

Effectiveness of Draw Cards for Language Development of Dislexia Children

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Abstract: A common problem experienced by children with dyslexia is difficulty in the ability to read and write. The lack of vocabulary mastered by dyslexic children is due to neurological factors, namely in the left hemisphere of the brain that is related to the sequence, linear thinking, and language skills have a small size than normal humans. Good and appropriate treatment will make the child more able to overcome this problem. The purpose of the study is to test a simple card-shaped technique and learning tool that is attractive for dyslexic children to stimulate language development (eg vocabulary). This study uses experimental techniques the one group pre-test post-test, which is an approach that gives treatment to one group then the results will be calculated the difference. The treatment used is giving a picture card. The subjects in this study were 4 people. This research is expected to make a new paradigm for the world of education especially for dyslexic children.

1 PRELIMINARY

Child development is a process of increasing ability in a child with information obtained from the family environment and social environment progressively. Some child development factors are strongly influenced by several factors, including gene factors, parenting and nutrition that children get from birth. In addition, a very important factor that considered in the child's growth and development are environmental factors in which children live, go to school, and socialize.

Talking is one of the children's developments that must be got through properly, because the development of language is an amazing development process. Children will go through this process not only demanded by their abilities, but also greatly influenced by environmental factors. Because children will learn to speak well if they hear appropriate language. Usually children will know a lot of vocabulary from the age of 3-4 years, when the language used is not limited to as a communication tool, but also as information to stimulate cognitive development.

Dyslexic children who have difficulty in the ability to read and write, even talk and listen to other people's voices and translate them into words,

analyze the meaning of words and mix sounds in words. Researchers from Yale University, Dr. Sally Sahywitz, argue that to learn languages, dyslexics use other parts of the brain, which are used by people in general in processing language. Some studies from a neurology Harvard Medical School mention that the hemisphere of the human brain has two asymmetrical hemispheres of the brain, while in symmetrical dyslexics. This means that the right hemisphere of people with dyslexia is greater than the human right brain in general. This is what makes dyslexics have strength in the right brain. The right brain has abilities related to intuition, creativity, and visual abilities. These are the strengths and advantages of dyslexics. Meanwhile, the left hemisphere associated with linear thinking and children's language skills in dyslexic children tend to be smaller than normal humans. This is what makes language skills and processing linguistic information different.

In connection with the foregoing, it is necessary to have the right methods to stimulate the development of the language of dyslexic children in order to develop optimally so that cognitive development can be maximized. The phenomenon that often occurs is that dyslexic children who learn in a school only get the same learning material and

repeat it, so that when the material is delivered, the child will have difficulty remembering and must repeat again.

Researchers as practitioners of child development, encounter cases of children who experience some characteristics of learning difficulties such as not being able to understand reading and having a limited vocabulary even though they are 7 years old, having difficulty concentrating, avoiding academic tasks, and experiencing social-emotional problems. However, when measuring its intellectual potential, the cognitive abilities of these children in the above-average category were measured.

Of course this learning difficulty is not due to limited cognitive abilities, but there is a disruption of learning difficulties. Researchers want to try to use a simple and fun method to stimulate the development of children's language to be more fully developed so that children will have more vocabulary that affects the ability to read and understand the contents of the reading.

Dyslexia is a form of specific learning difficulties that is most often among the two other specific forms of learning difficulties, namely dysgraphia and dyscalculia. Dyslexia. Dyslexia comes from Greek, "dys" which means difficulty and "lexis" which means letters or lexical. So dyslexia means a person's difficulties in carrying out activities related to letters, especially reading and writing activities, as well as language skills.

Dyslexia is one type of learning difficulty, especially the difficulty in reading and writing which is usually experienced by some children in this world. According to the Child Development Institute, (2008) (Martini Jamaris, 2014) that cases of dyslexia are found in 3-6% of the population. However, cases related to reading difficulties that were not classified as dyslexia were found in more than 50% of the population. Individuals with dyslexia have a normal level of intelligence, even above average, so that dyslexic sufferers are not classified as mentally retarded children. Mulyadi, (2010) explains in more detail that the notion of dyslexia is difficulty reading, spelling, writing, and in interpreting or recognizing the structure of words that affects on the learning process or learning disruption. Nini Subini, (2012) provides an understanding of dyslexia based on internal causes in the individual concerned, dyslexia is one of the disorders of the development of brain function that occurs throughout the life span. Dyslexia is considered an effect caused by a disorder in memory and central processing associations called primary

reading difficulties. To be able to read automatically the child must go through education and normal intelligence without any sensory interference. Usually this difficulty is only detected after the child enters the school world for some time.

Olivia (2016) Mentioning, there are five broad areas of problems in dyslexic sufferers, namely: (1). Mix letters or words that are the same pronunciation, like B and D, P and Q, as well as words like; b with d, was and saw, left with right, west with east. (2). Problems with linear sequences such as alphabets, schedules, sentences, list of instructions. (3). Problems with short-term memory, (4). Coordination problems, related to motion coordination with the pronunciation of sentences, (5) problems in reading and writing. Every dyslexic child certainly has unique characteristics, so that not all of these problems are shared by dyslexics. However, generally sufferers have more than one category of problems.

DSM V mentions dyslexia is an alternative term used to refer to the type of learning difficulties categories characterized by problems with word recognition, poor coding, and poor spelling skills. So, dyslexia is used to determine the pattern of learning difficulties in the field of reading and numeracy in mathematics.

2. LITERATURE REVIEW

2.1 Grouping of Dyslexia

2.1.1 Learning Method for Dyslexia

According to Mulyono Abdurrahman, (2012) there are several methods of teaching reading for children with learning difficulties, namely (a) Fernald (b) Gillingham and (c) Glass Analysis. Here is a brief explanation:

(a) Fernald Method. Fernald's method has developed a multisensory reading teaching method that is often known as the VAKT method (Visual, auditory, kinesthetic, and tactile). This method uses reading material selected from the words spoken by the child, and each word is taught in full. This method has four stages. In the first stage, the teacher writes the words to be learned on paper with crayons. Next the child traces the writing with his finger (tactile and kinesthetic). When tracing the writing, the child sees the writing (visual), and pronounces it loudly (auditory). This kind of process is repeated so that the child can write the word correctly without seeing an example. If the child has been

able to write and read correctly, the reading material is stored. In the second stage, the child is not too long to trace the writings with a finger, but learn the teacher's writing by watching the teacher write, while saying it. Children learn new words in the third stage, by looking at the writing on the chalkboard or printed writing, and saying the word before writing. At this stage the child begins to read the writing from the book. In the fourth stage, the child is able to remember the words printed or the parts of the word that have been learned.

(b) Gillingham Method. The Gillingham method is a high-level structured approach that requires five years of study time. The first activity is directed at learning various letter sounds and the combination of these letters. Children use tracing techniques to learn various letters. The single sound of the letters is then combined into larger groups and then the phonics program is completed.

(c) Glass Analysis Method. Glass Analysis Method is a method of teaching through letter group password breaking in words. This method departs from the underlying assumptions of reading as decoding or writing code. There are two assumptions underlying this method. First, decoding and reading processes are different activities. Second, password breaking precedes reading. Password solving is defined as determining the sound that corresponds to a written word correctly. Reading is defined as decreasing the meaning of words in the form of writing. If children cannot do writing passwords efficiently, they will not learn to read. Through the Glass Analysis method, children are guided to get to know groups of letters while looking at the word as a whole. This method emphasizes auditory and visual training that is centered on the word being studied. The material needed to teach recognizes groups of letters can be made by the teacher. Essentially, groups of letters can be made on cards measuring 3 × 15 cm. On each card, the teacher writes well the selected words that have become the child's vocabulary. Word groups are defined as two or more letters which are one complete word, describing a relatively fixed sound. In Indonesian, a group of letters which is a single word consisting of only one syllable is very rare. The word "no" for example, actually stands for the word "tidak"; and the word "pak" or "bu" is actually the approach of the words "bapak" and "ibu". Thus, the application of Glass analysis methods in

Indonesian will be in the form of syllables, for example the word "bapak" consists of two groups of letters "ba" and "pak".

From several methods or approaches available, this study provides alternative interventions that consider the needs of children with dyslexia in improving language skills. Based on the exposure, the hypothesis of this study is that there are differences in the number of vocabulary mastered by children before and after the card being given. Children have more vocabulary after given the picture card game.

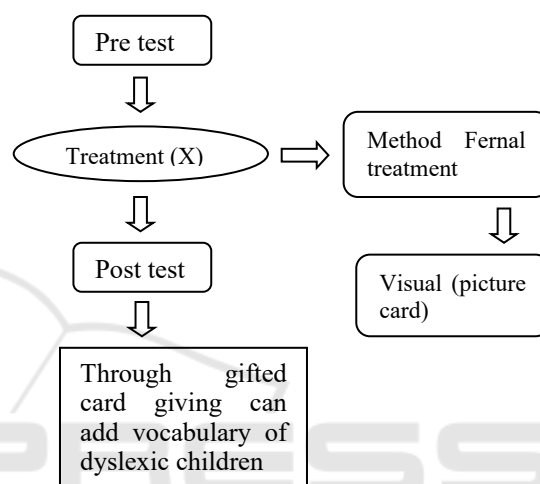


Figure 1. Research Framework.

3 METHODS

This research will be conducted using Quantitative methods with the experimental approach. This method was chosen because the researchers wanted to see the results of the form of treatment in dyslexic children who are the object of research on giving picture cards.

Giving a picture card is one form of intervention given to people with dyslexia which is a combination of the Fernald method (VAKT), where in the visual aspect given is the use of picture cards. Furthermore, children do touching / tactile when the child plays the picture card while voicing or mentioning the type of picture card that is being played. The picture card played by the child is shaped like a piece of picture (puzzle), so that the child is always learning while playing.

The language ability of the child intended in this study is the ability of the child to master the number of vocabulary words, both verbs, command words

and other types of vocabulary, such as vocabulary in the form of types of transportation, verbs and so on.

The research design used was a Pre-experimental case study through a case; pre-post test design:

Table 1: Pre-post test design.

Pre Test	Treatment (X)	Post test
(T1)	Picture cards	(T2)

Remarks T1 = observation & measurement before treatment

T2 = observation & measurement after treatment

This research is a quasi-experimental research conducted by not exercising full control of experimental scheduling stimulus which includes time, subject, and random ability.

3.1 Procedure

- Researchers provide treatment to children. In this case the treatment given is in the form of a picture card, in forms illustrated cards, ranging from transportation and picture cards telling stories of children's daily activities.
- The treatment is independent variable and the result is the dependent variable.
- The researcher conducted a post test by checking how much mastery of the vocabulary number after the subject received the treatment.

The focus of attention of this study is to study one case in children who experience Specific Learning Difficulties, especially in reading disorders (dyslexia), where researchers try to analyze it from language skills mastered by children. The main data collectors are in-depth observations and interviews. Observations carried out here are closed observations, meaning observing without being known by the subject with a natural setting (Moleong, 2001) by using observation guides made by researchers. Whereas to add qualitative data, interviews were conducted with parents.

4 RESULT

The results in this study are presented in the form of descriptive data obtained before the study (pretest) and after research (posttest). Summary of

treatment for giving a picture card are shown on Table 2.

Table 2: Treatment for giving a picture card.

Treatment	Subject		
	M	K	S
1	Picture card pieces: compile 7 transportation illustrated vocabulary cards properly The story telling card sequence: Reverse order on cards 2 and 3	Picture card pieces: compile 7 transportation illustrated vocabulary cards properly The story card sequence : Reverse order on cards 2 and 3	Picture card pieces: compile 7 transportation illustrated vocabulary cards properly The story card sequence : Reverse order on cards 2 and 3
2	Picture card pieces: compile 7 transportation illustrated vocabulary cards properly The story card sequence : Reverse order on card 2	Picture card pieces: compile 10 transportation illustrated vocabulary cards properly The story card sequence : Reverse order on card 2	Picture card pieces: compile 7 transportation illustrated vocabulary cards properly The story card sequence : Good order in story tell
3	Pieces of picture cards: arrange 9 cards with fruit vocabulary images properly The story card sequence: Reverse the order on cards 3 and 5	Pieces of picture cards: compile 10 cards with fruit vocabulary images well The story card sequence : Reverse the order on cards 3 and 5	Picture card pieces: compile 10 transportation illustrated vocabulary cards properly The story card sequence : Good story order
4	Pieces of picture cards: compile 10 cards with fruit vocabulary images well The story card sequence: Good sequence of stories	Pieces of picture cards: arrange 10 fruit vocabulary cards with fruit well The story card sequence: Good story order	Picture card pieces: compile 10 transportation illustrated vocabulary cards properly The story card sequence :

Treatment	Subject		
	M	K	S
			Reverse the order on cards 3 and 5
5	Picture card pieces: compile 10 school equipment illustrated vocabulary cards properly The story card sequence: Reverse order story	Potongan kartu bergambar: menyusun 11 kartu kosakata bergambar perlengkapan sekolah dengan baik The story card sequence : Reverse order story	Picture card pieces: compile 12 transportation illustrated vocabulary cards properly The story card sequence : Good order story
6	Picture card pieces: compile 10 school equipment illustrated vocabulary cards properly The story card sequence: Reversed the order on card 2, but the next is good	Potongan kartu bergambar: menyusun 11 kartu kosakata bergambar perlengkapan sekolah dengan baik The story card sequence : Reversed the order on card 2, but the next is good	Picture card pieces: compile 12 transportation illustrated vocabulary cards properly The story card sequence : Good order story
7	Pieces of picture cards: compile 11 well-illustrated clothing vocabulary cards The story card sequence: Good order on card story	Potongan kartu bergambar: menyusun 11 kartu kosakata bergambar pakaian dengan baik The story card sequence : Good order on card story	Picture card pieces: compile 12 transportation illustrated vocabulary cards properly The story card sequence : Good order on card story

From the results of the treatment carried out 7 times, it appears that the difficulty of the subject is the task of sorting illustrated story cards. The subject is still upside down in the sequence of stories, especially those with similar stories. However, for the activity of compiling images on vocabulary cards, subjects can do well, even able to do more than the number of cards expected. The subject was very fond of the activity of compiling this picture card, so the subjects did not feel bored and tired when the researchers gave treatment to them.

However, for a series of illustrated story cards shows the level of difficulty on the subject because the subject must sort the card image and tell it into a series of stories. Results show short Short-term Memory (STM).

However, qualitatively some behaviors that can lead to progress, although not significant, can be reported. For example: 1) The subject has mastered a lot of additional vocabulary in the sub-field of transparency, whereas previously the mastery of this vocabulary was only small. 2) The subject is more interested in learning by using a card than before, it can be seen from the subject's interest in being present every day and asking to add hours to study. 3) The subject looks more telling stories using the card as a media story to the researcher, where before the subject was more silent and seemed confused about what to say to the researcher.

5 DISCUSSION

Dyslexia is a disorder that occurs in the neurobiological process in reading activities. To be able to read a person must have mastery of verbal language, short-term memory sequential memory, adequate visual spatial functions, sufficient attention, and can express it verbally. In the research subjects there was no visual motor function found, because the subjects were able to write and draw well and had good verbal expressions. The problem experienced by the subject lies in short-term sequential memory and is confused to see / determine direction. Subjects are still limited in reading, so that they have difficulty understanding the contents of the reading.

From the results of interviews with mothers, there is indeed a history that his mother also experienced a delay in reading even though he finally got it. According to teacher information, the subject is still often confused to determine the right or left, also slow in reading. Based on the division of dyslexia according to Sidiarto (1990), the subject can be categorized as a type of visual dyslexia because the subject does not experience sharpness or visual impairment, the subject can see but is unable to distinguish, interpret or remember the words he sees.

This is probably due to a dysfunction in the central nervous system. Visual dyslexia symptoms are as follows: (1) Presence of reversal and inversion tendencies (2) Difficulties in visual discrimination and confusing letters or similar words, (3) Difficulty following and remembering visual sequences. This

is seen when the subject sorts pictorial story cards, where the subject is still often swapped by the order of cards, the treatment of 1 subject 1 (1.1). (4) Visually impaired memory; Subjects who forget to mention the name of the tool / school kit, treatment 5 on subject 1 (5,1). (5) The speed of perception is slow. Children are slow in scanning letters. (7) Difficulties in visual analysis and synthesis (8) Poor reading test results (9) Better in auditory activity skills - more remembering teacher explanations (9) Difficulties in playing sports (10) Ability to draw inferiorly and lacking in detail.

The method of giving picture cards is an exercise in remembering images and connecting in the preparation of storytelling sentences. Storytelling card images that are arranged sequentially are intended to train subjects to be able to think of a series. The combination of the use of picture cards and illustrated story order cards is to train the subject's memory. In addition to increasing the vocabulary of the subject, so that the development of the subject language becomes better.

From the post-test results, it can be seen that the use of this picture card can improve children's language development, where vocabulary increases after the child has received treatment 7 times. The subject tells more about using picture card media and is more interested in learning to read than before. However, the significance value is greater than 0.05 ($p > 0.05$), which is equal to 0.95. This is because theoretically the learning of individuals with dyslexia takes a short time, is done repeatedly, and continuously (continuous). While learning in this study only lasts for ± 1 week (7 meetings).

In this study also, the learning process using cards is not repeated at home because it considers the saturation of the subject and also the lack of assistance carried out by the mother, because mothers who work fulltime in the office from morning to evening are too exhausted to repeat the material at home. From the results of this study, it can be concluded that there is no addition of subject vocabulary through images and subjects have no difficulty in remembering vocabulary through images, subjects can mention vocabulary in the card well, although not all pictorial cards can be remembered well by the subject. However, for storytelling card images that are presented sequentially the subject has difficulty in sorting the story well, the difficulty in sequencing is probably caused by a neurobiological disorder that occurs in the brain, especially in the language area so the subject often forgets and is confused in sorting illustrated story cards that is.

The language area in the brain is located in Broca's area and Wernicke's area. Broca's area is a speech production center located in a small area in the inferior portion of the left prefrontal cortex in the brain, while the Wernicke area is a cortical area of language compatibility (language understanding) located in the left temporal lobe right posterior to the primary auditory cortex (Pinel, 2011). The difficulties experienced by the subject related to neurobiology certainly require continuous and continuous handling, in addition to that, proper accommodation is needed. Accommodation is the availability of varied tools according to the needs of the learning program for people with dyslexia, picture cards are one of the innovative learning media in helping learning dyslexic people.

6 CONCLUSION AND RECOMMENDATION

The pictorial card method has not been able to improve the mastery of language skills in people with dyslexia to the fullest. Based on the results of statistical analysis with a significance value of 0.95, it means there is no significant difference in the value of the pre test and the value of the post test. However, judging from the average value of the subject there were differences in the value of the pre-test and post-test, the subject experienced a small increase in vocabulary. Observation, interviews and continuous repetition of material are important factors in the development of the language of dyslexic children. Some suggestions that can be submitted for further research include:

1. The target module needs to be adjusted to the subject's condition and increase the number of subjects.
2. The main focus is more on the repetition process, preferably in the training process the provision of pictorial cards must be repeated at home and outside school hours.
3. Variations in the delivery of material and the use of various props to increase children's vocabulary can be done to motivate the subject, so as not to get bored following training.

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