Brain Based Learning Approach In Early Childhood Learning

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Abstract. This article discusses the *Brain Based Learning* in learning in early childhood. Character development in early childhood is closely related to neuroscience, because the brain is the center of intelligence that controls the nervous system to be able to respond to the learning process. Learning in early childhood through neuroscience theory is carried out by educators who understand and understand the performance of the human brain. The natural work of the students' brains is considered so that an educator is able to create an appropriate learning atmosphere. Thus brain function can be optimally developed properly and correctly so that learning objectives can be achieved. The type of research used in this article is a type of qualitative research in the form of literature (library research). The purpose of this study was to examine the *brain based learning* used in early childhood learning.

Keywords: Brain Based Learning, Early Childhood, Learning method

1 Introduction

Education is a necessity for every human being, because humans were created by being endowed with reason by God Almighty. With human education will be able to increase the ability of reason and develop mindset and behavior. One education that is very important in the process of change is Early Childhood Education. What is meant by Early Childhood in general are children under the age of 6 years. In the Law on the National Education System Number 20 of 2003 it is stated that Early Childhood is children who are in the age range between 0-6 years. During this period, almost all of the potential of children experiences rapid growth and development or what we usually know as the golden age. Based on various studies in the field of neurology, 50% of a child's intelligence will be formed in the first 4 years of life. At the age of 8 years, brain development will reach 80% and until it reaches the age of 18 the brain will develop optimally and achieve 100%.

Children need more continuous knowledge and experience and get new experiences to increase their abilities. According to Suryana (2014), the emotional state of children is important when children are learning, stress will become a weapon that can destroy brain cells and make children face learning difficulties. Emotions are the subject's reaction to problems associated with changes in psychology and behavior [1]. Children begin to develop basic emotions starting at the age of six months, where these emotions include joy, anger, sadness and fear [2]. Emotions have also been shown by newborn babies, for example by crying, kicking their arms and legs, and twitching their bodies. Erik Erikson in [3] thinks that good emotional development is very important in the psychological development of children.

All of the goals of brain-based learning are attempts to direct insights from brain research into the educational arena in order to improve teaching and learning. The study of this science is

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often The essence of all brain-based learning aims to seek and direct knowledge from brain research into educational settings in order to enhance teaching and learning. This field of science always continues to be developed as an innovation that is applied in the world of education to improve the quality of education, especially students, both related to curriculum, teaching materials, media and learning models and others. referred to as "brain research", which includes neuroscientific studies that examine models of cell development in various brain regions and brain imaging techniques.

2 Method

This article uses a type of library research that uses a descriptive analysis approach. The author focuses on the focus of the discussion on the literature that reviews the theme of brain based learning. With this study it is expected to be able to provide a clear picture of the learning process using the brain based learning.

3 Result and Discussion

3.1 Learning in Early Childhood

The process of interaction between students and teachers which is equipped with learning materials and also through delivery methods and learning strategies, as well as learning resources around the learning environment is called learning. an achievement in the process of learning can be observed through the success rate of achieving educational goals. If the learning objectives are achieved, it can be indicated that the teacher has been successful in teaching [4]. In the Law of the Republic of Indonesia Number 20 of 2003 which contains the National Education System in article 1 paragraph 14 states that early childhood education is an effort to foster the object of which is children from birth to the age of six who are sought through providing educational stimuli. in order to help physical and spiritual growth and development so that children are able to enter further education. even higher. Furthermore, in article 28 which contains the challenge of Early Childhood Education, it states that (1) AUD education is carried out before entering basic education; (2) Early Childhood Education can be carried out through formal, non-formal and informal education channels; (3) one of the early childhood education in formal channels, namely: Kindergarten, RA, or other forms that are equivalent; (4) the channel for implementing early childhood education through non-formal institutions, for example: KB, TPA, or other equivalent forms; (5) early childhood education which is implemented through informal education, namely:organizing education within the family or in education organized by the surroundings; and (6) regulations regarding Early Childhood education which are further explained through government regulations.

The purpose of learning in PAUD (Early Childhood Education) is to help children reach the stages of development, so it needs to be planned so that goals can be achieved effectively and efficiently, [5]. For this reason, it is hoped that the learning process must be in accordance with the stages of child development, [6]. Early childhood needs freedom, without pressure, active, not coerced and forced, flexible in learning. Learning in Kindergarten should be well planned so that the implementation of the learning process will be fun, joyful, cheerful and not forced to do it. Thus teachers need to understand learning management so they can plan educative elements in each child's learning. Thus Early Childhood education is a process of activities carried out through coaching, the process of growing and developing significantly all

the abilities of Early Childhood Education in order to achieve basic attitudes and potential in accordance with the stages of their development so that they are mentally ready to explore higher education, it is necessary to organize various kinds of activities that can develop various aspects of children's motor skills. Early childhood education is a form of education that focuses on the development of behavior/habituation including: (1) development of religious and moral values, (2) social emotional development and independence and development of basic abilities. The second development includes: (1) language development, (2) cognitive development, and (3) physical-motor development.

Development activities for an aspect are carried out jointly and in balance with other aspects by using. PAUD has various functions including fostering, developing, and also developing various abilities that exist in children since early childhood to the fullest so that behavioral attitudes and basic potential will be formed that are in accordance with the child's development period so that children are mentally ready to explore the level of education higher, [7].

3.2 Brain Based Learning Model Approach

In order for early childhood education to run optimally, on target, and according to targets and goals, appropriate learning strategies must continue to be developed, one of which is the brain-based learning approach model. Brain-based learning or in other terms commonly called brain-based learning is a learning concept that is oriented towards empowering the potential of the brain. The process goes according to the way the brain functions, starting from processing knowledge by analyzing, assessing, judging, making decisions and so on. All parts of the brain are directly involved in the teaching and learning process. Educators and parents must be able to adjust the principles that exist in brain-based learning so that learning objectives can be achieved.

The learning model of Brain Based Learning in the learning process involves the full ability of the student's brain, building full knowledge so that learning is carried out meaningfully and students can better understand the material being taught. Neuroscience divides the anatomy of the brain into three hemispheres, namely: the left brain, the right brain, and the midbrain. The work of the left brain is called IQ, the work of the right brain is called EQ, and the work of the midbrain is called SQ. Furthermore, Neuroscience explains that playing can activate the left brain (IQ), music can activate the right brain (EQ), while stories or socio-dramas, especially great spiritual stories, can activate the midbrain (SQ). Neuroscience finds that all the potential of students rests on their brains. It was further explained that newborn students have 100-200 billion neurons (nerve cells) and their intelligence develops up to 50% until the child is 6 months old [8]. At the age of two years his brain development reaches 75%, and at the age of 10 years his intelligence development has reached 90%. Over the age of ten years brain development is getting slower so to achieve 100% intelligence development must wait until the child is 18 years old.

What makes Brain-based Learning different from other learning models include learning models with a brain base that have the characteristics of relaxed learning, constructive learning, learning that focuses on aspects of collaboration between students, a very suitable time for students in understand the material they have received, meaningful and contextual learning. [9]. There are three strategies that can be used in brain-based learning: First, creating a learning environment that challenges students' thinking skills, for example in learning mathematics, children are not interested in learning to sit and work on adding or subtracting questions, but by playing congklak, which is basically learning. addition and subtraction, children will feel more

happy learning. Second, creating a fun learning environment by providing a variety of learning opportunities in the classroom, for example by having a computer area, writing training laboratories, science areas, materials for drama, all of which can trigger imagination and sensory stimulation in children's learners. With this context, children learn to control their learning and the teacher acts more as a facilitator. In different terms, the provision of various learning opportunities in the classroom can also be facilitated in the learning center. With a learning center, children can channel their individual interests, find out something they really want to know, and can facilitate the potential that each child has. And the third, creating an active and meaningful situation for students (active learning).

There are several components needed to create an active learning environment, namely: a. Physical arrangements on tables, chairs, study centers, libraries, lighting, and other components that can interest children; b. The room is designed in such a way that it can be used for individual work as well as small and large group meetings; c. Availability of manipulative materials and exploratory space that can arouse natural curiosity in children, plenty of time for children to explore, role play, and experiment. d. Creating a curriculum can foster children's interests and be contextual, so that children are able to grasp the meaning or meaning of what they are learning. e. Provide lessons and involve concrete experiences, especially in problem solving because the learning process is most effective not with lectures, but with real experiences [3].

4 Conclusion

Brain based learning provides new ideas on how to create a learning process that emphasizes optimizing the potential of students' brains. This learning model has proven to be attractive for increasing mastery of knowledge in addition to ensuring the development of overall potential among students. Through such learning, students will be motivated to take part in learning, have a deep conceptual understanding, and develop their thinking skills.

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