THE EFFECT OF ORTON-GILLINGHAM BASED MULTISENSORY METHOD TOWARDS DYSLEXIA CHILDREN'S EARLY READING IN THE GRADE I OF INCLUSION SDN, KETAWANGGEDE, MALANG CITY

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Abstract: Reading skills are a prerequisite to acquire knowledge, no exception for the dyslexic children who study in inclusive elementary school. The purpose of research was to describe: (1) the ability of early reading for dyslexia children before being applied Orton-Gillingham based multisensory method, (2) the ability of early reading for dyslexia children after being applied Orton-Gillingham based multisensory method, (3) the effect of the Orton-Gillingham based multisensory method towards dyslexia children's early reading, The research method was a Single Subject Reasearch with A-B-A design. The results showed that the mean level of A1 condition was 40%, the intervention was 65.88%, A2 was 64.7% and the percentage overlape was 0%. The conclusion was the ability of early reading of conditions: (1) A1 was low category, (2) intervention has increased, (3) A2 remain stable. Suggestions for further researcher is to develop the same study in different subject for expanding knowledge.
Keywords: Orton-Gillingham based multisensory Methods, Early reading, dyslexia in the grade I

INTRODUCTION

Reading is a critical skill as a basic prerequisite for mastering other fields. Vaughn danBos (2009: 60) argues that 'reading skills is a prerequisite for many learning activities in the classroom subjects such as social sciences, natural sciences and vocational education to get a job ". The first step in learning to read is early reading. Similar with the previous opinion, Dalman (2013: 85) says that "Early reading is the beginning level for people to read." Early reading is an early stage for children in learning to read when they entered the first grade.

At the beginning of learning to read in class, there are some students who can already read, otherwise, the others are still not able to read or experience various forms of reading difficulties affecting up to first grade. "Difficulty reading in students are usually called as dyslexia (Abdurrahman, 2012: 161).

Characteristics that mark students with dyslexia can be observed with a variety of characteristics. Myklebust in (Abdurrahman, 2012: 163-164) revealed some characteristics of dyslexic students as follows:

1. Lack of visual and auditory memory, deficiencies in short term and long-term memory.
2. Have problems remembering data such as remembering the days of the week.
3. Have a problem in identifying left and right.
4. Having a deficiency in understanding of time.
5. If prompted to draw people, often incomplete one.
6. Poor spelling.
7. It is difficult to interpret globes, maps, or charts.
8. Lack of coordination and balance.
9. Difficulty in numeracy.
10. Difficulty in learning a foreign language.

Meanwhile, according to Jamaris, (2015: 140) dyslexia has the following characteristics:

1. Reading in reverse writing that reads like: *duku* to be read *kudu*, *b* to be read *d* or or *p* to be read *q*.
2. Write letters in reverse.
3. Have difficulty in recall of information given orally.
4. Bad writing Quality, written character letters are not clear.
5. Poor drawing.
6. It is difficult to follow the orders given orally.
7. Have difficulty in determining the direction of the right and left.
8. Have difficulty in understanding and remembering new story to read.
9. Have difficulty in expressing thoughts in writing.
10. Having dyslexia is not caused by poor eyes and ears but because of brain dysfunction.
11. Have difficulty in recognizing letter shapes and sounds of the letters say.
12. Have difficulty in combining the sounds of the letters into a word that means
13. Very slow in reading because of the difficulty in identifying letters, remembering letter sounds and combining the sounds of the letters into meaningful words.

Based on the experts' explanation, the characteristics of dyslexia characterized briefly by difficulty in learning to read caused by the difficulty of recognize letters, letter sounds and combining remembering letter sounds into words so that if the child is able to read when reading the last few words are omitted, added and even inserted.

Forms of reading difficulties in dyslexia children like reading letters or words in reverse. This happens

because the child has difficulty in recognizing and understanding the shapes and sounds of the letters caused disturbances in visual and auditory perception. According Jamaris (2013: 39) reveal that the "reversal of letters occurring (1) reversal (upside-down from the back to forward or reverse) at point b with d, p into q, (2) inversion inverted from top to bottom in the letter n to be u and m becomes w, (3) discrimination in the letter *n* become *r*, and h into n. "Based on a preliminary study of early conducted in SDN Inclusion Ketawanggede, Malang city in the grade I, through observation and interviews with classroom teachers, and assessment of early reading and perceptual assessment, the authors found that a female child with initials (FIS) in 8 years old who have difficulty reading form letters in reverse on the letter b-d, p-g, m-w-n-u-h.

Various methods in the teaching of reading can be chosen according to student characteristics. "It is necessary to note that there are three alternative methods of learning as follows: (1) strengthen the weak modalities, (2) teach through the whole modality, and (3) combine both methods" (Rahman 2012: 115). The methods of Orton-Gillingham based multisensory is a reading method for dyslexia in the class III that utilize visual, auditory, and kinesthetic modalities. Some examples of methods of Orton-Gillingham based multisensory is designed for students from grade III to VI with the ability to average or above average and normal sensory acuity. With some adaptations, could be modified to work well on both younger and older students (Vaughn and Bos, 2009: 96).

Some steps in the use of methods of Orton-Gillingham based multisensory were divided into three associations as follows: (1) Phase visual by a way of mimicking the teacher in reading the letter sounds repeatedly, (2) Phase auditory in which the teacher mention vowel and students is asked to appoint and pronounce vowel pronunciation well, (3) Phase kinesthetic by (a) copy the writing on the card by means of searching read, (b) write dictation sounds of the letters mentioned by the teacher on the book, (c) searching read papers have been written by the students.

Problems reading in dyslexia require special handling by specialized teachers. Koeswara, (2013: 1) "Among children who attend in regular school learning process, there are children who have difficulty learning. Not a few who assumes that the child with learning disabilities is categorized as a child with special need so he need a special education". Regular schools that accept students with special needs is called a inclusive school. Similar with this opinion, Koeswara (2013: 129) that "Inclusive Education is a system of education that is open to all children/students regardless of their social background, economic, culture, religion, language, race, ethnicity and gender as well as the ability and other aspects ".

Based on the above explanation, then the problem can be formulated as follows: (1) How is the ability of early reading for dyslexia children in the grade I before being applied Orton-Gillingham based multisensory method? (2) How is the ability of early reading for dyslexia children in the grade I after being applied Orton-Gillingham based multisensory method? (3) Is there any effect of the Orton-Gillingham based multisensory method towards dyslexia children's early reading for dyslexia children in the grade I of SDN Ketawanggede, Malang City.

The results of this study is expected to provide benefits for various parties particularly for children with learning difficulties in reading (dyslexia) and special education in general as follows: (1) Class teachers; make them easier to teach and select the appropriate method with the characteristics of the child. (2) Researchers; are hoped to increase knowledge dealing with dyslexic children in reading. (3) Parents; in order to implement Orton-Gillingham based multisensory method to learn to read when at home.
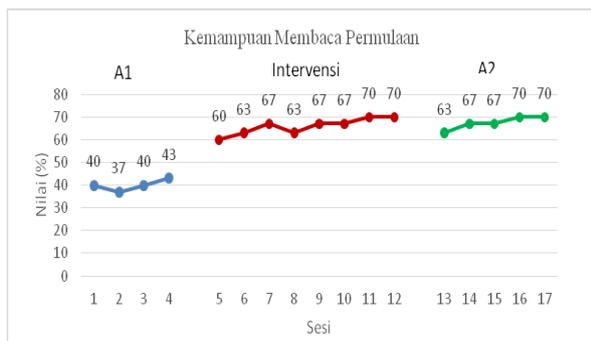
METHODS

The method used was an experiment in the form of Single Subject Reasearch (SSR) with the design of the A-B-A. The subjects were female child with initials FIS in 8 year old in the first grade at SDN Inclusion Ketawanggede, Malang city. The instrument used was informal tests made by the researcher. The tests used were oral reading test to measure the ability for early reading of of dyslexia child. The test consisting of 30 items developed based on the trouble reading to read the letters in reverse such as *b-d, p-g, m-w-n-u-*h were then arranged on tiers of letters, syllables, words and sentences by adding vowels. Those items include: searching read letters b-d, p-g, n-u, n-m, n-h, m-w, searching read syllables: ba-bi-bu-be-bo, da-di-du-de-do, ga-gi- gu-ge-go, hi-hu-ha-he-ho, ma-mi-me-mu-mo, na-ni-nu-ne-no, pa-pi-pu-pe-po, wa-wi- wu-we-wo, tracing read word suach as aunt, cultivation, badu, debi, dice, teeth, hana, huda, mona, nina, rice, wima.

Further test results are calculated using the percentage with a score of 1 if she can browse correctly read the article, and a score of 0 if it she can not read the writing trace. If the data have been collected at A-B-A baseline, then they were analyzed in the conditions and inter-conditions. At the final stage of the qualifying acquisition score reading, it was interpreted by adopting a Likert scale in 5-level (very low, low enough, low, high, and very high).
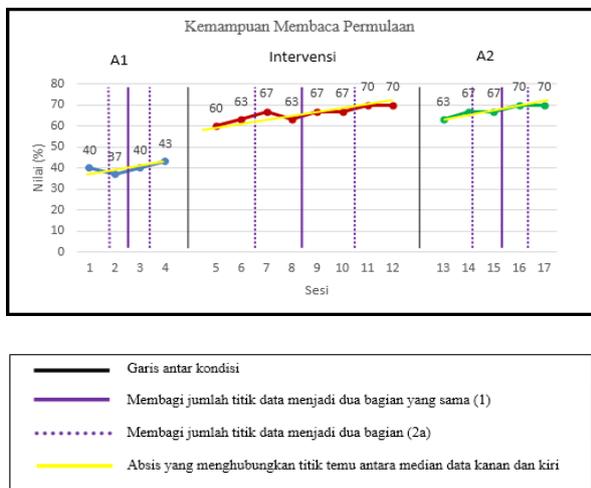
RESULT

This research was conducted individually in a separate room for 17 sessions divided into three conditions as follows: four sessions on the condition A1 (before being given treatment), 8 sessions on the condition of intervention (given Orton-Gillingham based multisensory method), and 5 sessions on condition A2 (the control condition).

The results of the acquisition value of the condition A1, A2 intervention and illustrated in the graph below:

The graph showed that the acquisition of scores in A1 condition marked blue line starts sessions one to four were 40%, 37%, 40% and 43%. Furthermore, on the condition of intervention by using Orton-Gillingham based multisensory method marked red line with the score obtained in session five to twelve are 60%, 63%, 67%, 63%, 67%, 67%, 70%, 70 %. While the condition is marked A2 green line with the scores obtained on the session thirteen to seventeen was 63%, 67%, 67%, 70%, 70%.

Then, the scores were processed by using data analysis in condition. The analysis in the condition described by the below graph:

The results of the dissemination of charts visual analysis respectively on each component condition can be described as follows:

On the condition of A1 before being given treatment illustrates (a) Long-condition for 4 sessions, (b) Estimated inclination direction and the effect marked with yellow lines abscissa indicates the trend of its increase (+), (c) The trend of stability showed stable at 100 %, (d) Trace data point increase (+), (e) Level stability and range data show steady with a range of 40% -43%, (f) Level of Change (+3). Then, the intervention of condition describe (a) Long-condition for 8 sessions, (b) Estimated inclination direction and the effect marked with a yellow line abscissa indicates the direction of its rising trend (+), (c) stability trend showed a steady 87.5 %, (d) Trace data point increase (+), (e) Level stability and range data show steady with a range of 60% -70%, (f) Level Changes at (+10).

Furthermore, on condition A2 describe (a) Long-conditions by 5 sessions, (b) Estimated inclination direction and the effect marked with yellow lines abscissa indicates the trend of its increase (+), (c) The trend of stability show stable at 100%, (d) Trace data point increase (+), (e) Level stability and range data show steady with a range of 63% -70%, (f) Level Changes at (+7).

The summary results of the analysis in the conditions presented in the following table:

	Condition	A 1	B	A2
1.	Long Condition	4	8	5
2.	Estimation of direction tendency	(+)	(+)	(+)
3.	Stability tendency	Stable 100%	Stable 87,5%	Stable 100%
4.	Data trace	(+)	(+)	(+)
5.	Level of stability and span	Stable (40%-43%)	Stable (60%-70%)	Stable (63%-70%)
6.	Level of change	43%-40% (+3%)	70%-60% (+10%)	70%-63% (+7%)

The, the data was analyzed by an inter-condition analysis. The results of the analysis between the state according to its components are (a) the number of variables are altered, from the conditions (A1) to intervene (B) amounted to one which is to improve the ability to read the beginning of the students dyslexia grade 1, (B) change in trend direction and the effect, from the condition B to A1 and A2 to B is a trend toward increased (+), (c) changing trend of stability, in comparison intervention condition (B) with the condition (A1) is from stable to stable (87.5% to 100%) , while the comparison condition (A2) with intervention (B) is from stable to stable (100% to 87.5%). (D) the level of change, on the intervention (B) to the condition (A1) is + 17% and of the condition (A2) to state intervention (B) of + 10%, so it can be interpreted that the ability to read the beginning of the increases, (e) the percentage of overlap, obtained by 0% since there is no overlapping data in the intervention condition (B) of the A1.

DISCUSSION

Based on the results of the data analysis has been done and presented in tables and line graphs using the design A-B-A, it can be said to be using the method based on Orton-Gillingham multisensory positively effect on dyslexia student's ability for early reading of class in the grade I at SDN inclusion Ketawanggede, Malang city. It can be seen from the data acquisition overlap between state intervention to baseline-1 at 0%. The calculation can be concluded that the intervention

by Orton-Gillingham based multisensory method believed to be a positive effect on students with dyslexia's ability to read early in the first grade.

The results of this study are consistent with the opinion of Vaughn and Bos (2009: 95) explains that "Orton-Gillingham based multisensory method is designed for students with dyslexia or who have substantial difficulties learning to read. Some examples of Orton-Gillingham based multisensory method is designed for students from in grade three to grade six with the ability to average or above average and normal sensory acuity. With some adaptations, could be modified to work well on older or younger students".

In addition, this research is also consistent with the results of the Goddess, 2012 that "multisensory method can improve the reading skills of children in the grade I of primary school accurately in recognizing words even though the results were not significant. Although the increase is not too high, but it can be a positive influence."

From these statements it can be seen that the use of Orton-Gillingham based multisensory method is positively effected on dyslexia student's ability for early reading in the first grade. By using this method have a positive impact on the improvement of dyslexia student's reading. So, it can be concluded that the method Orton-Gillingham based multisensory method have positive effect on student's ability for early reading in the first grade.

CONCLUSION

Based on the results of the study can be summarized as follows:
1. The ability of early reading with the components of reading letters looked is almost the same, read syllables, words and sentences on the subject FIS on the conditions (A1) in the category of low and need special handling by the given intervention. This can be seen in the mean at any level between baseline conditions. Obtaining the mean level before being given intervention or when the condition (A1) is 40% with the level change of +3.
2. The ability of early reading on the subject FIS when the condition of intervention has increased. It can be seen from the results of the acquisition of the mean level on the condition of intervention by 65.88% and an increase in the level of change of +10.
3. The data analysis in the conditions A2 with a mean level of 67.4%, and the level of change shows no sign of +7, which means that ability of early reading has increased. Since the mean result of the conditions (A2) reached 67.4%, it can be categorized into high achievement early reading.
4. The use of Orton-Gillingham based multisensory methods is positively effected on students dyslexia's ability for early reading in the grade I.

This is shown from the acquisition of overlap percentage results from intervention to A1 of 0% meaning that there is no overlap of data intervention in A1 condition, so that, it can be concluded that the interventions positively influence on the target behavior.

SUGGESTION

Based on the research findings and the condition of field study, the researcher put forward suggestions as follows:
1. From the research findings, teachers are expected to use the appropriate method for reading in dyslexic students in a way to utilize all the senses that exist. The use of Orton-Gillingham based multisensory methods can be applied not only to assist students in improving the early reading but also make student easier to remember how to read an engaging sounds of the letters that have been studied
2. For further researchers are expected to expand research using Orton-Gillingham based multisensory methods on subjects with different characteristics or different behavior targets, so that, can provide a broader knowledge.

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