ABSTRAK

Sri Mariana (2015) Pendekatan *Scientific* disertai *Mind Map* untuk Meningkatkan Kemampuan Pemahaman Konsep dan Koneksi Matematis serta *Self Efficacy* Siswa SMP

Penelitian ini didasarkan pada permasalahan rendahnya kemampuan pemahaman konsep dan koneksi matematis serta keharusan mengembangkan aspek afektif dalam pembelajaran matematika yang mempunyai hubungan dengan keberhasilan seseorang dalam mengerjakan tugas akademik. Untuk mengatasi hal tersebut, dilakukan penelitian dengan menggunakan pendekatan *scientific* disertai *mind map*. Penelitian ini mengkaji masalah peningkatan kemampuan pemahaman konsep, koneksi matematis serta *self efficacy* antara siswa yang mendapat pembelajaran matematika dengan pendekatan *scientific* disertai *mind map* dan pembelajaran ekspositori. Penelitian ini merupakan penelitian kuasi eksperimen dengan menggunakan teknik *purposive sampling*. Populasi dalam penelitian ini adalah siswa SMP di Bandung Tahun Pelajaran 2014/2015. Sampel penelitiannya adalah siswa SMP kelas VIII. Instrumen yang digunakan dalam penelitian berupa tes kemampuan pemahaman konsep, koneksi matematis dan angket *self efficacy*. Analisis data dilakukan secara kuantitatif dan kualitatif. Analisis kuantitatif dilakukan menggunakan uji statistik nonparametrik *Mann-Whitney U*. Analisis kualitatif dilakukan untuk mendiskripsikan *self efficacy* siswa setelah pembelajaran dan menganalisisnya menggunakan uji statistik nonparametrik *Mann-Whitney U*. Hasil penelitian menunjukkan bahwa: (1) Peningkatan kemampuan pemahaman konsep matematis siswa yang memperoleh pembelajaran dengan pendekatan *scientific* disertai *mind map* lebih baik daripada siswa yang memperoleh pembelajaran secara ekspositori. (2) Peningkatan kemampuan koneksi matematis siswa yang memperoleh pembelajaran dengan pendekatan *scientific* disertai *mind map* lebih baik daripada siswa yang memperoleh pembelajaran secara ekspositori. (3) *Self efficacy* siswa yang memperoleh pembelajaran dengan pendekatan *scientific* disertai *mind map* tidak berbeda secara signifikan dengan *self efficacy* siswa yang memperoleh pembelajaran ekspositori. Namun *self efficacy* siswa yang memperoleh pembelajaran dengan pendekatan *scientific* disertai *mind map* sudah mengarah untuk menjadi lebih baik.

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Kata kunci: Kemampuan Pemahaman Konsep, Kemampuan Koneksi Matematis, *Self Efficacy*, Pendekatan *scientific*, *Mind Map*

ABSTRACT

Sri Mariana (2015) : *Scientific approach* by *Mind Map* to Improve Ability of Understanding Concept and Mathematical Connections and *Self Efficacy* Junior High School Students

The study was based on the problem of the low ability of understanding mathematical concepts and connections as well as the necessity to develop the affective aspects of learning mathematics that regarding a person's success in academic tasks. To overcome this, a research was conducted using a *scientific approach* with *mind map*. This study examines the problem of improvement of understanding the concept and mathematical connection, as well as *self efficacy* between students who study mathematics through a *scientific approach* with *mind map* and students who study through expository. This study was a quasi-experimental research using purposive sampling technique. The population in this study were eighth grade junior high school students in Bandung academic year 2014/2015 and the sample in this study were eighth grade students as much as two classes. Instruments used in this research were test the ability of understanding the concepts, mathematical connections and *self efficacy* questionnaire. The data were analyzed quantitatively and qualitatively. Quantitative analysis was performed using nonparametric statistical test of Mann-Whitney U. The qualitative analysis was done to describe the *self efficacy* of students after learning and analyzing them using nonparametric statistical test of Mann-Whitney U. The results showed that: (1) Improvement of the ability of understanding mathematical concepts of students who acquire learning with a *scientific approach* with *mind map* was better than students who received expository learning. (2) Improvement of the ability of mathematical connection of students who obtain a *scientific approach* with the mind map was better than students who received expository learning. (3) *Self efficacy* of students who obtain a *scientific approach* with *mind map* did not differ significantly with *self efficacy* of students who obtain expository. But the *self efficacy* of students who obtain a *scientific approach* with *mind map* were better than students who obtain expository.

Keywords: Ability of Understanding the Concept, Ability of Mathematical Connection,*Self Efficacy, Scientific approach, Mind Map*