

The effectiveness of the Multisensory Method on Early Reading Ability in 6-7 Years Old Children

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Abstract

Early reading is an important primary capital that students have in conducting their academic knowledge, but there are still many elementary school students who have not mastered the skills. Using the right reading method can support children's skills in reading. The purpose of the study is to determine the effectiveness of the Multisensory method on the early reading skills in 6-7 years old children of the State Elementary School 10 Ganting Bigau and the State Elementary School 19 Koto Tuo, the Sulit Air Village, District X Koto diatas, the Regency of Solok. Withdrawal of samples with simple random sampling technique. Data collection is conducted by adapting instruments from ERSI (The Early Reading Screening Instrument). The data analysis technique is an independent T-test that is to see a comparison of differences in the average score. The results showed that the Multisensory method was effective in developing early reading skills in Grade 1 students at elementary school. The use of multisensory reading methods can be an alternative to the choice of reading by the teacher in improving the student's initial reading.

Kata Kunci: multisensory method; early reading ability; elementary school.

Abstrak

Kemampuan membaca permulaan merupakan modal dasar yang penting dimiliki oleh siswa dalam menjalankan pengetahuan akademis disekolah, namun kondisi masih banyak siswa sekolah dasar yang belum menguasai keterampilan tersebut. Penggunaan metode membaca yang tepat dapat menunjang keterampilan anak dalam membaca. Tujuan dari penelitian yaitu untuk mengetahui efektivitas metode multisensori terhadap keterampilan membaca permulaan anak usia 6-7 tahun di Sekolah Dasar di SDN 10 Ganting Bigau dan Sekolah Dasar 19 Koto Tuo, Kelurahan Sulit Air, Kecamatan X Koto Diatas Kabupaten Solok. Penarikan sampel dengan teknik simple random sampling. Pengumpulan data dilakukan dengan mengadaptasi instrumen dari ERSI (The Early Reading Screening Instrument). Teknik analisis data adalah uji-t independen yaitu untuk melihat perbandingan perbedaan dalam skor ratapenelitian menunjukkan bahwa metode multisensori efektif rata. Hasil dalam mengembangkan kemampuan membaca permulaan pada siswa kelas 1 Sekolah Dasar. Penggunaan metode membaca multisensori dapat menjadi alternatif pilihan metode membaca oleh guru dalam meningkatkan kemampuan membaca permulaan siswa.

Keywords: Kemampuan Membaca Permulaan, Metode Multisensori, Sekolah Dasar

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INTRODUCTION

The purpose of early reading skill development in students with low-case infertility is that they have language skills and have an understanding of textual information. Such skills can be realized with meaningful and fun meaningful reading learning activities that correspond to their age and development levels. The accuracy of the teacher in the method selection can add improvement to the students ' active involvement in the classroom learning process so that students have a meaningful experience and can fulfill their language development duties (Horowitz-Kraus et al., 2018).

The term reading early or early reading is part of the language aspect in early childhood. An association of educators, academics and early childhood observers known as the National Association for the Education of Young Children (NAEYC) mentions the initial reading of part of the content of learning that was run with aspects of language development from kindergarten to third grade of primary school (Yusuf & Enesi, 2012). In the world of international education is made the standard size of age categories in the limited initial reading of the age of kindergarten to third-grade elementary school.

The cognitive domain of children can develop through early reading content, children's understanding of the reading content that has been learned from the complex of children's Reading activity is one of the ventures in gaining a lot of knowledge and information.ability in reading that can be obtained from various types of media. Children with reading skills will utilize his skills to explore the knowledge he possesses (Chaudhry, 2014). At this stage, the child will move from the stage of learning to read to the reading stage to study. The importance of reading for students is to be able to have an understanding of the letter symbol, knowing about how to pronounce and save knowledge and how to acquire it and the ability to know the word (Thompson & Sonnenschein, 2016). Therefore, the urgency in the early reading ability is a fundamental knowledge for students in developing his thinking skills.

(Rahmatika et al., 2019), said students ' success in following the learning process is determined by the mastery of the reading skills to get a good result in the school. This can be explained that every child should have the ability to read early to be easy to follow the process of learning to teach with a classroom teacher. Reading activity is one of the ventures in gaining a lot of knowledge and information (Winarti & Suryana, 2020).

While reading and writing are the basic academic skills that students must have since entering formal schooling in elementary education the mastery of low reading skills is found in Indonesian elementary school students, it can be seen from the Progress in International Reading Literacy Study (PIRLS), an international study that measures reading literacy in elementary school students, indicating that the level of reading of Indonesian students is at a position or rank to 45 from 48 participating countries by obtaining a value of 428 from An international average of 500 points (Mullis et al., 2014). In line with the data is a report of the Early Grade Reading Assessment (EGRA) which was legalized by USAID priorities from 2012-2015 to measure the ability to read Grade 3 students elementary school at 184 schools in 7 provinces in Indonesia. The results of the report say that the students can read smoothly but not necessarily understand what they read (Leer et al., 2015). This indicates the weakness in the students ' ability to understand reading read.

In line with the findings of the above data, the fact that the field is found based on the results of interviews with several Class 1 teachers and field observations at several elementary schools in District X koto above Solok District, there are at least 65% of the number of elementary school students in Grade 1 who can read early is still under the standard competency. The information obtained from several teachers finds that the low student's ability to read is seen during the difficulties students experience in understanding textual instruction and answering simple questions in each subject in student worksheets. This fact indicates that the low mastery of early reading content will result in the difficulty of students understanding textual words.

The follow-up of this observation is from how teachers or practices in improving the reading ability of students to various types of methods that have been done such as syllabic methods, spelling methods, word methods of institutions, and global methods. The implementation of conventional methods above is limited only to reading through word making sentences or breaking sentences. In other words, elementary School in District X Koto above, in the teaching process read more emphasis on visual and auditory ability and less exploration through sensory equipment. Besides, more inclined to the behavioristic approach known as the Law of exercise, wherein the process the implementation is more emphasized to the method of drill (memorization) that tends to be abstract.

Low students ' ability to read causes difficulties in understanding textual words. As findings from (de Leeuw et al., 2016) Stating that students with low reading skills will need more time to know each word in the text that will complicate the student's efforts to understand each textual instruction at every school learning activity. Similarly, the social proficiency of reading children will be used as the basis for understanding the forms of social interactions such as the values and norms in which they are represented.

Research conducted by (Ayşe & Ali, 2016), Find that there are challenges in the education of social studies to make learning easier to do by the child by reading, understanding, and applying knowledge through media such as notebooks, magazines, newspapers and other print media. In other words, the main purpose of reading is to provide textual understanding so that the child has the knowledge and social skills.

Kemampuan membaca awal adalah

Meaningful experiences can be gained through students ' involvement in the learning process of reading students so they have the understanding and mastery of early reading content. The exactness of the selection of reading methods taken into consideration by involving media use is a fundamental concept that needs to be applied in the implementation of early reading learning. One way to achieve this is to implement learning activities through the Multisensory method (Labat et al., 2020).

The Multisensory method trains the child to master the initial reading content through stimulation of visual, auditory, kinaesthetic, and tactile sensory instruments. The more stimulated the entire sensing device, the stronger the child's understanding of the letter symbol gained from a meaningful experience (Maliki & Yasin, 2017). In other words, multisensory learning and teaching methods integrate all the senses.

As the research results (Labat, H, Vallet, G. et al., 2015), Which suggest that through a visual-tactile and visual-kinaesthetic approach in multisensory, it helps the child to gain a complete understanding of the form characteristics of each letter symbol. This requires physical media modification so that in the process the initial reading content can be stimulated through the child's sensing.

The statement is supported by (Jamaris et al., 2016), Which states that a neurosensorybased learning approach is a reflection of a natural process in the brain that occurs when a child learns or performs a particular activity. The child will have to construct their understanding of early reading content through a natural process obtained through sensory stimulation.

The results of previous research have shown the effectiveness of the multisensory method in improving the student's initial reading ability. As research conducted by (Ardini & Handini, 2018), Which found there was a multisensory interaction and visual-spatial intelligence on the student's initial reading ability. Research results of quasy experiments conducted by (Widyana et al., 2020), Examining the intervention of multisensory and jolly phonics methods to improve the early reading of kindergarten children. The results showed that both early reading methods for kindergarten children were effective in improving the reading ability of kindergartens.

Based on the findings of the previous study and the problems found in the field, the study examines how the effectiveness of the multisensory method on the ability to read early Grade 1 students in elementary school.

METHODOLOGY

A quantitative approach used with Quashi experimental type post-test only control group design is to look at the comparative treatment of experimental class through treatment using the Multisensory method and control class through conventional media treatment. The research population is all Grade 1 elementary school students in Kecamatan X Koto district above Solok district. Withdrawal of samples with simple random technique is to choose randomly/random from 15 elementary school that is 1 class, Then selected state Elementary School 10 Ganting Bigau which has as many as 34 students and Elementary School 19 Koto Tuo Sulit Air Village 33 students, then in random again for the determination of the class, then elected State Elementary School 10 Ganting Bigau which is used as an experimental class with the treatment of the method of multisensory.

Tabel 1. Post-test Only Control Group Design

Grup		Treatment (X)	Post-test		
Experimental	R	(X)	O1		
Control	R	(-)	O_1		
Cat: R= Random X=	Multicone	ory Method Treatmer	$\Omega_1 = Post_test$		

Cat: R= Random, X= Multisensory Method Treatment, O₁= *Post-test*

Data collection is conducted using the instrument adaptation of ERSI (The Early Reading Screening Instrument) consisting of testing on the knowledge of the alphabet letters, Word concepts, spelling finds, and the word sense for decodable and basal words (Lombardino et al., 1999). Data analysis techniques used through the test of the average difference of the independent sample T-Test, by fulfilling the test of the terms in advance there are two Tests pre-requisites before test-T, including the normality test with Kolmogorov-Smirnov and Levene's Test for equality test homogeneity to know the similarity of data is homogeneous through a Levene test. The entire data were analyzed by Statistical Package for the Social Sciences (SPSS) version 23.

RESULT AND DISCUSSION

Based on the results of the meaningfulness test using the paired T-test sample by fulfilling the test structure on the hypothesis it can be explained as follows:

From the results of the descriptive statistical calculations performed on each group obtained the average value, the deviation, the minimum score, and the maximum score.

Descriptive Statistics									
	Ν	Range	Min	Max	Mean		Std. Deviation	Variance	
	Stat	Stat	Stat	Stat	Stat	Std. Error	Statistic	Stat	
Eksperimen	34	14	68	82	74,38	,623	3,635	13,213	
Control	33	14	65	79	70,27	,665	3,818	14,580	

Table 2. Average and variance of both sample groups

From the table above, it is seen that the average value of the children of the experiment group given treatment with the Multisensory method is greater than the average value of the children of the control group that is not given the method of multisensory treatment.

After the further descriptive statistical calculations are performed inferential statistical calculations to determine test normality and test the data homogenity. The data normality test was conducted by the Kolmogorov Smirnoff-Shapiro-Wilk test on the experiment group and the control group. Furthermore, the homogeneity test is done with the Levene test. The normal test result of normality is presented in the following table:

Tabel 3	3. Tests	of Normality	
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	Kolm	ogorov-Smi	rnov ^a	Shapiro-Wilk			
	Statistic Df		Sig.	Statistic	df	Sig.	
A (Experimental Group)	.076	34	.200	.978	34	.719	
B (Control Group)	.104	33	.200	.949	33	.122	

a. Lilliefors Significance Correction

Tabel 4. Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
.059	1	65	.809

Table 3 above shows Shapiro Wilk and Lilliefors test results. The value of P-value (Sig) lilliefors 0.200 in 2 groups where > 0.05 then based on the test lilliefors, each group's data is the normal distribution. P-value Test Shapiro Wilk in Group 1 of 0.719 > 0.05 and in Group 2 of 0.122 > 0.05. Since all > 0.05 then both groups are equally normal distribution based on the Shapiro Wilk test. Based on the output on table 4 looks at the value of the Sig. Levene's Test for Equality of Variances is 0.809 > 0.05 then it can be interpreted that the variance of the Group data experiment and the control is Homogeny. Further hypothesis tests were conducted using test-T with the help of SPSS software. -T-test results in both sample groups can be seen in table 5.

	Table 5. Independent Samples Test											
Levene's Test for Equality of Variances				t-test for Equality of Means								
		F	Sig.	Т	Df	Sig. (2- tailed)	Mean Differenc e	Std. Error Difference	95% Confidence Interval of the Difference Lower Upper			
Learning	Equal variances assumed	,059	,809	4,513	65	,000	4,110	,911	2,291	5,928		
Outcomes	Equal variances not assumed			4,510	64,5	,000	4,110	,911	2,289	5,930		

The output table of the Independent Sample Test is known as the value of Sig. (2-tailed) amounting to 0.000 < 0.05. Then the zero hypothesis is rejected and the research hypothesis is received, meaning there is a significant difference in the initial reading ability between groups using the learning of multisensory methods with a group that uses conventional learning that is derived t-count = 4,513 > T table = 1.99. If viewed average student's initial reading ability using a multisensory method of 74.38 higher than the average early reading ability of students using conventional reading methods of 70.27.

The results of the above shows that in teaching-learning to read in first-class elementary school children with a method of multisensory reading proved effective. Multisensory methods in the application of the study by involving learning styles in different children such as children with visual, auditory and kinaesthetic learning styles (Shams & Seitz, 2018), stated that in each person it was able to recall as much as 10% of what was read, as much as 20% of what was heard, as much as 30% of what was seen and as much as 50% of what was already seen and heard.

This shows that the different styles of learning that a child has, the various modalities of learning can help minimize the cognitive burden because the information of the modalities are not the same. After all, short-term memory is easier to store information and it can be used in constructing long-term imagery. Things above according to (Kennedy et al., 2012), In the theory of Multimodal which mentions that in providing language learning to children need to include a variety of ways and materials and to wear interesting visual forms both images, various typefaces and playing colors, in addition to gestures, some interactions and media are manipulated.

The results showed that the effectiveness of the multisensory method in enhancing the child's initial reading ability was (Joshi et al., 2002) Found that there is a significant difference in the value between groups of children given the treatment of multisensory methods in understanding phonology, decoding and reading comprehension while in a child control group with different methods of good value only on the aspect of reading comprehension. Also, other research results (Campbell et al., 2013), stated that students in grades 1 and 2 with the Multisensory method can be used to perform reading words through the use of fingerprints, magnetic letters, and carpet formations.

While research conducted by (Ruhaena, 2008), Mentions an increase in the write-up skills of Bahasa Indonesia and English in a group of preschoolers who learned the method of Jolly Phonics higher than the group of preschoolers who learned regular methods. This proves that the use of the Jolly Phonics read-write teaching method is effective for improving the reading and writing of English and Bahasa Indonesia in preschoolers.

The results of this study were formulated by research (Ardini & Handini, 2018), Which states that there is a significant difference in the average scores of the initial readingperformance tests of multisensory and Phonics, the difference between the highest and lowest spatial intelligence scores, as well as significant interactions between methods of spatial intelligence learning. Based on these findings, it is therefore recommended to conduct technical guidance activities for teachers in elementary school, and conducting workshops on the writing of manual books for the activities of multisensory methods in the classroom. Besides, designing early reading programs as a foundation at the beginning of the school year is recommended.

The results of this study are in line with research conducted (Sri Utami Soraya Dewi, 2015), Found that there was an increase in children's ability to identify the word accurately, albeit insignificant. Although it is not too high in its improvement, it can be a positive outcome. Further, according to (Shin, 2019), said that the sensory instrument was used to strengthen the learning process of children, known as the acronym VAKT (visual, auditory, kinaesthetic, and tactile or Fingering). The way used in stimulating the entire sensory instrument is that the child listening to the teacher speaks a word, speaks the word to itself, listens to the word, senses the movement of muscles as they trace the written word, feels the surface of the Roar on their fingers, sees their hand moving when searching for writing, and listening to themselves speak the word while tracing.

Thus, reading with multisensory learning will improve the ability to read children who have high spatial-visual intelligence where the child who has high spatial-visual intelligence is the child with the ability to manage, organize, create something related to the activities of art, exploration, games, imagination in the form of images and space.

The results of this study are also similar to those seen by researchers in the field when giving experimentation and control classes. The effectiveness of the multisensory method in improving the reading ability of students is better than using conventional methods seen from the average students in reading using multisensory methods compared

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to conventional uses. This is because in reading the students not only see and pronounce the letters but also can touch and manipulate from the letters read by the students.

CONCLUSION

There is a difference in the early reading between the experimental group, which is given a multi-sensory treatment with a control group that is not given the method of multisensory treatment. This distinction is indicated by the average score of the student's initial reading skills gained in each group. The average student's initial reading ability score on the experiment Group is greater than the average student's initial reading ability score in the control group. As such, the Multisensory method is effective in developing early reading skills in Grade 1 students at elementary school. The use of multisensory reading methods can be a choice of reading by teachers in enhancing the early reading ability of students.

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DAFTAR PUSTAKA

- Ardini, P., & Handini, M. (2018). The Influence of Instructional Method, Visual Spatial Intelligence, and School Readiness on Early Reading Abilities. *Journal of Scientific Research and Reports*, 17(4), 1–22. https://doi.org/10.9734/jsrr/2017/38737
- Ayşe, O. ccedil, & Ali, A. (2016). The impact of self-regulated learning on reading comprehension and attitude towards Turkish course and metacognitive thinking. *Educational Research and Reviews*, 11(8), 523–529. https://doi.org/10.5897/ERR2016.2692
- Campbell, M. L., Helf, S., & Cooke, N. L. (2013). Effects of adding multisensory components to a supplemental reading program on the decoding skills of treatment resisters. *Education and Treatment of Children*, 31(3), 267–295. https://doi.org/10.1353/etc.0.0003.
- Chaudhry, A. S. (2014). Student response to e-books: Study of attitude toward reading among elementary school children in Kuwait. *Electronic Library*, 32(4), 458–472. https://doi.org/10.1108/EL-04-2012-0041
- de Leeuw, L., Segers, E., & Verhoeven, L. (2016). Role of text and student characteristics in real-time reading processes across the primary grades. *Journal of Research in Reading*, 39(4), 389–408. https://doi.org/10.1111/1467-9817.12054
- Horowitz-Kraus, T., Hutton, J. S., Phelan, K., & Holland, S. K. (2018). Maternal reading fluency is positively associated with greater functional connectivity between the child's future reading network and regions related to executive functions and language processing in preschool-age children. *Brain and Cognition*, 121(December 2017), 17–23. https://doi.org/10.1016/j.bandc.2018.01.003
- Jamaris, M., Edwita, Trisna, M., & Hartanti, W. (2016). Empowering Logical-Mathematical Intelligence o The Inclusive Group of the 4-6 Years Old Children through the Neurosensory Instructional Approach. *American Journal Of Educational Research*, 3(4), 427–438. https://doi.org/10.12691/education-4-10-10
- Joshi, R. M., Dahlgren, M., & Boulware-Gooden, R. (2002). Teaching reading in an inner city school through a multisensory teaching approach. *Annals of Dyslexia*, 52, 229–242. https://doi.org/10.1007/s11881-002-0014-9
- Kennedy, E., Dunphy, E., & Dwyer, B. (2012). *Literacy in Early Childhood and Primary Education* (3-8 years) (Issue 15). National Council for Cirriculum and Assessment.

https://papierenkarton.nl/wp-

content/uploads/2017/02/Literacy_in_Early_Childhood_and_Primary_Education_3 -8_years.pdf

- Labat, H, Vallet, G., T., Magnan, A., & Ecalle, J. (2015). Facilitating effect of multimodal letter encoding on reading and spelling in 5-year-old children. *Learning and Instruction*, 2(March), 381–391. https://doi.org/10.1002/acp.3116
- Labat, H., Boisson, A., Brunel, L., Ecalle, J., Versace, R., & Magnan, A. (2020). Multisensory letter integration and implicit learning of reading with 5-year-old children. *European Review of Applied Psychology*, 70(1), 100477. https://doi.org/10.1016/j.erap.2019.100477
- Leer, J., Fretes, M. De, & Rinjani, G. (2015). Literacy Boost: Belajar Indonesia. *Save the Children UK*, *October*, 1–24. https://resourcecentre.savethechildren.net/node/9659/pdf/indonesia_belajar_basel inereport_20151030.pdf
- Lombardino, L. J., Morris, D., Mercado, L., DeFillipo, F., Sarisky, C., & Montgomery, A. (1999). The early reading screening instrument: A method for identifying kindergarteners at risk for learning to read. *International Journal of Language and Communication Disorders*, 34(2), 135–150. https://doi.org/10.1080/136828299247478
- Maliki, N. S. B. M., & Yasin, M. H. M. (2017). Application of Multisensory in Learning Alphabets Identification Skills for Special Education Students. *Journal of ICSAR*, 1(2), 150–154. https://doi.org/10.17977/um005v1i22017p150
- Mullis, I. V. ., Martin, M. ., Foy, P., & Drucker, K. . (2014). PIRLS 2011 International Results in Reading. TIMSS & PIRLS International Study Center. *Transplantation*, 91, S32–S38. https://doi.org/10.1097/01.tp.0000399132.51747.71
- Rahmatika, P., Hartati, S., & Yetti, E. (2019). Metode Pembelajaran Mind Map dan Bercerita dengan Gaya Kognitif, Pengaruhnya terhadap Kemampuan Membaca Permulaan. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 3(2), 548. https://doi.org/10.31004/obsesi.v3i2.260
- Ruhaena, L. (2008). 6. Lisnawati Ruhaena. Jurnal Penelitian Humaniora, Vol. 9, No. 2, Agustus 2008: 192-206, 9(2), 192-206.
- Shams, L., & Seitz, A. R. (2018). Benefits of multisensory learning. *Trends in Cognitive Sciences*, 12(11), 411–417. https://doi.org/10.1016/j.tics.2008.07.006
- Shin, M. (2019). Exploring multisensory experiences in infants' learning and development in the child care classrooms. *Early Child Development and Care*, 3(1), 1-12.
- Sri Utami Soraya Dewi. (2015). Pengaruh Metode Multisensori Dalammeningkatkan Kemampuan Membaca Permulaanpada Anak Kelas Awal Sekolah Dasar. MODELING: Jurnal Program Studi PGMI, 2(1), 1–13.
- Thompson, J. A., & Sonnenschein, S. (2016). Full-day kindergarten and children's later reading: The role of early word reading. *Journal of Applied Developmental Psychology*, 42, 58–70. https://doi.org/10.1016/j.appdev.2015.11.005
- Widyana, R., Astuti, K., Bahrussofa, M. F., & Githa, G. M. (2020). The effectiveness of jolly phonics and multisensory learning methods in improving preschoolers pre-reading skills. *International Journal of Innovation, Creativity and Change*, 11(8), 1–13.
- Winarti, W., & Suryana, D. (2020). Pengaruh Permainan Puppet Fun terhadap Kemampuan Membaca Anak Usia Dini. Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini, 4(2), 873. https://doi.org/10.31004/obsesi.v4i2.462
- Yusuf, H. O., & Enesi, A. O. (2012). Using Sound in Teaching Reading in Early Childhood Education. *Journal of Language Teaching and Research*, 3(4), 660–666. https://doi.org/10.4304/jltr.3.4.660-666