



THE BRAIN BASED LEARNING (BBL) AND INTRAPERSONAL INTELLIGENCE FOR MATHEMATICS LEARNING IN JUNIOR HIGH SCHOOL

Edy Mastoni*

Educational Technology of Postgraduate Program
Universitas Negeri Jakarta, STKIP Muhammadiyah Bangka Belitung
Indonesia

M. Syarif Sumantri

Educational Technology of Postgraduate Program
Universitas Negeri Jakarta
Indonesia

Nurdin Ibrahim

Educational Technology of Postgraduate Program
Universitas Negeri Jakarta
Indonesia

*Corresponding author's Email: edymastoni_tp15s3@mahasiswa.unj.ac.id

Author's Biography



Born, October 23, 1978 in Toboali, South Bangka. Elementary to High School in Toboali, Elementary Schools in 1991, Junior High School in 1994, and Senior High School in 1997. Completed D1 Computer at DCC Bandar Lampung in 1998, S1 in Informatics Engineering at STMIK Darmajaya Bandar Lampung in 2002, Master of Educational Technology at Lampung University in 2010 and S3 in Educational Technology at Universitas Negeri Jakarta is completing a dissertation. Educators at STKIP MBB and joined in several professional and social organizations. Currently active as a researcher at Institute of Research and Education (IRE) Bangka Belitung.

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info@readersinsight.net*

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Research Highlights

The study proposed two focus studies and results indicated there is a conformity between Brain Based Learning (BBL) and students' intrapersonal intelligence toward characteristics of junior high school mathematics learning. Implementation of Brain Based Learning (BBL) and intrapersonal intelligence in junior high school mathematics learning can improve student's learning outcomes.

Research Objectives

This research aims to knowing activities of junior high school mathematics learning and to knowing conformity of characteristics between Brain Based Learning (BBL) and intrapersonal intelligence with junior high school mathematics learning. BBL as a learning strategies and intrapersonal intelligence as an internal factors of students must be the main consideration in learning activities, including in this case mathematics learning. Learning is more directed at construction than instruction, which has implications for the role of teachers and students (Reigeluth and Carr-Chellman, 2009). Learning strategies concept is a various types of plans used by the teacher to achieve goals (Silver et al., 2012). In simple terms, this view states that learning strategies are ways to do something in achieving goals. Learning mathematics is learning about the concepts and structure of mathematics and looking for relationships between the two on the material being studied (Bruner, 2009). In the learning activities, learning materials must be adapted to the abilities and cognitive structures of students. Learning material must be related to the concepts that are already owned so that new ideas can be fully absorbed by students (Ausubel, 2012). Learning activities must be gradual, sequential and always based on past learning experiences.

Methodology

This type of research is qualitative descriptive. The approach used is qualitative with descriptive methods and literature studies. Data collection uses documentation studies, observations, and interviews with teachers and students. Data collection was conducted in junior high school of SMP Assahil Lampung Timur in the 2018/2019 academic year. The mathematics teachers and students were included in this study as a respondents. In this study the data analysis used was quantitative descriptive and qualitative descriptive analysis. Quantitative descriptive analysis is used to present and analyze data relating to mathematics learning outcomes over the past three years. Qualitative descriptive analysis is used to interpret and analyze data regarding the learning process of mathematics that has taken place.

Results

The study indicate that mathematics teachers have only used expository learning strategies in learning activities. The expository learning strategy is a form of teacher-centered learning approach. Mathematical learning outcomes are not satisfactory. The Mathematics learning is a learning process that involves active students building mathematical knowledge (Cobb, 2013). In mathematics learning there is a process of developing students' creativity to improve their abilities and beliefs in building knowledge and mastering good mathematics subject matter. The Characteristics of Brain Based Learning (BBL) emphasizes students to play an active role in building the concepts learned (Ulger, 2018). The steps in the BBL





learning strategy include creating a learning environment that challenges students' thinking skills (regulated immersion), creates a relaxed learning environment, and creates actual and meaningful learning situations for students (active processing). Intrapersonal intelligence is self-knowledge as intelligence that involves self-awareness or self-sensitivity, thought processes, realizing changes that occur in oneself, involving skills of cooperation and communication both verbally and nonverbally (Alder, 2001). The characteristics of intrapersonal intelligence consist of three main aspects that can be used as benchmarks, namely recognizing oneself, knowing one's own desires, and knowing what is necessary for oneself.

Findings

The results of data analysis, it was found that the learning activities that had taken place so far only used expository learning strategies. The teacher does not apply learning strategies that are in accordance with the internal factors of students in learning mathematics. The literature review show that there is a match between the characteristics of junior high school mathematics material, the characteristics of BBL learning strategies and the characteristics of intrapersonal intelligence. Therefore, the implementation of BBL learning strategies and intrapersonal intelligence in junior high school mathematics learning is very well done to improve student learning outcomes.

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