Identification of Children with Learning Barriers (Dysgraphia) and Treatment in Elementary School

Muhammad Fakhri Saifudin, Yustri Mindaryani, Susi Lestari, Minsih, Choiriyah Widyastuti

ABSTRACT

Background: Education in elementary schools certainly has the aim of properly realizing the function of national education. However, without realizing it, in carrying out national functions certain obstacles come from both students and teachers. One of the obstacles that is often encountered is dysgraphia. Where dysgraphia is a difficulty experienced by children in reading due to poor writing and spelling in children. Therefore, researchers in this study have the aim of identifying learning barriers and handling them in one of the elementary schools in Sukoharjo Regency. This research uses a qualitative approach. The research participants were guidance and counseling teachers, class teachers, and students. Data collection techniques include observation, interviews, and documentation. The analysis technique used is interactive data analysis through data reduction, data presentation, and data conclusions. The results of the research show that children with learning disabilities have types of dyslexia dysgraphia, motor dysgraphia, and spatial dysgraphia. Therefore, children with this type of dysgraphia obstacle can be overcome by using strategies used by class teachers and guidance and counseling teachers in various ways, namely by providing motivation to students, providing interesting media, writing pre-school activities, tracing letters, writing block letters and practicing in writing cursive letters.

Keywords: Identification, Learning Barriers, Dysgraphia, Treatment

INTRODUCTION

In developing national and state life, the most important basis is education. Law no. 20 of 2003 Article 3 explains that the potential in students must be developed to make students have the character of faith and piety, noble morals, healthy, capable, independent, creative and knowledgeable so that they can achieve the goals of national education and make students democratic and responsible (Syafri, 2017). Without exception, educational institutions in Indonesia have an important role in realizing the function of national education, both for all levels of education including elementary schools which also have an important role in realizing the goals of national education (Dalimunthe, 2015).

In the world of education in elementary schools, to achieve national education goals, students must be able to develop their potential. At this time, education has several obstacles that make students unable to achieve the expected learning outcomes. These obstacles unknowingly come from students, so the learning taught by teachers has problems that make it difficult for students to achieve the national education goals expected by the Indonesian people. Obstacles that are often encountered in education are at the beginning of elementary school, where students experience a process of adapting to a new environment.

Data shows that many children experience learning disorders or obstacles in education, especially during the early stages of elementary school. Where this learning disorder does not only occur in one region but also in several countries. As many as 15% of research conducted in Berlgaum, India showed that elementary school students had problems in learning activities (Mogasale et al., 2012). In addition, research conducted in Kerala, India found that learning disorders occurred in students with an estimate of only 2% (Gafoor, 2015). Lipkin and Macias (2020) explained that research in America ranges from 5-15% of learning disorders, especially in the first year of formal school (Wiguna et al., 2012) explained that in relation to research conducted in Jakarta, Indonesia, there were 28% of elementary school children who experienced learning disorders.

Based on research conducted by (Mogasale et al., 2012), (Gafoor, 2015), Lipkin and Macias (2020), and (Wiguna et al., 2012) it is explained that there are problems of interference or obstacles that are often experienced by students namely is Dysgraphia. Dysgraphia is a neurological
disorder in children that hinders the writing process (Dewi & Herayuni, 2021). So, writing difficulties or dysgraphia can be seen in students feeling awkward using a pencil, poor spelling, and poor writing. According to Berninger et al., (2009) explained that children who have problems with dysgraphia will experience problems in reading due to poor writing and spelling. In line with (Vellutino et al., 2004) dysgraphia is a learning difficulty experienced by students in expressing their thoughts in their writing. The same thing was explained by Santrock (Imadatus, 2015) explaining that dysgraphia is a learning disorder in children that is characterized by difficulty in expressing the child's thoughts in writing. Many children who experience dysgraphia are often seen by teachers as lazy, stupid, and naughty (Muniksu & Muliani, 2021).

However, the current reality is that children who have obstacles or disorders in learning with dysgraphia also have the desire to be able to implement their thoughts and feelings into written form like other normal children (writing skills below that of children of the same age). However, children with dysgraphia have obstacles in expressing themselves in written form. In this case, a teacher must be aware that children who suffer from dysgraphia are not children who have a low IQ, are not children who are lazy, or children who do not want to learn. However, children with dysgraphia need guidance and assistance in writing, for this reason, teachers must have good learning techniques and strategies to improve the quality of children with dysgraphia.

According to Kasnawati, et al. (2021) in (Muchtar & Agustina, 2022) explain that there are five types of dysgraphia, including:

1. Dyslexia dysgraphia, is a form of learning disorder experienced by students characterized by illegible handwriting, often making mistakes in writing letters and punctuation.

2. Motor dysgraphia, namely a lack of fine motor skills, lack of dexterity, stiff muscles, and the child’s hand movements seem "clumsy". Where when children are given the opportunity to write, it requires extra effort, the form of writing is slanted due to incorrect handling of the writing object, but the student’s understanding of spelling is not disturbed.

3. Spatial dysgraphia, namely where the child experiences problems related to understanding space but in his writing, this is above or below the line, and in his writing the distance between words is inconsistent.

4. Phonological dysgraphia is a disorder in children's phonology, where this type occurs in children who have mastered of a foreign language (English or Western) and have differences in spelling and sound.

5. Lexical dysgraphia is an obstacle that occurs when words have different spelling and pronunciation, as is the case in English and French.

Research related to writing difficulties (dysgraphia) has been carried out in several countries, including Iran and the United States. Research conducted by (Rostami et al., 2014), which in this study explains that children with dysgraphia in writing activities are always close to paper, so they will experience difficulties in writing. Apart from that, the handwriting produced by children is poor writing in different shapes both large and small, with incorrect spacing between words and letters, slanted writing, and leaving lines out of line. Research conducted by (Chung & Patel, 2015) in America explains that in writing activities, especially in letters and writing, the form is still bad, the spacing is inconsistent and still backward and the handwriting cannot be read because it does not match the margins of the writing.

In other research from Indonesia, research from Taufik (2014) explains that children who suffer from dysgraphia experience difficulties in producing graphemic writing, namely they cannot write the letters F, f, Z, z, distinguish the letters d and b, m, and n. This disorder is often experienced by elementary school children when making Indonesian language assignments. Another thing explained by (Sihombing et al., 2022) is that children who suffer from dysgraphia disorder have delays in writing, inappropriate spacing, slanted writing, and use of pencils which are always used incorrectly under pressure (thick or thin).

Based on several studies conducted, many dysgraphia learning disorders occur in elementary school children. Therefore, researchers will conduct research in elementary schools with a research focus, namely writing disorders (dysgraphia) in elementary school children. In this research, the researcher aims to 1) describe the learning obstacles experienced by students, 2) describe the types of learning obstacles, and 3) describe how to overcome or handle them.

METHOD

The method used in this research is qualitative with a case study approach. Moleong (2015) explains that this case study research focuses intensively where the researcher focuses on the case of an object being studied. The data sources and informants in this research are guidance and counseling teachers, class teachers, and elementary school students. Researchers used data collection techniques with observation, interviews, and documentation. Researchers conducted research at elementary schools in Sukoharjo Regency because researchers would see the extent of disturbances experienced by students in writing activities (dysgraphia). With this, researchers will conduct interviews with Guidance and Class Teachers regarding the identification of students with learning obstacles in elementary schools, as well as solutions and treatment for students with writing difficulties (dysgraphia). By conducting interviews with students, researchers will search for data with class teachers to obtain sources of information related to how to handle students with dysgraphia learning barriers. For data supporting documents, researchers will collect documents in the form of images or other things (Saleh 2017). The data analysis used in
relation to this research is triangulation with stages in accordance with Miles and Huberman, namely reducing data, presenting data, and drawing guided conclusions (Sugiyono, 2016). With analytical techniques, data collection is carried out from the time the research data is collected for the analysis process.

RESULTS AND DISCUSSION
In this research, aspects that will be discussed are aspects that are in accordance with the research objectives, including 1) describing the characteristics of learning barriers, 2) describing the types of learning barriers, and 3) describing how to overcome or handle them. There are several discussion findings based on the results of data analysis, namely as follows:

A. Barriers to learning to write (dysgraphia)
   1. Inconsistent in writing the distance between letters and words.

   Figure 1. Written documentation

   The picture above shows that the writing carried out by children with dysgraphia is inconsistent in the distance of writing letters, this causes readers to have difficulty reading their writing. Children with dysgraphia often forget to provide distance from word to word. Apart from that, dysgraphia children can also find distances in their writing, but the distances in the writing of dysgraphia children are too wide. In this case, children with dysgraphia cannot write consistently well.

   2. Inconsistent writing in letter size and writing with lots of scribbles

   Figure 2. Written documentation

   In the picture above is the writing of a child who has a learning disorder, namely dysgraphia, wherein the writing produced by the child has several scribbles. The writing produced by children with dysgraphia is due to factors such as not being able to communicate their knowledge and ideas. This child with dysgraphia still has difficulty writing neatly even though he copies the writing in the example given. This shows that the writing of a child with dysgraphia seems sloppy, dirty, and messy. Apart from that, another thing that causes problems in children with dysgraphia is adjusting or equalizing the form of writing. In this dysgraphic child’s writing, the letter size is inconsistent. In the example above, “Father” and “Together” in letters A and b should be written in lowercase, but in the writing above, it is written in capital letters. Another thing is that the writing of children with dysgraphia is getting more to the right, the resulting writing is not neat and the letters are getting smaller and bigger and smaller, and the letters produced cannot be consistent with the initial writing.

   3. Missing letters and incomplete writing

   Figure 3. Written documentation

   In the picture above, this child with dysgraphia writes many letters that are left behind or missing, for example, the word “loving”, the child with dysgraphia writes “loving”; apart from that, this child with dysgraphia writes the word there are letters that are left out, for example, “same” just written “high school”. This shows that children with dysgraphia cannot communicate ideas in written form as well as children in general.

   4. Does not match the line flow

   Figure 4. Child Table Documentation

   The picture above shows that this child with dysgraphia cannot write according to the lines in the notebook, apart from that the writing produced does not fit in the line column, the writing of the child with dysgraphia also gets smaller and goes up and down. So, in making tables for children with dysgraphia, more research and attention must be paid so that the writing can be in accordance with the table and neat. The table
is not neat because the pencil is always pressed when used.

B. Types of Barriers to Writing Activities

According to Kasmawati, et.al (2021) (Muchtar & Agustina, 2022), there are several types of dysgraphia, including: 1) dyslexia dysgraphia, 2) motor dysgraphia, 3) spatial dysgraphia, 4) phonological dysgraphia, and 5) lexical dysgraphia. From the several types of dysgraphia above, it can be concluded that the writing of children who have been studied by researchers, namely children with dysgraphia above, are included in the categories of dyslexia dysgraphia, motor dysgraphia, and spatial dysgraphia. In interviews conducted by researchers with homeroom teachers that:

"Yes, it is true that in writing activities in one class, there are several children who cannot write neatly, are not consistent in both letters and spacing, and in writing there are children who are always under pressure because they have difficulty holding a pencil."

Another thing explained by the elementary school guidance and counseling teacher was that:

"Yesterday the homeroom teacher consulted with me, asking about children who had writing disorders. From my observations, in this writing activity, especially the students above experienced writing disorders or what is called dysgraphia. The writing he produces cannot be written well and neatly because the writing goes up and down, this is one of the characteristics of children who experience learning obstacles, namely dysgraphia. Apart from that, it is still difficult to communicate ideas in written form."

Therefore, the results of interviews with class teachers and guidance and counseling teachers can conclude that the disorders or obstacles experienced by these students are in the types of dyslexia dysgraphia, motor dysgraphia, and spatial dysgraphia.

C. Strategies for Overcoming Children with Dysgraphia

In every problem that exists in the world of education, especially in children who experience dysgraphia, there are strategies used by teachers to overcome this obstacle. The strategies are as follows:

1. By providing motivation. Based on the results of interviews with the homeroom teacher, it is clear that:

    "To deal with children who have these obstacles, as a class teacher, I also provide motivation for children to continue to have the desire to write. "Because with this motivation, you will feel enthusiastic about writing, so that with this writing activity students will be able to use their motor skills well."

    The same thing was explained by Safitri & Dafit (2021) in classroom learning activities carried out by teachers, namely by providing motivation for children, especially in reading and writing activities. With this motivation, the teacher can give words in writing and reading activities "We must not get tired and lose, we must be enthusiastic!".

2. Use interesting media for learning. Based on interviews with class teachers:

    "I really use media for learning for children who have learning disabilities, dysgraphia. As a teacher I am responsible for the child, I also have to be able to adapt to the learning of children who have dysgraphia. So that learning can follow well."

    Followed by the BK teacher, he said:

    "Yes, that's right. I really agree with the homeroom teacher. In teaching, you must use media that can attract students to participate in learning. "This media will provide a stimulus for children to express their ideas in writing, so as a class teacher you must be able to provide special communication and attention."

    In Muslikah & Rusnilawati (2022) they explain that treating children with dysgraphia can be done using media, one of which is pictorial media. This is because pictorial media can help students read and recognize writing.

3. Pre-writing activity strategies. Based on the results of interviews with class teachers:

    "The most basic thing that students must be introduced to is training in the use of writing tools, for example holding a pencil, sitting position when writing, and visibility when reading a book. "This pre-writing activity, it can be a solution for students to train students in activities related to writing, because the more often students write, the less "clumsy" or "nervous" they are in holding a pencil, so they will produce neat and good writing."

    Explained by the BK teacher in the interview activity, namely:

    "Correctly. In my opinion, it is like the homeroom teacher that before children write they must first do pre-writing activities. This activity will provide an idea of when children apply writing. So, teachers can introduce writing tools, their uses, and functions, even holding a pencil, writing distance, and good and correct sitting position.

    "When children are given education regarding this matter, children will not experience dysgraphia."

    The same thing is explained by Yusuf, et.al (2003) in Sihombing et al., (2022)that the earliest strategy is pre-writing, where with this pre-writing activity children are trained to use writing tools, both by holding a pencil, writing distance, and a good position in writing activities.

4. Strategy for tracing letters. In the interview with the homeroom teacher and the guidance counselor, it was explained that:

    "In learning activities, especially during additional tutoring hours, I have various variations to attract students, one of which is tracing letters. This letter tracing activity begins by drawing broken line patterns in the form of letters, numbers, or flat shapes. "With this activity,
students will familiarize themselves with writing activities and produce letters that match the tracing lines."

The BK teacher explained that:

"If I agree with additional tutoring activities, especially for children who have dysgraphia, by providing tracing activities, tracing is easy for me. However, for children with dysgraphia, it is a challenge to match these letters or numbers. "This tracing activity given by the teacher provides a stimulus for the brain and hands to be more in sync."

5. Block letter writing activity. Based on the results of interviews with class teachers, it was explained that:

"In learning, writing block letters can train students' senses, especially multisensory ones. "In this activity, it can be carried out by the teacher by pointing at one of the letters, then students are given the opportunity to answer and demonstrate with their hands the letters mentioned, then students write the letter in a lined book."

Another thing explained by the guidance and counseling teacher is:

"If this block letter writing activity is carried out during additional tutoring activities if it is in class, children will still take part in learning activities like their friends. So, there is a special time for special handling of obstacles for children who experience dysgraphia, namely the teacher can give homework at home to write block letters by imitating."

The same thing was explained by Marinda (2020) that children who experience dysgraphia need fine motor therapy for their hands, such as writing block letters. By writing block letters you can use your senses, namely sight and hearing.

6. Activities with cursive writing. Based on interviews from class teachers, it explains that:

"As a class teacher, I always provide guidance in writing for children who have dysgraphia. "I gave homework in the book to write cursive letters according to the example."

Followed by the guidance and counseling teacher's explanation that:

"Children are taught to write cursive letters in stages, because writing cursive letters requires the child's patience and persistence in writing, apart from that it also requires the child's shrewdness or agility in using a pencil. Children who have patience, persistence, and agility in writing cursive letters will produce neat and beautiful writing. Therefore, writing cursive letters will train children to consistently match the lines in the book."

The same thing was explained by Yulinda et al., (2013) that children with dysgraphia learning disabilities need to be given treatment to write cursive letters, writing cursive letters will make hand movements. So with this movement technique, the child will gradually improve in his writing ability.

CONCLUSION

Based on the results of research conducted by researchers, it can be concluded that the learning disorders or obstacles for children with dysgraphia include inconsistent writing regarding the distance and size of letters, writing many strokes in each word or sentence, missing letters or word order, and in activities. Students' writing does not match the plot or lines in the book. Therefore, children with dysgraphia are considered to have different ability development from their peers. In this study, researchers found that dysgraphic children in elementary schools in Kartasura experienced dysgraphia disorders such as dyslexia dysgraphia, motor dysgraphia, and spatial dysgraphia. The efforts or ways to handle it are by providing motivation to students, providing interesting media, writing pre-school activities, tracing letters, writing block letters, and practicing writing cursive letters.

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