

The Improvement of Early Reading Ability Based Multiple Intelligences

Edwita¹ I Wayan Widiana² Arita Marini³

¹*Department of Primary Education, Faculty of Education, Jakarta State University, Indonesia*

²*Department of Primary Education, Faculty of Education, Ganesha University of Education, Indonesia*

³*Department of Primary Education, Faculty of Education, Jakarta State University, Indonesia*

Abstract:

This research aimed to receive information regarding the method of improvement of early reading ability based on multiple intelligences of the lower grades' students in the elementary school. The research was conducted from July to November, the first semester of 2013, was held in SDN 05 Pagi Jati Pulo Gadung Jakarta Timur, by using the action research method. The action research was conducted in two cycles. On each cycle consist of four phases; planning, action, observation, and reflection. Data collection was conducted through observation, assessment, and video recording. Data analysis was conducted by using a qualitative data analyzing. The reading tests consist of pre-test as the based for planning the intervention action. The following reading test conducted at the end of each cycle, in order to evaluate the effect of intervention action. The reading ability improvement was observed through the learning process and the reading tests on the end of the cycle. The process learning of reading based on the multiple-intelligences have three kinds of intelligences, the musical intelligence, visual intelligence, and kinesthetic intelligence. The research showed the reading ability of the first grade students in the elementary school have improved after using the multiple-intelligences learning. In conclusion, the research showed a significant improvement in student reading ability.

Keywords: *early reading ability, multiple intelligences, action research*

Preliminary

The importance of reading for students' academic development has been understood by educators, only the implementation of learning has not been maximized (Vanbinst *et al.*, 2020). The results showed the reading ability of Indonesian students was still low, especially related to reading comprehension. In 2009, the *Progress International Reading Literacy Study* (PIRLS), which is an International Study sponsored by *The International Association for the Evaluation Achievement* conduct a research on fourth grade students of Elementary Schools and Madrasah Ibtidaiyah (Moslem Elementary School). The result show that the reading ability of Indonesian students at fourth grade from the bottom of the 45 countries in the world studied. Next, in 2011 a study of reading culture in Indonesia conducted by UNESCO (*United Nation Education Scientific and Cultural Organization*) also show low results. The Statistics released by UNESCO show that Indonesian citizens' interest in reading is low with an index of 0.001. That is, every thousand inhabitants of Indonesia, only one person who has a high interest in reading. The low interest in reading and the low ability to read are two interrelated results. It also said that the cause was the Education system in Indonesia, especially learning to read in school. The teacher competence who teach in schools is inadequate, parents are less concerned, and lack of cooperation in developing children's potential (Judith *et al.*, 2018).

The results of interviews with elementary school teachers about the ability to read and the learning process of reading first grade students, low student reading skills and lazy students reading. First grade teachers feel overwhelmed teaching reading, because some of the students who are accepted cannot read, the reading progress of students is also slow. Achievement of learning outcomes for beginning reading in some elementary schools were only 60-75%. Whereas the Minimum Criteria expected to be 80%. Every year there are students who do not move up the class because they are not fluent in reading.

Based on the results of direct observation analysis of learning to begin reading in first grade, the causes of students' reading ability are low, including because the teacher has not used a variety of learning approaches that are appropriate to the individual circumstances of students. The teacher is less creative in creating a beginning reading learning experience that activates and pleases students. This problem was also stated by Westwood (2008: 4) that one of the causes of students' difficulties in learning to read, write and speak in the early grades was the use of less effective learning methods.

Reading is the beginning part of learning. reading is discussing one stage of the process of learning to children (Farrelly, 2018). Reading in general can be divided into two parts, learning to read and reading to learn (Byrnes and Wasik, 2009: 172). Beginning reading skills are directed towards being able to read words and sentences. Gleason and Ratner (1998: 420-425) divide the two stages of reading development, the protoliteration stage and the literacy stage. Literacy stage said to be the right time for children to learn to read and write. Based on the Gleason reading development stage above, the reading development of first grade elementary students is in the literacy stage (read-write) as a beginner reader.

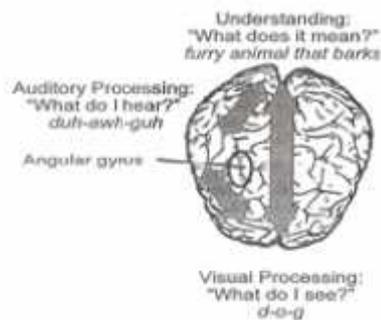


Figure 1. *How the Brain Learns* (Quoted from Sousa, 2006)

The picture above shows three neural systems involved in reading is process of visually observing the written word, the voice auditory sounds, and *frontal lobe* integrates information that has meaning. *Angular gyrus* helps decode (recognize) the visual word signals which processed in the left hemisphere of the language center. The visual process begins when eye observation is fixed on the letters written in the word, and the visual signal sends to location of *visual cortex* in *occipital lobes*. Based on the way the brain works in the neural system in the reading process, to facilitate children's learning it is necessary to activate the left hemisphere and the right brain, by involving visual intelligence, musical intelligence, and kinesthetic intelligence (Sousa, 2006).

Visual intelligence, musical intelligence, and kinesthetic intelligence are the part of multiple intelligences theory. Multiple intelligence theory (multiple intelligence) was invented by Howard Gardner in early 1980s. The concept of multiple intelligences in process of learning applied to prepare students who are successful in learning, because students feel valued and are believed each student has advantages. Gardner (1993: 10) defines intelligence as follows: the ability to solve problems, or to make a product that has more than one of cultural values. Thus, the size of intelligence will vary between cultural environments. Children who grow and develop in an environment that gives high appreciation to books, for example, will become intelligent in language and have a culture of reading (Mishar and Bangun, 2014).

Visual intelligence as an intelligence of images and visualizations involved the ability to visualize images in two or three dimensions, and includes thinking in pictures or thinking visually (Armstrong, 2010). They tend to be imaginative and creative. Mental intelligence is the ability to handle musical forms, the ability to feel as a connoisseur of music, and is able to express when singing (Armstrong, 2010: 20). Kinesthetic intelligence is an intelligence when using someone is able

or skilled to use his limbs to do something (Armstrong, 2010). This intelligence includes talent in controlling body movements and skills in handling objects.

In this study, plural intelligence represented by ribs plural intelligence that is directly related to reading is a visual intelligence, musical intelligence and the kinesthetic. To be able to read requires the ability to recognize symbols of reading elements, for example letters and punctuation through visual observation. Reading is related to the ability to listen and sound letters and their series with the help of rhythm will be easier for children. Recognizing letters and their series with the help of physical responses or gestures makes it easy for children to understand words and sentences. Thus, the focus of research is related to the effort that teachers can do to improve the reading skills of elementary school students beginning classes I through intelligence-based learning plural (*multiple intelligence*).

Methodology

The study was conducted on first grade students at SDN Jati 05 Pagi, with 33 students, consist of 12 female students and 21 male students, aged 6-7 years old. This purpose of the Research was to increase the ability to begin reading at first grade students using action research studies. The procedures developed by Kemmis and Taggart are spiral cycles.

Data collection was carried out through: (1) Interviews with school principals, teachers and students about students' reading skills. (2) Observing the learning process about the activities of teachers and students (3) Among them are the assessment data of students' reading ability test results, student work related to reading, field notes of the learning process, and recording images of the learning process.

Data analyzed using qualitative and quantitative data analysis. Qualitative data analysis to find information about the process of learning to begin reading using musical intelligence, visual intelligence and kinesthetic intelligence. While quantitative data to determine the increase in students' reading skills as a result of action.

The research instrument used in this study was instrument to observe the ability to read and instrument monitoring the process of learning to begin with reading. The reading ability instrument was arranged with a grid based on a conceptual definition of initial reading.

Results and Discussion

Results

To find out the results of students' abilities, before the action carried out the initial test reading. Then the test was done after the cycle I and II, and the final test. The results can be seen in the following table

Table 1. Mapping Ability to Read Beginning Elementary School Students in Class I

Test	Recognize letters and pronunciations 30%			Stringing letters-> syllables-> 30% pronunciations words			Stringing words-> sentences Punctuation 25%			Smoothness Read 10%			Clarity Sound 5%			Score-Align
	SB	B	PB	SB	B	PB	SB	B	P	SB	B	P	SB	B	P	
Early	3	15	15	3	15	15	3	15	15	3	15	15	3	23	7	74.36%
I	30	2	1	22	10	1	22	10	1	7	24	2	24	8	1	85.48%
II	31	2	-	27	5	1	27	5	1	11	21	1	27	5	1	90.93%
End	31	2	-	27	5	1	27	5	1	13	19	1	27	5	1	91.24%

Initial reading test results showed an average achievement of 74.36%. The reading ability of students in IA Class SD 05 Jati varies greatly. Based on early reading test results from the number of students 33 people, known to three students (10%) very good category (SB) with a maximum score of 100. Students are fluent reading with the indicator; can read a children's book with mem - note the sign read, with the correct intonation. Fifteen students (45%) in the good category (B) with a score of 76-85. they are familiar with letters and can read words smoothly, but are slow to read one simple sentence. Fifteen students (45%) with a score of <75 only recognize a number of letters, can read words by spelling. The lowest score is 42. The initial test shows that 45% of students need guidance in mastering letters and sounds.

Based on the results of the initial assessment analysis of students' reading ability in IA Class, researchers and elementary school teachers set the KKM 85% for the target of research success. Higher than what was determined by the previous school, which is 80% for grade promotion. And for the first semester students' reading ability, the minimum number has reached 75% KKM. After the act of learning to read the beginning of multiple intelligence-based in the first cycle, it was found that the average score reached 85.48, 0.48 higher than the score that set 85. But individually, there were still 16 students (50%) which is still below the score of 85. Because it has not reached the expected learning outcomes, action research continued in cycle II with eight actions. Cycle I action has made all students memorize letters and are able to read words. But not fluently read a simple sentence, it would require further action to improve student's ability to read words and sentences as well as understanding. By using more methods of reading *Total Physical Responses (TPR)*. Language learning methods that use physical responses, as a way of learning through kinesthetic and visual intelligence.

The results of learning to start reading in the second cycle have reached an average of 90.93%. Compared to the achievements in the first cycle there was an increase of 5.45% and it had exceeded the Minimum Mastery Criteria (KKM) determined by the school which was 85 for grade achievement achievements. From 33 students: 24 students have very good grades (86-100), 8 students are good (76-85), one student is in the medium category with a score of 65. Based on the results of reading progress of students based on multiple intelligence of thirty-three students, twenty-nine students or 87% had exceeded KKM 85, three students or 10% score 83 and one student (3%) needed special guidance because it had only reached 65. Action research was stopped, because it had achieved the expected learning outcomes. The results of improving students' reading ability can be seen in the following figure.

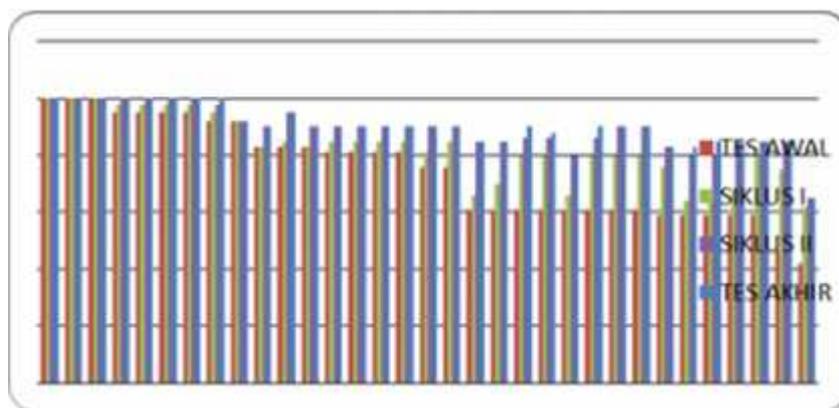


Figure 2. Improvement in Beginning Reading Skills of Each Class at first grade Student

The final test result of learning to read based on musical intelligence, visual and kinesthetic has reached the best value of 91.24. Out of 33 IA class students, 24 students or 72% have very good grades with a score of 86-100, 8 students or 25% of the categories either score 76-85, one student or 3% of the category needs special guidance with a score of 65. comparing the average value obtained initial tests students 74.36% at the end of the test results of 91.24%., there is a very significant improvement, with improved learning outcomes mem - read amounting to 16.88%. Thus, it can be concluded that the reading ability of first grade Elementary students will increase.

Discussion

Based on the results of the assessment and observation of the learning process, it discovered a few things about learning to read in the beginning. Early reading can be increased, if the teacher uses musical intelligence approach, visual and kinesthetic. by using a variety of reading methods, and learning media in accordance with the characteristics of first grade elementary school students. Improved student reading results in the first cycle, especially on the ability to recognize letters. Before the study, 45% of students had not memorized all the letters. After being trained to read letters using the singing method in cycle I, students can master all the letters and sound correctly. Learning to read music intelligence approach using the song as a medium, and using phonic method (spell letters) with Cadence to facilitate the child to remember the letters and the circuit symbol. Basically, the child likes rhythmic sounds and repetition of sounds, which will make it easier for children to remember letters and words with rhythm. Through visual observation of the shape of letters and the elements of the lines that make it up, it will be easier for students to identify letters as part of words. Mastery of letters is important for children to be able to read words. Children who are able to read words, will easily understand the meaning of the text (West, 2006).

Reading through kinesthetic intelligence by activating body movements to understand reading can be done with language learning methods that use physical responses, namely *Total Physical Response (TPR)*. According to Asher in Brown (2007: 84) that children learn languages seem to hear a lot before speaking, and hearing activities are accompanied by physical responses (reaching, touching, moving, seeing, and so on). Reading activities with motor responses activate the right brain, whereas reading is left brain activity. Thus, reading activates parts of the right and left brain will make it easier for children to learn to understand the meaning of words and memorize them through body movements.

This study has limitations as follows: First, this study uses only three of the eight intelligences multiple intelligences, so it has not been able to accommodate intelligences of the students. Second, elementary school thematic teaching materials or books that support the development of multiple intelligences are not available. So, for the continuation of learning to read multiple intelligence-based require teachers to work more actively, creatively, and productively to prepare the learning resources and instructional media.

Reading Learning Based on Visual Intelligence

Visual-spatial intelligence of children can be used to provide fun and interest in reading. Children who stand out in this field will tend to have a visual learning style. Visual learning styles require information media in the form of media that can be seen, including: Children need picture books and words when learning to read. Reading through the visual-spatial path can be done by: (1) Observing images and reading text (2) Giving colour to parts that are considered important (3) Drawing based on observations, composing words and reading one's own writing. (4) Make a chart or diagram of reading material (5) Observe objects, environments, events, and compose words (6) Imagine things, events, desires, express verbally, arrange words in written form, and read them Armstrong (2010).

Reading Learning Based on Musical Intelligence

Children with musical intelligence will easily learn to read if the teacher can find simple songs they like. The lyrics are typed by the teacher or written in large letters to be used as their basic textbooks, as the teacher does when teach children who have linguistic intelligence. Also choose simple poems and stories that they can read or sing rhythmically. Can use a package of books and tapes that combine stories and songs. Children who are strong in the musical field have an auditory learning style. Reading through the music can be done such as (1) read aloud (2) read with rhythm, singing and read the lyrics of the song are known student and who has been revamped several of his poems (3) read blared (4) Singing with accuracy in speaking (5) Reading literature or reading beautiful poetry, unrequited rhymes, and stories (Armstrong 2010) .

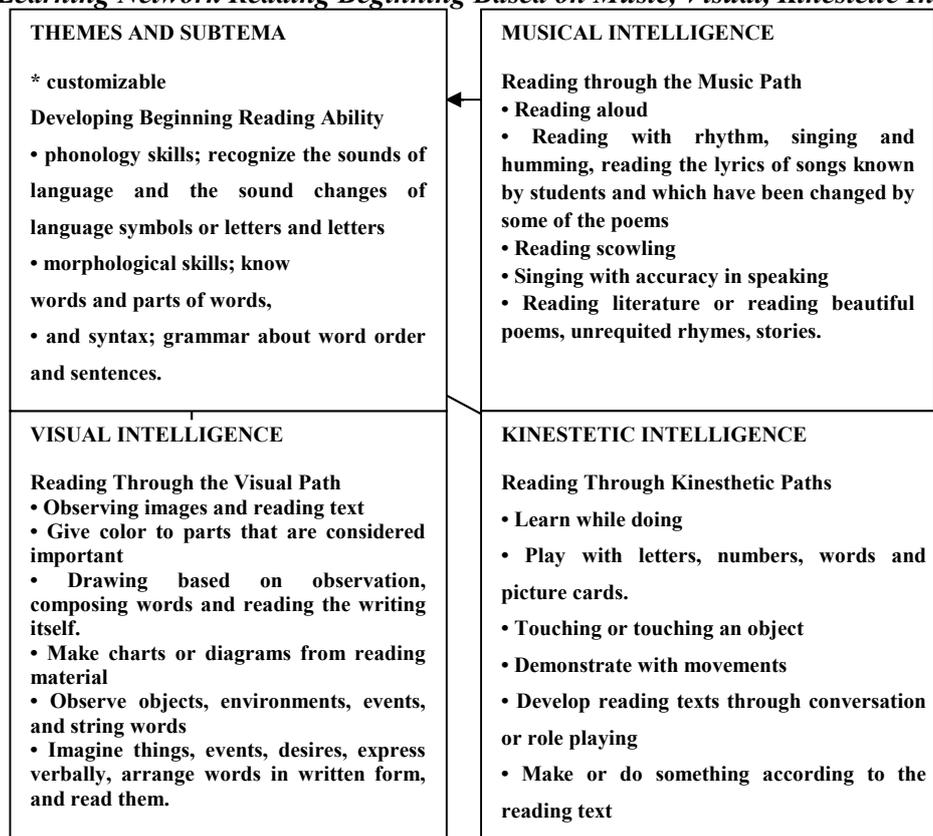
Reading Learning Based on Kinesthetic Intelligence

Children who have advantages in kinesthetic intelligence need to write before reading. In general, kinesthetic people learn through movement. They must involve their bodies in the creation of

letters and words before reading them purely auditory-visual. Give children the opportunity to demonstrate what they read and not just tell it to their teacher or friends (Armstrong 2010). Reading through kinesthetic reading lines, called (1) Learning while doing (2) Touching or touching objects according to the subject matter (3) Developing reading texts through conversation or role playing (4) Making or doing something according to the reading text (5) Writing before reading (Armstrong, 2010). Beginning reading learning through this intelligence channel is carried out with a thematic learning approach. The implementation was adjusted to the themes that already existed at the first grade in the first semester of elementary school. The thematic learning network is as follows.

Learning to read has been more pro-children who have intelligence in language. Lack of attention for children who have an advantage in other intelligences. Three of the eight plural intelligences, namely; visual-spatial intelligence, musical intelligence, and kinesthetic intelligence possessed by students greatly support reading success. Because reading is related to the ability to see and remember written visual symbols and the ability to hear, sounding back visual symbols, such as recognizing various forms of letters, words and punctuation. These visual symbols will be easy for students to learn in reading with the help of visual intelligence. With kinesthetic intelligence students will respond physically, do what is heard and ordered. Likewise, by using musical intelligence possessed by students, teachers can also make it easier for students to learn to read because it can begin with songs that are already known and liked.

Thematic Learning Network Reading Beginning Based on Music, Visual, Kinesthetic Intelligence



Conclusions And Recommendations

Conclusion

Based on the research findings and the discussion of these measures, it can be argued two things. The ability to read in the beginning of first grade students of the Elementary School 05 Pagi Jati East Jakarta increased through learning that activates musical intelligence, visual intelligence and kinesthetic owned by students themselves. Learning to read based on musical intelligence using the method of singing. In the early learning of students invited to sing a children's song that connected to the theme and subthemes. In the core activity, students play in groups arranging letters cards, word

cards and song lyrics. The teacher guides students reading with correct pronunciation and intonation. Students practice reading and proceed with conducting question and answer about songs to find out students' understanding of their reading. Visual intelligence-based reading learning activities begin by giving students the opportunity to observe images, objects or the environment and retell what has been observed. The teacher guides students with questions; who, what, why, where, etc. After that students are given word cards / sentences to be arranged based on pictures / events. Learning activities to read with kinesthetic intelligence starts from touching or touching letters or objects according to subject matter, learning to read while doing. Students develop reading texts through conversation, role playing, learning to write and read using computers. Using environment like learning resources. Students are assigned to read writings on the school grounds and parks or outside the school environment, as well as public facilities. To enable students to learn to read, the teacher uses a place of learning other than class.

Intelligence-based beginning reading learning provides opportunities for students to develop diverse learning activities. Enabling students 'five senses to learn to read, such as listening, speaking, seeing, and touching, and paying attention to students' diverse learning styles of intelligence. Early reading intelligence-based learning provides all the opportunity of developing meaningful learning activities. As well as increased activity in students' reading ability obtained from a series of learning activities at the start of the study knowing, remembering, interpreting the letter-word sentences, which simultaneously helped develop the ability to think, feel and act. It is expected that after the interest and ability to read, from the ability of understanding reading texts will expand the horizons of science, culture and which eventually will be able to elevate the dignity of human adult students as a whole.

Second. There is an increase in students' initial reading skills from an average of 74.36% of pre-intervention to an average final result of 91.24%, and has passed the Minimum Mastery Criteria (KKM) set by researchers and schools, which is 85. The percentage results increase in reading ability per - student beginnings increase gradually. This ability improvement is obtained from actions taken through the process of learning to read which consists of two cycles. The ability to read the beginning of the intervention students with an average of 74.36% experienced an increase in cycle I with an achievement of 85.48%, an increase of 11.12%, and had passed the KKM 85. Based on the analysis of reading ability of each student there were still 16 students with a value still below 85. Then agreed on further action to the second cycle. The second cycle test gives very satisfying results, which is an average of 90.93% and the last test reaches an average of 91.24%.

Recommendation

Things that need to be considered in the implementation of intelligent intelligence in learning to read, first. Implementation of multiple intelligence-based learning to read can be implemented as an alternative model to increase students' reading ability. First, the implementation of multiple intelligence-based learning requires the same understanding between teachers and parents about the concept of intelligence and each intelligent child with each of its uniqueness. Second, the implementation of multiple intelligence-based learning requires creative teachers to use various strategies, learning resources, media and organize class / learning environments that educate students. Third, the implementation of plural intelligence-based reading learning requires the cooperation of teachers and parents so that what is learned at school can be trained again at home as a follow-up to children's self-development.

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