

Dynamics of Cognitive Development of Dyslexia Students Through Multisensory Learning

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ABSTRACT

Objective: This study aims to determine the dynamics of cognitive development of dyslexic students with multisensory interventions. Based on research conducted in Surabaya in 2019, it was shown that 37% of children from 7 schools in Surabaya have dyslexia. The large percentage is the basis for the importance of finding effective interventions for dyslexic children. One strategy that can be done is through multisensory interventions. The multisensory method is a method that introduces the concept of learning by maximizing the sensory that is owned. **Method:** The type of research used in the study is a qualitative case study study with a subject of a male student in grade 2 of elementary school in Sidoarjo. The data collection method in the study used triangulation methods including interviews, observations, and documentation. **Results:** The results of this study indicate that the application of multisensory interventions to children with dyslexia can have a positive influence on psychological development in the cognitive domain. **Novelty:** The use of the case study method involving research subjects is intended as a novelty from previous research in order to obtain the latest data regarding its effectiveness.

INTRODUCTION

In Indonesia, the number of children with reading disorders or Dyslexia is quite high. Based on research conducted by Irda Murni and Noviana, it was found that the prevalence of children with dyslexia in Padang City, precisely in Kuranji District, was 41.74% [1]. Meanwhile, research conducted in Surabaya in 2019 showed that 37% of children from 7 schools in the Surabaya area experienced specific learning disorders, Dyslexia [2]. This shows that many children experience specific learning difficulties in the form of Dyslexia. Based on an initial survey conducted at SD Muhammadiyah 4 Zam Zam using the interview method, there were several students with various special needs, one of which was dyslexia. Dyslexia is a condition of learning difficulties related to language, ranging from distinguishing or recognizing letters, spelling, to experiencing delays in learning [3]. Children with dyslexia are children with limitations in the form of learning difficulties so that they require special handling in learning [4].

Symptoms of dyslexia begin to appear when difficulties are found in reading, writing and arithmetic activities. Children with dyslexia have difficulty recognizing letter names, letter shapes, letter sounds, and difficulty in reading and writing words. In writing, many letters are often missing or even missing several sentences when writing or copying [5]. The symptoms of children with dyslexia are not only limited to the inability to compose or read sentences in reverse order but also in various orders, such as from left to right, top to bottom. Children with dyslexia also have difficulty receiving commands that should be forwarded to memory in the brain [6].

Costa, Edward, & Hooper argue that children with disabilities in writing and reading tend to experience cognitive burdens that can affect their language and executive functions [7]. This is in line with findings in the field carried out using interview, observation, and documentation methods. Children with dyslexia at SD Muhammadiyah 4 Zam Zam showed similar symptoms. Difficulty in recognizing letters caused the child's achievement to tend to lag behind his friends. Information obtained from the class teacher showed that the child did not move up a class in the previous school year.

Based on the findings of Setianingsih, congenital disorders in children with special needs also reduce their ability to receive information, which can lead to discrimination even from educational personnel who do not understand children with special needs [8]. Therefore, it is necessary for all parties to understand children with specific learning difficulties in order to provide appropriate treatment [9].

In each child, the learning process depends on the patterns and methods of learning that they like and are in accordance with their ability to absorb information [10]. The process of learning activities, analyzing and thinking also has an impact on cognitive development [11]. Therefore, children with dyslexia need special stimuli to improve their cognitive abilities.

In cases of dyslexia, it is very necessary to activate all of the child's senses in the learning process to overcome learning difficulties [12]. Siregar also argues that children will learn well if the child's sensory functions or modalities are involved in the presentation of learning topics [1]. Based on these considerations, intervention through multisensory learning methods is considered to be able to meet these needs.

The multisensory method is a method developed by Stillman and Gillingham with a phonics-visual-auditory-kinesthetic system [13]. According to Anggraeni et al., multisensory itself is a learning method that actively involves kinesthetic, audio and visual sensors [14]. Yusuf argues that the multisensory approach is based on the belief that children will be more effective in the learning process when teaching materials are presented in various ways that involve their senses [15]. The multisensory method can also be described as an exercise that involves all the senses that a child has with the aim of recognizing and learning something [12].

Based on previous research conducted by Faruq & Pratisti using a literature review research method, the application of multisensory methods to help the learning process of dyslexic children, especially in reading and writing, is considered the most effective [16]. However, unfortunately, the application of multisensory methods to dyslexic children in elementary schools has not been widely carried out [17]. Research related to multisensory learning methods for dyslexic children is also still rarely found.

This is the basis for researchers to conduct research related to the dynamics of cognitive development of dyslexic children who have received multisensory learning methods in order to determine the role of multisensory methods in the cognitive development of dyslexic children.

The use of the case study method involving research subjects is intended as a novelty from previous research in order to obtain the latest data regarding its

effectiveness. It is hoped that this study can provide a broader picture of the dynamics of psychological development in terms of the cognition of dyslexic children who receive multisensory learning methods to improve learning achievement for dyslexic children. In this way, learning delays, the tendency to withdraw from the environment or isolation and discrimination against dyslexic children due to the innate disabilities of dyslexic children can be avoided.

RESEARCH METHOD

The method used in this study is qualitative with a case study type. The data collection technique used is observation and documentation of one Dyslexic student aged 8 years 9 months who is in grade 2 of elementary school and interviews with Special Companion Teachers (GPK) and Class Teachers at SD Muhammadiyah 4 Zam Zam Sidoarjo. Observations were carried out using non-participant techniques where the researcher was only an observer and recorded directly on the subject being studied. Observations were carried out to determine the cognitive aspects of the subject within the school environment, namely when the subject was carrying out learning activities while at school, such as when the subject was given reading or writing assignments in books.

Based on PPDGJ - III F81.0, the subject showed indications of typical reading disorders. This indication is accompanied by the presence of characteristics of reading ability that is lower than his level, errors in oral reading ability, and deficits in understanding reading. The subject also showed difficulty in pronouncing the alphabet and difficulty in saying the correct name from the writing. This indication is reinforced by the documentation in the form of a diagnosis from a psychologist stating that the subject had a specific learning disorder with the classification of Dyslexia.

In this case, the intervention used is multisensory. The use of this intervention aims to improve the learning ability of dyslexic children in receiving information through the various senses they have. This method utilizes visual (eyes), auditory (ears), kinesthetic (movement), and tactile (touch) sensors in the learning process of dyslexic children [18]. In practice, this method is not only limited to teaching spelling by imitation, but also involves visual and tactile memory [19].

Previous research conducted at SDN Marunda 02 found that the multisensory method was able to improve the learning outcomes of dyslexic students [20]. This is in line with other research conducted at SDN Margaluyu, Serang City which showed that providing multisensory interventions to dyslexic students effectively increased reading ability by up to 60% [21].

The stages of intervention carried out in this study include:

Stage 1: Assessment

At this stage, an assessment is carried out on the subject to determine the difficulties experienced by the subject during the learning process. The assessment is carried out by observing the subject for 1 week. Interviews with class teachers were also conducted

along with the collection of documentation such as subject worksheets, photos of subject activities, and professional diagnosis results.

Stage 2: Building closeness with the subject

This stage was conducted for 2 consecutive weeks with the aim of fostering the subject's trust. At this stage, no multisensory intervention was conducted at all but rather focused on playing together.

Stage 3: Providing multisensory intervention stage 1

At this stage, multisensory intervention was focused on training the subject's focus. The form of intervention provided was in the form of finger gymnastics games and eye-gazing competitions.

Stage 4: Providing multisensory intervention stage 2

At this stage, the interventions that had been running in the previous stage were still provided. The multisensory interventions added in this stage were in the form of counting activities in various subject activities at school. This stage also included providing interventions through simple games using objects around the subject.

Stage 5: Providing multisensory intervention stage 3

At this stage, additional interventions were carried out by involving various educational games in the subject's learning process. The interventions that had been carried out in the previous stages were still provided.

Stage 6: Evaluation

At this stage, an assessment is carried out regarding the improvement of the subject's learning ability from before receiving the intervention to after the intervention is given. Improvement is measured through the development of the subject's writing, reading, arithmetic, and focus duration.

In this study, semi-structured interviews were conducted with Class Teachers and Special Assistant Teachers (GPK). Interview questions were based on cognitive aspects including language skills, memory, focus, logical thinking, number skills and the use of appropriate words. Interviews were conducted to be used as a source of supporting evidence where the interview results were used to support the results of observations of the subjects being studied.

The documentation collected is in the form of professional diagnosis results and photos of subjects during activities at school with the Special Assistant Teacher. Subject worksheets are also included as supporting documentation. Documentation is used to complete and support data from observations and interviews. To ensure the validity of the data, this study uses triangulation techniques. The triangulation carried out aims to determine the suitability between the interview results and the conditions that occur in the field (results from observations) and data obtained from documentation.

RESULTS AND DISCUSSION

Results

After intervention with multisensory learning method for 3 months, significant cognitive development was found in the subject. At each stage of intervention, the subject slowly showed development. This development includes aspects of language, memory, focus, logical thinking, number ability and proper word usage.

The subject who was initially unable to count and add, is now able to count from 1 to 20 and is able to do simple addition under ten. The subject also showed development in writing and reading ability although there were still frequent errors in reading and spelling. The subject's handwriting also became neater compared to before receiving multisensory intervention.

In maintaining focus, the subject was previously unable to make eye contact at all and was very often distracted so that he could not complete the tasks given. After receiving multisensory intervention, the subject began to be able to maintain eye contact for up to 10 seconds and began to be able to complete the tasks given although he was still distracted by other things several times in the process. This development shows that intervention through multisensory method has proven to play a positive role in the cognitive development of dyslexic children.

Discussion

Children with dyslexia experience various obstacles in their learning process. This is due to the brain's inability to process and process information received in the brain [22]. According to Costa, Edward & Hooper, along with the increase and increase in class of a child with disabilities in the form of inability to write or read, the child's cognitive load can increase which will have an impact on their language and executive dysfunction [7]. Therefore, children with dyslexia need proper treatment to minimize the cognitive load they experience. Based on the research that has been conducted, by utilizing the multisensory method as an intervention for dyslexic children, it was found that the dynamics of cognitive development of dyslexic children through multisensory learning moved in a positive direction. This finding shows that intervention through the multisensory method has a significant influence on the cognitive development of dyslexic children.

In its application, at the stage of building closeness with the subject, GBK gives freedom to the subject regarding their learning process. Subjects are allowed to play in between learning times. The games allowed during the learning time are limited to small toys that can be used on the classroom table. When the learning is finished, the subject is allowed to play freely both in and outside the classroom. In order to build closeness with the subject, GPK tries to be involved in every game the subject plays. At the stage of providing multisensory intervention stage 1, GPK begins to provide multisensory intervention through simple games. The games include brain gymnastics games using fingers and eye gazing competitions. This intervention focuses on training the subject's

focus. When implementing this intervention, the subject showed development, namely starting to be able to make eye contact for two seconds.

At the stage of providing multisensory intervention stage 2, the intervention that had been running in the previous stage was still given. At this stage, GPK added counting activities in various subject activities at school. This stage also includes providing intervention through simple games by utilizing objects around the subject such as pencils, paper, erasers, and other objects. At this stage, the subject showed development in the form of the ability to count from 1 to 10 and do simple addition under 5. At this stage, the duration of eye contact of the subject also increased to 5 seconds.

At the stage of providing multisensory intervention stage 3, GPK began to provide multisensory intervention by utilizing educational games such as playdough, leggo, image media juxtaposed with letters to form words, thickening dotted lines with colored pencils, and several other games. At this stage, the intervention that had been given previously was still applied. The results of stage 3 showed the development of the subject where the subject began to be able to write more neatly. The subject also began to be able to read even though it was by spelling. At this stage, the subject can also count up to 20 and do additions below 10. The duration of eye contact of the subject also increases to 10 seconds.

According to Yusuf, when teaching materials are presented through various ways that involve the senses, children will be more effective in their learning process [15]. The multisensory methods that are often used in this study are through visual, auditory and tactile. The subject is given a picture that he likes and then invited to count the picture. In each activity, GPK accustoms the subject to count such as counting the remaining unassembled legos when playing legos, counting the number of papers that have been cut by the subject, counting the unassembled paper when making class decorations, counting the number of objects drawn by the subject, to counting the time when throwing away the trash. In each calculation, GBK often provides physical touch such as touching the subject's chin to directing the subject's fingers to point to each object being counted. The results of this habituation make the subject able to count from 1 to 20 in approximately three months. In addition, the subject is also able to do simple additions below ten. It should be noted that previously the subject was unable to count or add.

The developments found are in line with the results of research conducted by Sullamuddiyanah et al., at UPTD SDN 4 Pringgacala. The study found that the application of multisensory-based learning can improve learning outcomes in grade 2 mathematics [23]. Thus, this research can complement previous research related to the dynamics of cognitive development that occurs in dyslexic children through multisensory interventions.

To develop the subject's ability to read and write, GBK provides additional classes for the subject outside of class hours. GBK uses a colored picture method and dotted lines that need to be connected to form a letter. In connecting the dotted lines, GBK gives the subject the freedom to connect them with their favorite color. Every time a letter is

formed, GBK asks the subject what letter is formed. GBK also provides stimulus by using image media that is juxtaposed with letters to form words.

During the learning process, GBK provides a lot of touch (tactile) such as patting the subject's shoulder so that the subject wants to learn. Several multisensory methods in the form of tactile given to the subject include paper cutting activities while singing the song "Twinkle Twinkle Little Star", forming letters using playdough while pronouncing them, forming letters on the table by moving the index finger, and various other forms of stimulus. GBK also gives praise and rewards in the form of drawing on paper when the subject successfully completes his task. The frequent provision of interventions in these ways slowly makes the subject's handwriting neater than before, although when compared to other students, the subject's writing is still messy. The subject also begins to be able to read although there are still some errors in reading and spelling.

The development of reading and writing skills found in this study strengthens previous research conducted through a literature review method by Faruq & Pratisti in 2022. The application of the multisensory method is considered effective in helping the learning process of dyslexic children, especially in reading and writing [16]. Research by Wijaya et al. also found that multisensory interventions were able to increase reading skills by up to 60% in dyslexic students at SDN Margaluyu, Serang City [21]. Through research conducted regarding the dynamics of cognitive development of dyslexic children through multisensory learning, it can provide a broader picture than previous research conducted by Wijaya et al. in 2023.

In developing the subject's concentration ability, the multisensory interventions often given by GPK are in the form of simple games. One of these games is moving both hands in different ways. One hand depicts the number 2 with the thumb and index finger while the other hand depicts the number 2 with the index finger and middle finger. In the game, both hands depict the number 2 in different ways and alternately quickly. In addition to being played in their spare time, this game is also played by the subjects in between learning when the subjects find it difficult to concentrate. GBK also trains the subjects' concentration with eye-gazing competitions.

The results of the method applied by GBK show positive results. If previously the subjects were unable to make eye contact at all, now the subjects are able to make eye contact for up to 10 seconds. The subjects' concentration is also better than before. If previously the subjects were often distracted by other things so that they could not complete their tasks, now the subjects have begun to be able to complete their tasks even though they are still distracted by other things several times. Based on this study, it shows that multisensory intervention can improve the concentration ability of dyslexic children. This is in line with the statement of Ghifary et al., that through the multisensory method, children's concentration in learning and understanding lessons can increase [24].

CONCLUSION

Fundamental Finding : Based on the research and analysis that has been done, it can be concluded that multisensory intervention in dyslexic children plays a positive role in psychological development in the cognitive domain. The use of multisensory methods in learning dyslexic children is one of the effective interventions to improve cognitive abilities such as focus, reading, writing, and arithmetic. This study also shows that sensory involvement in the learning process can help overcome the limitations of dyslexic children. **Implication :** To obtain effective results, schools need to synergize with the families of dyslexic children regarding the strategies that will be used to support the cognitive development of dyslexic children. The involvement of professional staff in learning dyslexic children also needs to be considered to maximize the cognitive development of dyslexic children. **Limitation :** This study is limited to several cognitive aspects such as focus, reading, writing, and arithmetic. It is important to conduct further research by considering other aspects as the focus of research in order to obtain a broader picture in developing the abilities of dyslexic children. **Future Research :** For further researchers, this study can be followed up with various variations and improvements. There are variations that can be done by focusing on other developments such as socioemotional and motoric by applying a multisensory approach.

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REFERENCES

- [1] A. Ade, L. F. Nawa, R. Rajak, P. A. Ilham, and W. S. Tonra, "Strategi Pembelajaran Anak Disleksia Di SDN 44 Kota Ternate," *J. Ilm. Cahaya Paud*, vol. 1, 2023.
- [2] L. Hasanah, I. Nafisyah, J. A. Pratiwi, and N. A. Putri, "Problematika pembelajaran daring anak mengalami kesulitan belajar 'disleksia,'" *J. Golden Age, Univ. Hamzanwadi*, vol. 6, no. 01, p. 291, 2022, [Online]. Available: <https://doi.org/10.29408/goldenage.v6i01.5639>
- [3] S. Nurfadhillah *et al.*, "Analisis Kesulitan Belajar Membaca (Disleksia) dan Kesulitan Belajar Menulis (Disgrafia) Siswa Kelas I SDN Tanah Tinggi 3 Tangerang," *Masaliq*, vol. 2, no. 1, pp. 114–122, 2022, doi: 10.58578/masaliq.v2i1.94.
- [4] H. M. M. Hidayatulloh, "Peran Pola Asuh Orang Tua Dalam Proses Belajar Anak Disleksia Di Era Pandemi Covid-19," *Couns. AS SYAMIL J. Ilm. Bimbing. Konseling Islam*, vol. 2, no. 2, pp. 17–24, 2022, doi: 10.24260/as-syamil.v2i2.755.
- [5] K. Dewi, "DISLEKSIA," in *Proseding Seminar Nasional PGSD UPY*, 2015, pp. 7–13. [Online]. Available: [http://repository.upy.ac.id/407/1/artikel kristiantini.pdf](http://repository.upy.ac.id/407/1/artikel%20kristiantini.pdf)
- [6] N. H. Rofiah, "Proses Identifikasi: Mengenal Anak Kesulitan Belajar Tipe Disleksia Bagi Guru Sekolah Dasar Inklusi," *Inklusi*, vol. 2, no. 1, p. 109, 2015, doi: 10.14421/ijds.020110.
- [7] L. J. C. Costa, C. N. Edwards, and S. R. Hooper, "Writing Disabilities and Reading Disabilities in Elementary School Students," *Learn. Disabil. Q.*, vol. 39, no. 1, pp. 17–30, 2016, doi: 10.1177/0731948714565461.
- [8] E. S. Setianingsih, "PENERIMAAN DAN SIKAP GURU TERHADAP KEBERADAAN ABK DI SEKOLAH," vol. 5, no. 1, pp. 1–23, 2018.

- [9] Dita Padiani Rahma and Tita Rosita, "Konseling Kelompok Siswa Kesulitan Belajar Spesifik di Sekolah Dasar Inklusi," *Quanta J. Kaji. Bimbing. dan Konseling dalam Pendidik.*, vol. 8, no. 2, pp. 139–148, 2024, doi: 10.22460/quanta.v8i2.4762.
- [10] O. D. Handayani and R. S. Rizkya, "Pola Belajar Anak Penyandang Low Vision Pada Anak Usia Dini," *J. Ilm. Potensia*, vol. 8, no. 2, pp. 273–280, 2023, doi: 10.33369/jip.8.2.273-280.
- [11] L. M. K. Filasofa and M. Miswati, "Perkembangan Kognitif Anak Usia Dini Penyandang Disleksia: Studi Kasus Pada Lembaga Pendidikan Di Indonesia," *J. Early Child. Character Educ.*, vol. 1, no. 1, pp. 53–72, 2021, doi: 10.21580/joece.v1i1.6615.
- [12] I. F. N. D. Primasari and A. Supena, "Meningkatkan Kemampuan Membaca Siswa Disleksia Dengan Metode Multisensori Di Sekolah Dasar," *J. Basicedu*, vol. 5, no. 4, pp. 1799–1808, 2021, [Online]. Available: <https://jbasic.org/index.php/basicedu/article/view/1055>
- [13] V. Sepsita and Z. C. Wijaya, "Penerapan Metode Multisensori dalam Pembelajaran Anak Disleksia di Tingkat Sekolah Dasar," vol. 2, no. 4, pp. 42–54, 2024.
- [14] M. E. Anggraeni, B. R. Akta, Z. N. Faizah, and M. H. Assidiqi, "Media Pembelajaran Multisensoris Menggunakan Flashcards Berbasis Augmented Reality untuk Anak Disleksia," vol. 8, no. 2, pp. 215–225, 2022.
- [15] E. A. Fiani, Y. Kurniawati, and Diana, "Pengaruh Pendekatan Multisensori Terhadap Kecerdasan Logika-Matematika Pada Anak Kelompok a Di Taman Kanak-Kanak Kabupaten Kendal," *BELIA Early Child. Educ. Pap.*, vol. 1, no. 1, pp. 1–8, 2012.
- [16] F. Faruq and W. D. Pratisti, "Model Pembelajaran Multisensori bagi Anak Disleksia, Efektif?: Tinjauan Sistematis," *Ideguru J. Karya Ilm. Guru*, vol. 7, no. 3, pp. 243–248, 2022, doi: 10.51169/ideguru.v7i3.392.
- [17] A. Widodo, D. Indraswati, and A. Royana, "ANALISIS PENGGUNAAN MEDIA GAMBAR BERSERI UNTUK MENINGKATKAN KEMAMPUAN MEMBACA SISWA DISLEKSIA DI SEKOLAH DASAR Arif," *Magistra*, vol. 11, pp. 1–21, 2020.
- [18] G. M. Simanjuntak, R. Widjana, and K. Astuti, "Pembelajaran Metode Multisensori Untuk Meningkatkan Kemampuan Pra-Membaca Pada Anak Usia Pra-Sekolah," *Cakrawala Dini J. Pendidik. Anak Usia Dini*, vol. 11, no. 1, pp. 51–54, 2020, doi: 10.17509/cd.v11i1.21082.
- [19] G. P. Amelia, "Gangguan Aspek Fonologi Pada Anak Penderita Disleksia Usia 8 Tahun," *J. Ilm. Multidisiplin*, vol. 1, no. 7, pp. 2986–6340, 2023, [Online]. Available: <https://doi.org/10.5281/zenodo.8301784>
- [20] A. Supena and I. R. Dewi, "Metode Multisensori untuk Siswa Disleksia di Sekolah Dasar," *J. Basicedu*, vol. 5, no. 1, pp. 110–120, 2020, doi: 10.31004/basicedu.v5i1.623.
- [21] S. Wijaya, A. Supena, and Y. Yufiarti, "Efektifitas Metode Multisensori Dalam Meningkatkan Keterampilan Membaca Siswa Disleksia Di Sekolah Dasar," *Prim. J. Keilmuan dan Kependidikan Dasar*, vol. 15, no. 1, pp. 125–140, 2023, doi: 10.32678/primary.v15i1.8263.
- [22] L. E. Rahmawati, E. Purnomo, D. A. Hadi, M. D. Wulandari, and A. W. Purnanto, "Studi Eksplorasi Bentuk-Bentuk Gejala Disleksia pada Anak," *J. Obs. J. Pendidik. Anak Usia Dini*, vol. 6, no. 5, pp. 4003–4013, 2022, doi: 10.31004/obsesi.v6i5.2495.
- [23] Sullamuddiyanah, W. A. Wilsa, and R. A. KD, "PENERAPAN MODEL PEMBELAJARAN MULTISENSORIDENGAN BANTUAN MEDIA SEMPOA UNTUK MENINGKATKAN HASIL BELAJAR SISWA PADA MATA PELAJARAN MATEMATIKA KELAS II SEKOLAH DASAR," vol. 24, no. 7, pp. 28–42, 2024.
- [24] M. A. Ghifary, I. D. Aprilia, and T. Soendari, "Metode Multisensori untuk Meningkatkan kemampuan Membaca permulaan Anak dengan Hambatan Kecerdasan di SDN Inklusi Sukamaju 01," *J. ORTOPEDAGOGIA*, vol. 9, no. 1, p. 72, 2023, doi: 10.17977/um031v9i12023p72-76.
- [25] Maslim, R., Kj, S., & Kes, M. (2019). *Buku Saku Diagnosis gangguan jiwa rujukan ringkas dari PPDGJ-III, DSM-5, ICD-11. Jakarta: PT. Nuh Jaya.*

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