

*Brain Gym Method to Enhance the Writing Skills of
Elementary School Students in Indonesia*

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Abstract

Students in Indonesia experience problems in writing skills. Based on the study of PISA (2023), PIRLS (2015), TIMSS, EGRA USAID (2018), The Primary Year Program (2003), Balitbang Dikbud (2003), Ministry of Education and Culture (2016) shows that Indonesian students have quite low scores in writing skills so we need a method that can make students feel interested and challenged to write. Brain Gym is an intriguing technique to try out to develop this writing skill because it has been shown in numerous studies to be able to improve cognitive capacities, diverse skills, and motivation. This study aimed to compare students' writing abilities in experimental and control classes, to identify the profile of students' essay-writing abilities in primary schools, and to examine the learning process. A quasi-experimental nonequivalent control group was utilized as the methodology. Two classes were the study's subjects. The results of a pretest and posttest on students' writing served as the research data collection method. The outcomes demonstrated that this approach had an impact on primary school kids' writing abilities. These results suggest that this approach should be applied to materials and lessons with longer time constraints.

Keywords: Brain Gym, Writing Skills, Elementary School, Indonesia

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Introduction

Language as a means of human communication in the form of symbols or signs and always contains thoughts or feelings. In this communication activity, humans convey their thoughts and feelings to other parties. Writing skill is the most neglected language skill in language education. This is due to wrong practices in learning to write from elementary school to college. Writing competence is tangible in written work, there is no mastery of theory without writing. The purpose of writing is to convey a message to the reader otherwise, the activity of writing is in vain (Alwasilah, 2005) in a more cultured Indonesian tradition, speech-hearing is not reading-writing, and literacy limits tend to ignore the writing component. Language education, especially writing, should train students to recognize inspiration, capture it, and manifest it in a work.

According to Harjoprakoso, research results reveal that Malaysia is able to publish around 6000 to 7000 new book titles per year on average, while Indonesia has 4000-5000 titles per year even though the population of Indonesia is 10 times the population of Malaysia, this is due to the lack of public interest in writing. Another study revealed that in the perception of respondents the national education system from elementary school to university provided writing skills (23.34%), reading skills (23.45%) and critical thinking skills (31.86%) meaning that the majority of respondents were more than 75% assessed that the national education system has not developed the basics of literacy, especially writing which is only perceived as the most difficult skill to master (43.22%) followed by speaking skills (28.64%) listening 21.11 and reading 7.04 (Alwasilah, 2005).

At first writing ability was the ability to recognize and write sound symbols, produce words and produce sentence structures, but step by step writing was introduced and tested as a coherent and complete ability. Therefore, writing skills are given intensively after students have an adequate level of ability in listening, speaking and reading so that these abilities can be used as a foundation for coaching and developing writing skills. One of the causes of human powerlessness in life is the lack of control over words, especially written words. It is very natural for someone to feel confused when writing. The most effective way to improve writing skills is to practice freewriting regularly, at least 3 times a week. (Elbow, Peter, 2007).

Writing practice is something that can be done by anyone, but the level of difficulty in writing for someone is certainly different, besides that the atmosphere is also a supporting factor that determines success in the writing process. A comfortable and pleasant atmosphere will stimulate the brain to think and be able to create interesting ideas and ideas as well. So that there is a need for conditioning in order to create a supportive atmosphere in the writing activity. To create a supportive atmosphere and overcome difficulties in writing activities, a learning method is needed that can improve students' writing skills, which makes students happy to write and makes writing an activity that is no longer considered difficult.

Research on Brain Gym has been carried out by many previous researchers, including the influence of Brain Gym on understanding the concept or material of a particular learning or skill of students (Saleh & Mazlan, 2019); (Spaulding, Mostert, & Beam, 2010); (Stephenson, 2009); (Annisa, 2016), Brain Gym for the elderly or those with dementia/dementia (Yusuf, Indarwati, & Jayanto, 2004); (Cancela et al., 2015)) and Brain Gym for people with disabilities (Watson, Kelso, & Austin, 2014); (Hyatt, 2007). Based on previous research, Brain Gym is able to optimize brain function for various skills, but there needs to be

something new, namely in the application of local culture, especially folk songs as national identity and cultural preservation efforts.

One alternative for interesting and meaningful learning is to use the Brain Gym method, which is a method that will assist students in activating all dimensions of the right and left brain so that students will be actively involved in fun and meaningful learning. Brain Gym is a series of exercises to stimulate the left and right brain. The brain is the center of awareness of all human activities and it is this brain that helps humans in facilitating learning activities and making adjustments to the tensions, challenges and demands of everyday life.

Based on this empirical study, the author feels that it is still necessary to conduct research and development on methods that are able to optimize the performance of our brains, because in addition to its enormous benefits, Brain Gym is indispensable in optimizing brain function which is so crucial in the 21st century. Based on the description above, the researcher raised a research topic with the title "Brain Gym Method to Enhance Writing Skill Student in Indonesia".

Methods

This research method is carried out using quantitative methods with a quasi-experimental type of research. Data collection techniques in this study is through the provision of tests. The type of test carried out is a written test. The test was used to determine the results of students' learning to write narrative essays using the Brain Gym method in the experimental class and conventional methods in the control class.

The data obtained from this study is the level of students' writing skills obtained from the test results, namely Pretest and Posttest. The pretest was conducted to determine the students' writing ability before being given treatment, while the posttest was conducted to determine the results of the student's writing ability after being treated in the form of a Brain Gym.

The Brain Gym method was used in an experimental class to determine its effect on narrative writing skills. Brain Gym is a series of simple movement exercises that help optimize the function of all kinds of centers in the human brain (Siamey, 2015 p. 34). Writing skills consist of 5 stages, namely prewriting, writing concepts (drafting), revising (revising), editing (editing), and publication (publishing) the five stages of writing skills are included in the Learning Implementation Plan (RPP) which functions as a reference in implementing learning. After designing the lesson plan, the researcher conducted a pretest in both the experimental class and the control class to obtain initial data that would be used as a reference in learning. After the pretest result data was obtained, calculations were carried out and then analyzed to what extent the pretest scores were obtained in the two classes. The students' pretest results were seen from the class average, highest score, lowest score, and average achievement per aspect.

After carrying out the pretest and obtaining the results, treatment was carried out in the experimental class using the Brain Gym method for six meetings in each class. After giving treatment to each class, a posttest was given. Referring to the problem formulation and research objectives, an assessment rubric was determined based on competency standards in the KTSP class IV elementary school Indonesian language subject curriculum, namely making various types of essays by paying attention to spelling and referring to the principles of writing essays.

In discussing the research results of the initial data analysis based on the pretest results, there were no significant differences in the results of students' essays for the experimental class and the control class. The results of this research show the impartiality of researchers in choosing the control class and the experimental class. Based on the results of the descriptive analysis, overall writing skills have increased. This can be seen from the comparison of the pretest and posttest results in the experimental class and control class. In learning using the Brain Gym method, the average skill in writing narrative and descriptive essays was in the poor category (10-55), whereas after being given treatment in the form of Brain Gym, the average posttest showed an increase so that the category in writing essays was in the sufficient category (56-75).

Result and Discussion

Writing is a person's ability to use language symbols to convey something in the form of ideas or ideas to other people or readers which is done using written language. By writing a person can communicate with other people who may never even meet (Cahyani and Rosmana, 2006). The Brain Gym method was created to stimulate (Letarity Dimension) to relieve the left and right hemispheres of the brain, (Focusing Dimension) to relax the back of the brain (brainstem or brainstem) and the front of the brain (fronta lobes), and (Concentration Dimension) to the limbic system (midbrain) and the cerebrum (cerebral cortex). Brain Gym is one of the teacher's efforts to improve student's learning abilities, according to Supardjiman (2007) the Brain Gym method has several benefits, namely:

- 1) Allows stress-free learning;
- 2) can be done in a short time;
- 3) does not require special materials and places;
- 4) can be done in all situations (while studying and working);
- 5) can increase self-confidence;
- 6) show results immediately;
- 7) can be explained aneurophysiologically by dr. Carla Hannaford;
- 8) very effective for handling obstacles in learning;
- 9) activate one's full potential and skills and is recognized as one of the best learning techniques by the National Learning Foundation, USA, and has been widely distributed in more than 80 countries.

Brain Gym is very good to do at the beginning of the learning process, especially when accompanied by songs or music that are cheerful and happy. Brain Gym can also be done to refresh the child's physical and mind after undergoing a learning process that requires high concentration which can result in brain fatigue. Brain Gym has a goal so that children can play and do physical exercises that can help improve children's writing skills.

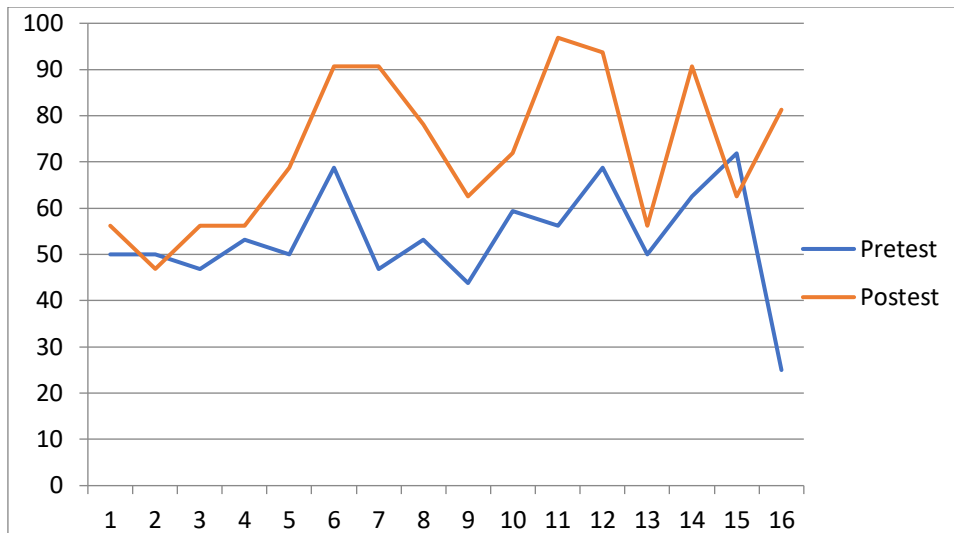


Figure 1: Pretest and Posttest Scores in the Experimental Group

Based on data analysis carried out by researchers, it was concluded that the Brain Gym method was proven to be effective in improving student's writing skills. This can be seen in the increase in the average score obtained from the pretest and posttest results for the experimental class when compared with the increase experienced by students in the control class who use other methods. There are 26 Brain Gym movements taught in this research, but in the learning implementation plan only 11 movements are taught, namely:

1. Drink water
2. Brain button
3. Cross movement
4. Latches relax
5. 8 Sleep
6. Double Strikethrough
7. Positive Point
8. Activate hands
9. Filling energy
10. Neck twist
11. Owl

From 11 movements there are several movements taught that are very prominent concerning students' writing skills which are visible to researchers based on the results of students' essays, namely drinking water, cross movements, relaxed hooks, elephants, double strokes, positive points, activating hands and filling energy. Meanwhile, for the other three movements, researchers have not found any prominent benefits in this research.

Below we will explain the connection between these movements and their relationship to the Brain Gym:

1. Water movement or drinking water is the largest compound in the human body, 70% of the human body is water. Water functions to clean the body and this water is also useful in accelerating the function of electrical and chemical energy which carries information from the body to the brain and vice versa (Yanuarita, F, 2012, p. 82). This movement is carried out because water is a conducting medium which increases the electrical potential through cell membranes and is what is most needed to ensure the function of nervous

tissue. By drinking water, students have enough energy to study, remembering that all bodily activities require water. If the body needs enough water, it will help channel energy to the brain so that the brain will carry out its functions optimally and dehydration will not occur. The purer the water you drink, the easier it is to burn, the easier it is for toxins to be removed from the body (Prihastuti, 2009, p. 40).

2. Brain exercise movements apply physical movements using the principle of crossing movements. This movement moves the extremities on one side of the body across the midline and coordinates with the extremities on the other side of the body. (Shamberg, 2009, p. 10). This cross movement causes both hemispheres to be used simultaneously. Using both hemispheres together allows us to access all sensory information and to communicate effectively, move and react to that information. A study was conducted Pereira, 2007 et al.
3. Relaxation is a movement that relaxes the body and mind, When students feel threatened, intimidated, excluded, confused, unable or physically unsafe and not relaxed, the brain will respond reflexively towards defense (fight or flight) (Kaufeldt, 2008 p. 11). A study shows that if students' minds feel calm then this will affect students' skills in reading and writing (Hartati and Agamani, 2006, p. 167). Other research suggests that Brain Gym as a form of physical activity that is fun and done regularly has a significant influence on improving the language skills of preschool children. Children's brain abilities are indirectly stimulated by Brain Gym movements (Wardani, S. R et al, 2013, p. 63). When students take a breath, oxygen intake will flow from the brain to the rest of the body and vice versa, the circulation of oxygen in the body affects brain function. If oxygen enters the brain stably, memory and brain intelligence will improve.
4. The 8 sleep movement functions to combine the left and right fields of vision, thereby increasing the integration of the left and right brain while improving body balance and coordination. This movement can improve reading, writing & comprehension skills and activate cooperation between the two hemispheres of the brain.
5. Double Scribble berThe function is to make the eyes and hands more relaxed and make writing easier (Yanuarita, F, 2012, p. 91). Drawing using their left hand can activate their right brain more effectively because the drawing activity itself trains the right brain, and can also train their left hand to stimulate their right brain to be more active. Drawing with both hands will stimulate the growth of students' creativity. Apart from that, when drawing with their left hand, students will find it difficult and unfamiliar so that when they return to drawing or writing with their right hand their writing tends to be better and neater because they previously faced difficulties in writing or drawing with their right hands that are rarely used.
6. Activating your hands works to relax your shoulders and helps you write. This movement aims to stretch the shoulder and hand muscles so that students are better prepared to write. This is in line with Jensen's statement (2011, p. 50) which states that with physical movement, the brain is able to increase circulation so that the nerves can get nutrition and oxygen. Apart from that, physical movement is also able to stimulate hormones that improve brain function.
7. Almost the same as the relaxing hook movement, one of the functions of this movement is to make the mind calmer. Taking a deep breath functions to help open the lungs so that

they can absorb energy that can repair body cells, so that the mind becomes fresher. A fresh mind can help students produce better and brighter ideas compared to when students are tired, bored and so on.

From 11 the movements taught by the author in the research, the researchers did not find a real connection between the Brain Gym movement and the 4 movements taught, namely the brain button, positive point, neck rotation and owl. Even though the function side has been explained in the previous chapter, in carrying out the research, the researchers did not find detailed benefits of these four movements. Brain Gym method focuses on brain and body activities so that the expected results are not limited to students' motor skills in writing, but researchers also want to link this Brain Gym activity with students' ability to generate ideas in an article.

Conclusion

Proficiency in writing is an essential talent that students, like other skills, must acquire. However, many students tend to dislike writing due to a lack of practice and the perception that it is challenging. It is crucial for teachers, parents, and other members of the school community to introduce innovations that will help children derive pleasure from this activity. This is because tasks that are enjoyable are typically more effortless to accomplish. Brain Gym is a compilation of uncomplicated exercises that seek to establish a connection or integration between the mind and body.

Properly executed Brain Gym activities can establish synchronization between the brain and muscles, resulting in a balanced state where tense muscles regain relaxation. In this manner, the circulation of blood can proceed unhindered, ensuring an adequate supply of oxygen to the brain, so facilitating the smooth transmission of energy to the brain. If there is good coordination between the muscles and the brain, and if energy can flow easily into the brain, it can activate the reticular formation. This activation can assist students in selecting only pertinent information, stimulate the release of endorphins to induce relaxation, and activate all three dimensions of the brain: the lateral dimension, focusing, and concentration. As a result, children can enhance their intelligence and learning abilities. In order to achieve optimal brain function and enhance learning concentration, it is important to follow such approach.

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