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ANALYSIS OF WRITTEN LANGUAGE PRODUCTION IN THE CHILD WITH DYSGRAPHIA

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Abstract

This research is focused on exploring in depth the production of written language and the role of parents in the child with dysgraphia using the psycholinguistic assessment of language (Caplan, 1992). The research used a qualitative approach with a case study method. This approach is used to explore a person who has dysgraphia. The data collection techniques used are observation and interviews. The participant in the research is a grade IV elementary school student with the initials WH who is indicated to have dysgraphia. The data analysis techniques include data reduction, data display, and conclusion drawing (Miles & Huberman, 1994). The results of the study show that the role of parents in training and guiding their children to write can have a significant influence on the production of written language in a child with dysgraphia. The more often parents do activities that can train the child to write, the more likely it is that the child will recover from dysgraphia.

Keywords: *psycholinguistics, dysgraphia, role of parents*

INTRODUCTION

Language has an important role in life, namely as a tool for communicating with humans and other living things (Chaer, 2003). The processes of language production and understanding can be found in various activities, one of which is learning. In this process, each individual has been equipped by the creator with the ability to pronounce sounds and understand language symbols. However, when producing language, some people have deficiencies or problems with various functions of language and communication. Based on data from Supportive Care ABA in 2023, at least 1 in 59 children has one or more learning disabilities. In the U.S., 4 million children younger than 18 have learning disabilities, and approximately 10% of the world's population has dyslexia.

In the study of Psycholinguistics, dyslexia is included in the area of language disorders that focus on difficulties in reading, spelling and writing language. This language disorder can be receptive (involving language comprehension disorders), expressive (involving language production), or a combination of the them. According to Steinberg and Sciarini (2006), dyslexia can be divided into two basic categories: Alexia, which involves difficulty reading, and agraphia (dysgraphia) which involves difficulty writing. In general, dysgraphia is characterized by difficulty in expressing thoughts through writing. Children with dysgraphia can notice when they write, because they write very slowly, their writing can be very illegible, and they make a lot of spelling mistakes because of their inability to mix sounds and letters.

There is a linguistic approach to the assessment of language disorders that aims to determine the type of linguistic representation processed abnormally. The approach is known as the Psycholinguistic Assessment of Language (PAL). Based on a search through the Publish or Perish application with a data source coming from Google Scholar, which is later integrated with the VOS Viewer application using the last five years, research on dysgraphia in children in the context of psycholinguistics is still slightly done. There are some studies related to this research: The first is, "How is Perseveration in Dysgraphia Students? A Research at Yayasan Pantara Jakarta" by Meiyanti, N. et al.(2022). The Second is, "Produksi Bahasa Tertulis Mahasiswa Penderita Disgrafia di Fakultas Ilmu Budaya Universitas Sam Ratulangi" by Rima Apriliana Tangke (2015). However, the previous studies generally only explained the picture of language production for someone who experiences dysgraphia and explained the symptoms he experienced.

In response to the gap, this research is focused on the production of written language and the role of parents in children who experience dysgraphia by using the Psycholinguistic Assessment of Language (PAL). In this study, the researcher discusses:

1. How is the production of written language affected in the child who experience dysgraphia?
2. How does the role of parents affect the production of written language for a child who experiences dysgraphia?

This research is expected to increase psycholinguistic research treasures regarding language disorders, especially dysgraphia, and can be an evaluation for parents in determining the therapy for children who experience dysgraphia. Dysgraphia comes from the Greek word. The prefix "dys" indicates a disturbance, as does the word "graph," which means the activity of writing by hand. So, dysgraphia can be interpreted as a disorder that involves writing activities using the hand. According to the HBIDA (2018), dysgraphia may occur alone, with dyslexia (impaired reading disability), or with oral and written language learning disability (OWL LD, also referred to as selective language impairment, SLI). Dysgraphia can have lifelong impacts, as adults with difficulty writing may continue to experience impairments in their vocational progress and activities of daily living. In fact, an estimated 20–60% of children with ADHD have one or more learning disabilities, and one of those may be dysgraphia. Some experts believe that dysgraphia involves a dysfunction in the interaction between the two main brain systems that allows a person to translate mental into written language (phoneme-to-grapheme translation, i.e., sound to symbol, and lexicon-to-grapheme translation, i.e., mental to written word). Here are some common characteristics of people with dysgraphia (Morin, n.d.):

1. Has trouble expressing thoughts in writing.
2. Uses simpler sentences when writing than when speaking.
3. Uses poor spelling and incorrect grammar or punctuation.
4. Writes run-on sentences and doesn't use paragraph breaks.
5. Seems frustrated by the act of writing on paper.
6. Has trouble holding a pencil.
7. Has trouble forming letters and words or spaces them oddly.
8. Mixes capital and lowercase letters or print and cursive letters.
9. Has slow, labored, and sloppy writing

The Psycholinguistic Assessment of Language (PAL) is one of the psycholinguistic assessments with the aim of identifying major deficiencies in language processing at the level of simple words, morphologically complex words, and sentences (Caplan, 1992). The PAL approach consists of 27 subtests, where each subtest contains items of varying difficulty to provide a measure of the extent to which certain components are impaired. The following are several subtests that are part of the Psycholinguistic Assessment of Language approach.

Auditory Comprehension

Phoneme Discrimination

In this test, the subject is given a test on a same-different task, which hones the ability to discriminate phonemes. Consonant letters are more widely used than vowel letters as the segment to be changed because consonant letters have been used more frequently than vowels.

Auditory Lexical Decision

Auditory lexical access is assessed using a lexical decision task for words and specifically constructed non-words.

Single-Word Auditory Comprehension

Word Picture Matching

In this test, subjects are given a paper containing several nouns, such as categories of animal names, fruits, vegetables, and tools. The examiner gives a clue auditory, and then the subject matches the clue to the picture on the paper correctly.

Forced-Choice Attribute-Verification Procedure

Sixteen concrete words are presented objectively in this task, and three questions relating to each word are asked. The answer to the questions must be either yes or no, depending on which of two features is selected. For example, does a horse have fur or hides? Physical and function attributes are the subject of three questions. Nouns are from the categories of animals, fruits and vegetables, and tools, and vary in familiarity.

The Word Formation Level

Affixed Word Production

In this test, the subject is given keywords, which must then be completed into a sentence that is in harmony with the keyword at the beginning or even into a simple paragraph according to the topic.

Written Affixed Word Production

The materials used to assess this function with oral production are used with written presentation, and the output is required to be in writing. If the production of the correct root and suffix is known, the responses shall be scored correctly. At the level of language, synonyms and other errors are detected.

The Sentence Level

Word-Sentence Production

In this test, the subject is given several sentences in paragraph form, which are then rewritten according to the existing examples. This test focuses on lexical production, aspects of meaning, and sentence form. In a more advanced stage, the subject can be given an image, and then he must write an accurate description of the image.

The Production of Written Forms from Phonological Forms

Writing for the Dictation

In this test, the subject must write the words or sentences given in dictation form. The focus points in this test are readability, regularization, orthographic (spelling) errors, and semantic errors. Through these subtests, we can combine a series of tests that are in accordance with the goals and problems of language disorders that occur.

METHOD

The research employed a qualitative approach with a case study method. This research aims to explore or provide a systematic and factual description of the production of written language and the influence of the role of parents on t with dysgraphia. This research belongs to qualitative research because it is focused on exploring and understanding the meaning individuals or groups ascribe to a social or human problem (Creswell, 2009). A case study is used as a research method since the researcher explores and invests deeply in a person who is indicated to have dysgraphia. This method is used to explore in depth a program, event, activity, process, or one or more individuals. The case(s) are bounded by time and activity, and researchers collect detailed information using a variety of data collection procedures over a sustained period of time (Creswell, 2009).

The participant in the research is a grade IV elementary school student with the initials WH who is indicated to have dysgraphia. To obtain the data, this research used purposive sampling. According to Creswell (2013), the researcher can do purposive sampling by selecting individuals and sites for the study because they can purposefully inform an understanding of the research problem and central phenomenon in the study. The data collection technique was observation and interviews (Cresswell, 2013). Observations were made directly to see the production of written language in a child with dysgraphia by conducting subtests according to the psycholinguistic assessment of language (PAL) approach. The non-participants and participants as observers were used to observe the production of written language.

According to Creswell (2013), a good qualitative observer may change roles during an observation, such as starting as a non-participant and then moving into the participant role, or vice versa. The

researcher conducts one-on-one interviews with a child with indications of dysgraphia to see how often parents play a role in teaching them to write and what kind of influence this has. After the data were collected, they were analyzed using the theory from Miles and Huberman (1994). There are data reduction, data display, and conclusion drawing or verification.

FINDINGS AND DISCUSSION

This study focused on the production of written language and the influence of parents' roles on the production of written language in a child with dysgraphia.

Production of Written Language

Based on the results of the first observation, the researcher gave two simple tests to see WH's written production. The test comes from the Psycholinguistic Assessment of Language (PAL) approach. Following are the results of written language production using several tests, including:

1. Writing to Dictation
   In this test, WH is given simple words or sentences by dictation, and then he has to write those words or sentences. The point of assessment is seen in the problems of readability, regularization, and orthographic errors.

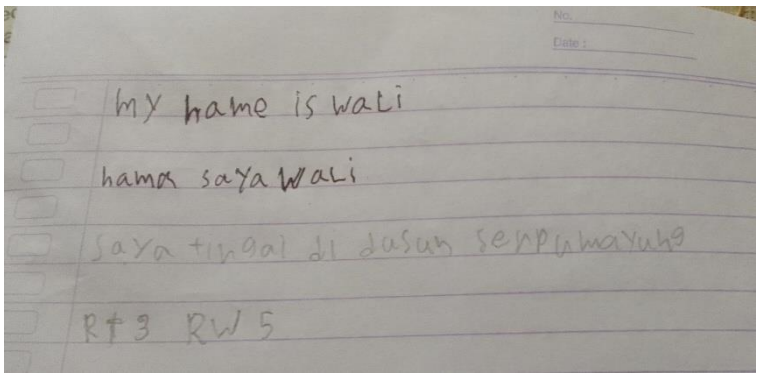

Figure 1. Writing to Dictation (FN070523)

Based on Figure 1, WH writes with a considerable distance between one word and another, and there are several letters missed. At the time of writing this, WH wrote it while spelling the letters one by one correctly. However, when it is written in written form, there are still some letters that are missed.

2. Word Sentence Production
   In this test, the WH was given a written text, which he then had to copy according to the original text. The assessment focuses on lexical production, aspects of meaning, and sentence form.

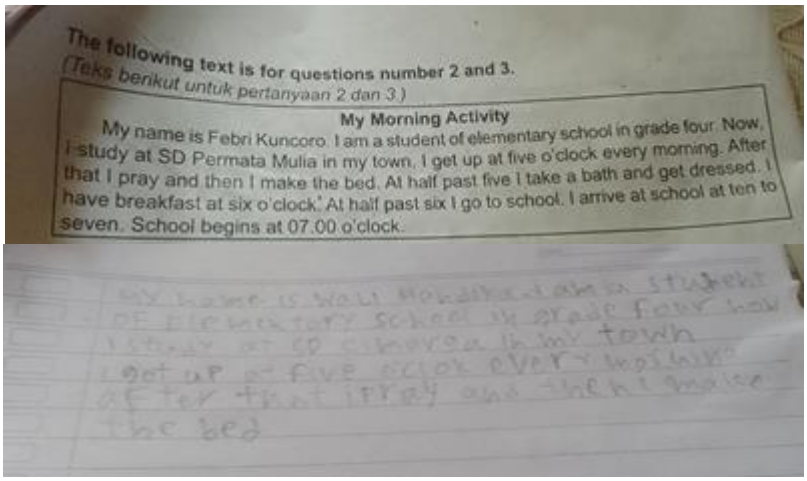

Figure 2. Word Sentence Production (FN070523)

As can be seen in Figure 2, WH copied the text without paying attention to the similarities to the original text, so the meaning of the sentence was difficult to understand. In addition, the use of capital letters and lowercase letters is still messy, and there are still some punctuation errors.

Based on the first observation, the researcher conducted interviews by asking several questions to obtain the following interview data:

1. WH finds it difficult to write using a pen and finds it difficult to express his thoughts through writing.

   "It's hard to use a pen; it feels slippery. It's easier to use a pencil." (INTV140523)

   "It's easier to write by dictation than to compose freely." (INTV140523)
2. WH easily feels tired and loses focus when writing.

   "Feeling sore hands writing the second text." (INTV210523)

3. WH learned to write from teachers and parents, especially mothers.

   "I study at school with the teacher while at home with my mother. I study with my mother when I have exams or homework." (INTV140523)

The Influence of the Role of Parents

Based on the results of the interviews conducted in the second week after the observation, the researchers provided a time lag so that the WH could focus more on learning to write in preparation for the daily tests that were held that week. So, during the third week of observation, the researcher conducted several tests with the following results:

1. Word-Picture Matching
   In this test, WH is given a piece of paper containing a word search. WH was given an auditory clue in the form of the Indonesian meaning of each of these objects, and it was hoped that he would be able to choose the picture that matched the word correctly.

Figure 3. Word-Picture Matching (FN210523)

As shown in Figure 3, WH can answer this test correctly. But, in the process, WH still has quite a hard time focusing on choosing the right image.

Affixed Word Production

This test is in the form of completing sentences using predetermined lexical items. First, the researcher gave the basic form to WH, and then WH was required to complete it with several sentences according to his ability.

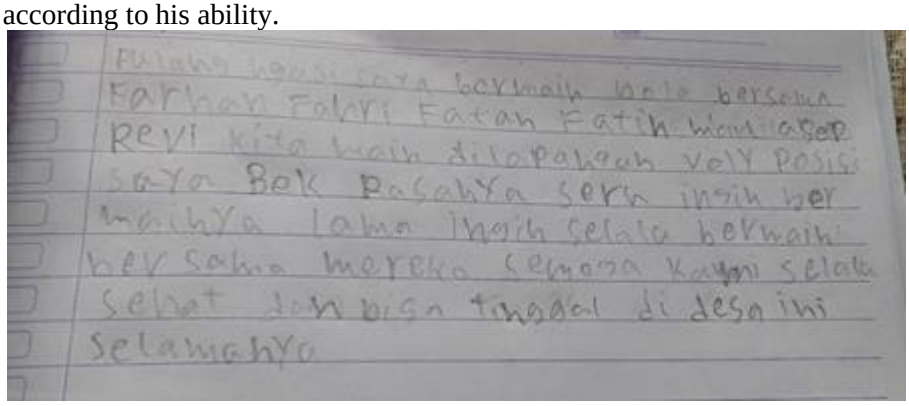

Figure 4. Affixed Word Production (FN210523)

WH tries to do this test according to his ability. However, as shown in Figure 4, the sentences it produces still do not pay attention to punctuation and the rules for using capital and lowercase letters. During this test, the WH must be given a clue in each sentence. He needed quite a long time to put what was in his mind into a piece of writing, even though it was an experience he had felt.

2. Writing for Dictation

At the time of the first observation, the WH carried out this test with several errors, such as writing at a considerable distance, not correcting when an error occurred in writing, missing letters, and

not paying attention to punctuation rules. However, in the second observation, after WH was given two weeks to learn to write with his parents, there was some progress in his written language production.

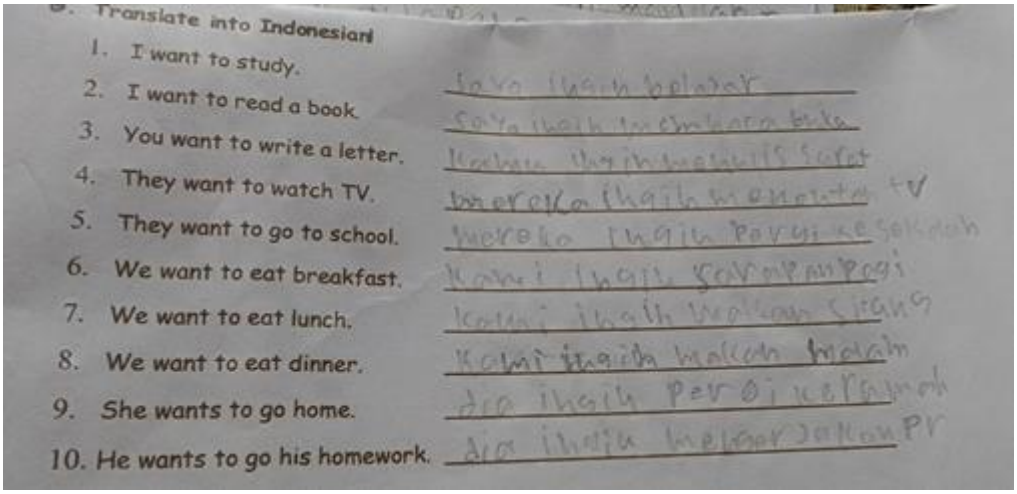

Figure 5. Writing to Dictation (FN210523)

As seen in Figure 5, the results of WH's writing are neater than before. He made no mistakes in spelling and only a few mistakes in writing. However, as in the previous test, the WH still did not pay attention to the rules for using punctuation and using capital and lowercase letters.

3. Word Sentence Production

In carrying out this test, WH looked more prepared than during the previous observation. It can be seen in Figure 6, where WH's written language production has undergone quite a change. He tried to copy the writing according to the original text and to focus on writing. When he feels there is an error while writing, he immediately deletes it and rewrites it better. When writing, he tries not to spell out every sentence he writes.

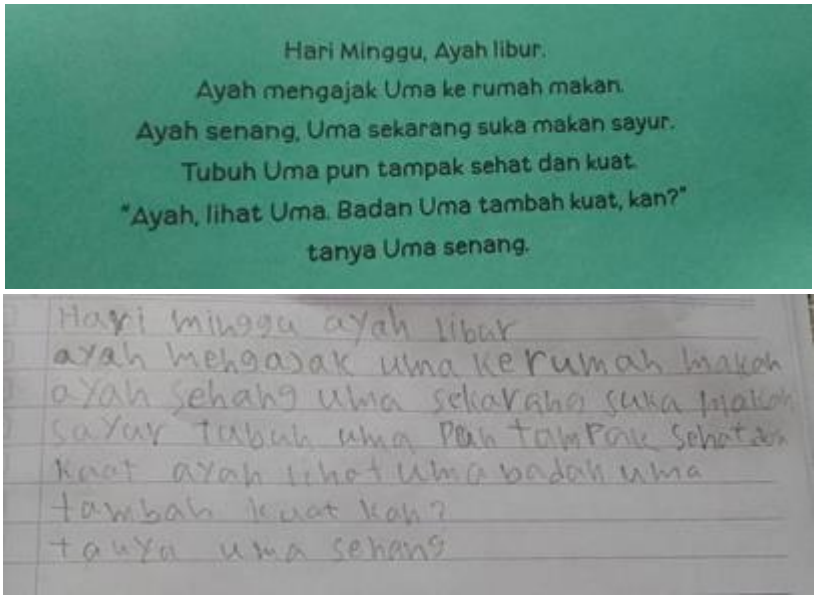

Figure 6. Word Sentence Production (FN210523)

CONCLUSION

Based on the research using the Psycholinguistic Assessment of Language (PAL) approach to see the production of written language and the influence of the role of parents on the child who experiences disgraphia, it can be seen that there are changes in the written language production of the child who experiences disgraphia. This can be seen from the four subtests that have been carried out, including Writing to Dictation, Word Sentence Production, Word-Picture Matching, and Affixed Word Production. At the time of the first observation, WH still made quite a lot of mistakes, such as errors in the use of capital and lowercase letters, excessive distances between words, and a shortage of one or two letters in one word. However, after learning to write with the assistance of his parents for some time, there was an increase in the results of his written language production. The mistake he made was just a little, and he began to learn to focus on it when writing. This shows that the role of parents who always take the time to train and guide children who experience difficulties has a considerable impact. Thus, parents are expected to be able to play a more active role and try continuously to give therapy to children who experience language disorders, especially dysgraphia.

Activities that can be done by parents in training children who experience dysgraphia other than by guiding them in doing homework and preparing the exam are to play games such as writing games, playing with clay to strengthen hand muscles, tracing letters with the index finger or eraser of a pencil, using speech-to-text tools that allow kids to speak and have it translated to text, inviting children to write letters and then celebrating improvements, and so forth. In this study, the use of the Psycholinguistic Assessment of Language (PAL) is only one way to guide and plan therapeutic selections for someone who experiences language disorders. In addition, this PAL approach can provide a representative and rational basis for assessing important aspects of language functions for anyone, both children and adults. In the end, every parent can determine the approach and test he will use to provide exercises and guidance according to the needs of children who experience language disorders.

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