1. Result of analysis pronunciation of words on sound vowels

No.	Pronunciation	Correct Pronunciation	Letter Changes
1.	[ambot]	[rambut]	“u” – “o”
2.	[idol]	[tidur]	“u” – “o”
3.	[indili]	[sendiri]	“e” – “i”
4.	[anet]	[hangat]	“a” – “e”
5.	[malem]	[malam]	“a” – “e”

In the research was conducted on Raziq, it can be seen that there are change in the vowels that Raziq made while conversation, where the vowels itself consists of 5 letters namely “a”, “i”, “u”, “e”, “o”. However, in the acquisition of words produced during the course of the research, there

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were 3 changes in the vowel form in 5 words, such as “u” changed to “o” in the word “rambut” and “tidur”, after that “i” changed to “e” in the word “sendiri”, and the last “e” changed to “a” in the words “hangat” and “malam”.

2. Analysis of Pronunciation of Consonant

The next findings that the researcher was founded that Raziq as a reseach subjects did not pronounce the consonant letters properly, but he changed them to other forms of consonants, in general, dysarthria sufferers only often the consonant letters in the form of the letter “r” become “l”, but in this study the researchers found more than one consonant letter which changed letter incorrectly. But he still understood the meaning of the word and did not change the meaning of the word. Therefore, bellow showed the results of findings that have been analysed, especially on pronunciation of consonants in spoken words.

Table 2. Result of analysis pronunciation of words on sound consonant

No.	Pronunciation	Correct Pronunciation	Letter Changes	Missing Letters
1.	[acya]	[rasyah]	“s” – “c”	“r”
2.	[yubis]	[lubis]	“l” – “y”	
3.	[itan]	[ikan]	“k” – “t”	
4.	[lambot]	[rambut]	“r” – “l”	“r”
5.	[idol]	[tidur]	“r” – “l”	“t”
6.	[embel]	[ember]	“r” – “l”	
7.	[indili]	[sendiri]	“r” – “l”	“s”
8.	[lasa]	[rasa]	“r” – “l”	
9.	[anet]	[hangat]	“a” – “e”	“h”, “ng”
10.	[ate]	[sate]		“s”
11.	[bulung]	[burung]	“r” – “l”	
12.	[pasil]	[pasir]	“r” – “l”	
13.	[bakar]	[bakar]	“r” – “l”	
14.	[besal]	[besar]	“r” – “l”	
15.	[balu]	[baru]	“r” – “l”	
16.	[cayang]	[sayang]	“s” – “c”	
17.	[belajal]	[belajar]	“r” – “l”	
18.	[gulu]	[guru]	“r” – “l”	
19.	[bocol]	[bocor]	“r” – “l”	
20.	[kabul]	[kabur]	“r” – “l”	
21.	[tulun]	[turun]	“r” – “l”	
22.	[putal]	[putar]	“r” – “l”	

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In the research was conducted on Raziq, it can be seen that there are change in the Consonant that Raziq made while conversation, where the consonant itself consists of 21 letters namely “b”, “c”, “d”, “f”, “g”, “h”, “j”, “k”, “l”, “m”, “n”, “p”, “r”, “s”, “t”, “v”, “w”, “x”, “y”, “z”. However, in the acquisition of words produced during the course of the research, there were 4 changes in the consonants form in 22 words, such as “r” changed to “l” in the words “rambut”, “tidur”, ember”, “sendiri”, “rasa”, “burung”, “pasir”, “bakar”, “besar”, “baru”, “belajar”, “guru”, “bocor”, “kabur”, “turun”, putar”, after that “s” changed to “c” in the words “rasyah”, and “sayang”, next is “l” changed to “y” in the words “lubis”, and the last “k” changed to “t” in the words “ikan”.

3. Analysis of Pronunciation of Diphthong

The last findings that researched was found that Raziq as a research subject did not pronounce the vowel letters of the diphthong form correctly, but he changed them to another letter of vowels, so the pronunciation of diphthong words incorrectly. Therefore, bellow showed the results of findings that have been analysed, especially on pronunciation of diphthong in spoken words.

Table 3. Result of analysis pronunciation of words on sound diphthong

No.	Pronunciation	Correct Pronunciation	Letter Changes
1.	[alimawu]	[harimau]	“au” – “wu”
2.	[sunge]	[sungai]	“ai” – “e”
3.	[sante]	[santai]	“ai” – “e”
4.	[kelbo]	[kerbau]	“au” – “o”
5.	[soldala]	[saudara]	“au” – “o”
6.	[dano]	[danau]	“au” – “o”
7.	[uwang]	[uang]	“ua” – “wu”
8.	[buwah]	[buah]	“ua” – “wu”
9.	[duyen]	[durian]	“ia” – “ye”

In the research was conducted on Raziq, it can be seen that there are change in the vowels of diphthong that Raziq made while conversation, where the diphthong itself is double sound donated by two vowels, like “ai”, “au”, “ei”, “oi” etc. However, in the acquisition of words produced during the course of the research, there were 5 changes in the vowel form in 9 words, such as “au” changed to “wu” in the words “harimau”, after that “ai” changed to “e” in the words “sungai” and “pantai”, next is “au” changed to “o” in the words “kerbau”, “saudara”, “danau”, and the last “ai” changed to “e” in words “durian”.

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Finally, the results of research and discussion of data on phonological acquisition of language, it can be seen that phonological acquisition of language is the study of language that studies the sounds of language produced by the human speech apparatus. The phonological acquisition of language includes vowels, consonants and diphthongs.

CONCLUSION

Based on the results of the discussion about Raziq's language disorder. It turns out that the most dominant language environment is the family environment. Furthermore, linguistic data related to language acquisition by Raziq was studied phonetically which focuses on the phonological aspect. It is known that Raziq at the age of 4 years from the results of the study, language disorders from many words spoken by children have several consonants that are lost, added, and sound changed. However, this does not affect the meaning of the word. Therefore, the role of parents is very important, so that the handling that can be done by parents to their children is to train children to speak so that they form utterances that do not sound well. As well as supporting factors such as the surrounding environment which is very influential should be given a good warning. This is intended so that children's language development is much better without being contaminated with negative language that enters the child's mind.

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