

THE APPLICATION OF BRAIN-BASED LEARNING IN TEACHING READING COMPREHENSION TO THE FIRST YEAR STUDENTS OF MA AS'ADIYAH ERENG-ERENG BANTAENG

Muh Agus Nur¹, Ruslan Hasyim², Ahsanul Khalikin³

¹MAN 2 Bulukumba, Bulukumba, Makassar

²Pendidikan Bahasa Inggris, Universitas Muhammadiyah Sorong, Kota Sorong

³MAN Pinrang, Pinrang, Makassar

Muhammadagusnur@gmail.com, ruslanruse89@gmail.com, Ahsanleeking@gmail.com

Abstract

The objective of this research described the application of Brain-Based learning to be used in teaching reading comprehension to the first year students of MA As'adiyah Ereng-Ereng Bantaeng Regency. The method was used by the research was descriptive quantitative method. The variables of this research were independent variable (the application of Brain Based Learning) and dependent variable (Teaching Reading Comprehension). The population of this research was the first year students of MA As'adiyah Ereng-Ereng Bantaeng Regency in academic year 2010/2011. The total number of population was 22 students. The sample of the research was 22 students which were taken by using total sampling technique. The instrument of this research was reading comprehension test. The result of the data indicated that there was a good classification. The mean score of post-test was (80) and standard deviation in post-test was 9.1. Based on the finding and discussion of the research, the researcher drawn a conclusion that the application of Brain Based Learning was good to be used in teaching reading comprehension to first year students of MA As'adiyah Ereng-Ereng.

Keywords : Brain-Based Learning, Teaching, Reading comprehension

1. Introduction

Reading is one of essential skills of learning foreign language. The one way to improve the ability in communicating is reading practice. Some students have high motivation to speak fluently to expose his idea. But they are limited of the empirical concepts. It is because of they have low motivation to read a text and the students also have difficulties in comprehending the reading.

Problem of reading comprehension assumed to happen by many factors. The first, teacher doesn't provide variety of activities and techniques. The second, teacher doesn't focus only into comprehension of the text. The third, motivation of students is low. In teaching reading, the teacher finds some problems. It is the fact that the students who study English may read fluently in their native language, yet they cannot transfer the skill in reading English. When they read English, they tend to know or focus on the words rather than the meaning of the text and they always want to see dictionary when they find difficult word by words. As the sequences, they are slow in understanding the meaning of the text. Reading is also something crucial and indispensable for the students because the success of their study depends on the greater part of their ability to read. If their reading skill is poor, they are very likely to be fail in their study or at least they will have difficulty in making progress. On the other hand, if they have a good ability in reading, they will have a better chance to succeed in their study. To solve the problem, teachers should use appropriate approach. When focusing to comprehend of an English text, the teacher has option to use Brain Based Learning approach is worth when learners have low motivation and difficult to comprehend English text.

The problem of comprehend English text is also faced by the students at MA As'adiyah Ereng-Ereng. In an observation as the pre-research, the researcher found that many students had difficulties to comprehend English text because they are low of motivation and not interested to read the text. As value of observation in the class room the students' has score 50, in the last semester the students score between 50– 65. This score is as a poor category. Smith and Richard (1980:128) also states that it depends on many factors as follows: (1) the readers' background knowledge to which new information. (2) The readers' purpose or goals in reading material.

In reading, to comprehend the text the readers should be able to manage every part of the text, because it is easy to gain the comprehension in reading when the readers are able to organize the text. Sometimes, they may find from pre-explanation and it is important for them to comprehend a reading text with having knowledge in general view of the text as their purposes read the text. Moreover, the

students can predict what will be discussed on the text. In line with this study, students may improve their reading comprehension if they know how the brain learn or read in best way. It is very important to understand about how the brain processes information to get good comprehension in reading. The researchers thinks that important to apply brain based learning to know whether or not brain based learning in improving students reading comprehension. Brain – based learning is a new paradigm in learning and teaching based on how human brain works. The concept was firstly introduced by Jensen in his book called *Brain-based learning: the new science of teaching and training*). Brain-Based Learning is a comprehensive approach that emphasized how the brain learns naturally and is based on what we currently know about the actual structure and function of human brain (Barbara, 2002:42-43). Sousa (1990:13) state that Brain-based learning is the study of the brain and its cognitive functions away from traditional neuroscience studies and into the educational field with new introductions of best practices in the classroom. An improvement in reading comprehension may be seen if the teachers can understand how the brain learns and why it doesn't. Tamara Lee Opalek (2005: 25) state that Brain Based learning is an approach that gives special attention of learners' diversity, and to accommodate a variety of learning style teacher need differentiated strategies for learning and reading. Brain-based learning concept states that activating prior knowledge or making connections to students' backgrounds has essential function to improve the teaching of reading. Brain-Based Learning, sometimes called brain-compatible learning, is in educational approach based on how current research in neuroscience suggests our brains naturally learn best. The learning strategies derived from this research can be easily integrated into any learning environment, from kindergarten classroom to a seminar for adults. To understand Brain-Based Learning, a study of brain cells is needed. The brain consists of many cells; one type which is basic to learning is the neuron. Learning takes place when two neurons communicate. When neuron gathers information, it grows appendages called dendrite. More than 30,000 dendrites can fit onto the head of a pin (Sylvester, 1995). Dendrites constantly scan for information because the brain continually wants to learn.

Previous studies have related the human brain and learning to computers by comparing the ability on each to store, retrieve, and organize files of information. However that simile is limiting as the human brain constantly updates how it stores and networks information based on individual experiences (Noshad, 2004:23). A key concept in brain-based learning is that the learner requires a challenging, supportive learning environment while the educator facilitates the learning process as educational activities transpire (Cain & Cain, 1991). Tileston (2004:44) encourages teachers to “create patterns and connections between what the learner already knows and the new learning.” as well as “provide students with examples and non-examples” to help brains build patterns. Brain-Based approach integrates the engagement of emotions, nutrition, enriched environments, music, movement, meaning-working, and the absence of threat for maximum learner participation and achievement. A basic premise is that we are all natural learner. Students learn in different ways due to their previous experiences, perceptions, and prior knowledge about the subject. From a practical stand point, Brain-Based Learning steps away from traditional teaching and learning method which focused on the memorization of facts. Instead, Brain- Based Learning emphasized contextual learning and engages learners in design making, forming cooperative groups, locating resources and applying the knowledge.

2. Method

The method of this research used descriptive quantitative method. It is aimed at examining the effects of the Brain-Based Learning in reading comprehension teaching to the first year students of MA As'adiyah Ereng- Ereng Bantaeng of 2010 – 2011. This research took the entire first year student of MA As'adiyah Ereng- Ereng in academic year 2010/2011 at the sample of population by using total sampling technique. Arikunto (2006: 134) states that if the subject less than 100, it would be better to take the entire subject so the research would be a population research. It means that the total number of the sample was 22 students.

3. Findings and Disscsion

Findings

Students' score of post- test were classified into some criteria and percentage as follows:

Table 1. The result of students' post- test.

No	Classification	Score	Post-test	
			Frequency	Percentage
1	Excellent	96-100	-	-
2	Very Good	86-95	5	23%
3	Good	76-85	9	40%
4	Fairly Good	66-75	7	32%
5	Fair	56-65	1	5%
6	Poor	36-55	-	-
7	Very Poor	0-35	-	-
Total			22	100%

The table above relevant that there were 5 students (23%) got very good score, 9 students (40%) got good score, 7 students (32%) got fair score and 1 student (5%) got fair score. It can be conclude that the percentage of very good and good score in the post- test is classified into Good classification.

To find out the significant of using Brain- Based Learning, it is shown in the following table:

Test	Mean score	Standard deviation
Post-test	80	9.1

The mean score of the students' were 80 and the standard deviation of the students' post- test were 9.1

Discussion

The discussion deals with the interpretation of the findings derived from the statistical analysis. The description of the data collected through the reading test as explained in the findings section shows that the students' reading has satisfied. It was supported by the frequency and percentage of the result of the students' score post- test. Students' score after presenting material by using Brain-Based Learning in teaching reading is in good classification. It can be shown by mean score of the students.

The statistical analysis from the result of the students' post-test showed that 5 students (23%) got very good score, 9 students (40%) got good score, 7 students (32%) got fair score, and 1 of them got fair score, the mean score of students' post- test was 80 that were classified as good score. It shows that the mean score of the students' post- test was high. Thus the alternative hypothesis (H1) is accepted.

The treatment was given in seven times and there were some different reading texts were given. In the first meeting, the students were given one short reading texts. Here, they showed their attention to the reading text. They tried to answer some questions in reading material. In the second meeting until the seventh meetings, the students were given a reading text. The research saw that the students really enjoy when they read the text. It was based on guides for using Brain-based Learning, which choose the reading material that link with their previous knowledge and experience.

The writer assumes that the application of Brain Based Learning is really helpful to students' reading comprehension. The ability of the students in finding out the main idea and supporting details was influenced by pre-explanation before reading and the context of materials with the students' background knowledge made it interest to be known deeply by the students. Therefore, teaching reading comprehension in finding main idea and supporting details can apply Brain-Based Learning. These strategies, identified through research based on what good readers do when they are reading, help students become meta-cognitive. They learn to think about their thinking as they are reading. When students learn to make connections from their experience to the text they are currently reading, they have a foundation, or scaffolding,

which they can place new facts, ideas, and concepts. As good readers read, they think about what they are reading and consider how it fits with what they already know.

The researcher also succeed to create relax environment with various activities that stimulating students got full of concentration. Techniques such as humor and tell a funny story at the beginning of class reduced the stress that maight came from embarrassment because of academic difficulties. The use of pair-share is also a collaborative brain-based strategy used to minimize student stress in risking an answer in front of the entire class (Cain & Cain, 1994).

Participatory oriented learning by group working and exchange learning also became the key of the students easier to understand the meaning of the text. They can analyze and synthesize what the reading text exposed. Most of the students were active compose the meaning of the text by share to their friends. Erlauer (2003:29) supports the premise put forth by Cain and Cain that the cooperative learning model is brain-based compatible because as Erlauer reports that an innate function for the brain is to search for meaning. Collaborative learning provides the brain with the means to explore new information in a problem solving situation.

Collaborative groups are designed to be supportive and cooperative by nature; competition and the threat these evoke are not present. We know the brain functions best in a non-threatening setting because it can focus on high-level thinking using its frontal cortex, rather than its reptilian brain which operates under fight-or-flight condition (Erlauer, 2003:136–137).

Working collaboratively does not come naturally to most students; therefore, they need to be taught the social skills to be able to do so. They also need to know the how and why of collaboration. Clear goals are essential for groups to be successful on designated academic tasks. Erlauer (2003:145) further states Collaborative teamwork occurs when the group has a goal to reach and is cooperatively striving to accomplish the tasks at hand in order to achieve success with the goal. Students will do this, as long as they know the purpose and the expectations for the work. Brain-based teachers predetermine a goal or purpose for the work giving a sense of purpose for the brain to work toward.

4. Conclusion

Brain base learning in reading comprehension can be one of the solutions to reduce the difficulty of learning reading, it is proved by reserach findings above. The application of Brain- based Learning was good in teaching reading comprehension to the first year students of MA As'adiyah Ereng- Ereng Bantaeng. It was proved by the score of the students at the post –test section (80) which is in good classification.

References

- Arikunto, Suharsimi. 2006. *Prosedur Penelitian Suatu Pendekatan Praktek*. Jakarta: Rineka Cipta.
- Caine, R., & Caine, G. 1994. *Making connections: Teaching and the human brain*. Menlo Park, CA: Addison-Wesley.
- Erlauer, L. 2003. *The brain-compatible classroom: Using what we know about learning to improve teaching*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Given, Barbara. 2002. *Teaching to the Brain's Learning Natural System*, Association for supervision and curriculum development; Virginia
- Hasyim, R., Ibrahim, I. and Said, E., 2019. The Use of Two Stay Two Stray Method to Improve Students' Reading Comprehension. *Lisan: Jurnal Bahasa dan Linguistik*, 9(1), pp.28-36
- Husain, Noushad. 2011. Brain Based Learning: Pedagogical Implications. 10.13140/2.1.4588.8806.
- Lee Opalek, Tamara. 2005. *Best Practice of Brain research for teaching primary Reading*; Florida; Hardee Countee.
- Smith and Richard. 1980. *Theoretical Models and Process of Reading*. Barkeley:University of California.
- Sousa, David A. 2001. *How the Brain Learns*. California. Corwin Press.
- Slyvester, R. 1995. *A Celebration of neurons: An educator's guide to the human brain*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Tileston, D. W. 2004. *What every teacher should know about learning, memory, and the brain*. Thousand Oaks, CA: Corwin Press.