KEMAMPUAN *MATHEMATICAL CREATIVE PROBLEM SOLVING*, BERPIKIR KRITIS MATEMATIS, DAN *SELF EFFICACY* SISWA SMP DALAM IMPLEMENTASI *EXPERIENTIAL LEARNING MODEL*

Disertasi

Diajukan untuk Memenuhi Sebagian Syarat
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Kemampuan *Mathematical Creative Problem-Solving*, Kemampuan Berpikir Kritis Matematis dan *Self-Efficacy* Siswa SMP dalam Implementasi *Experiential Learning Model*

ABSTRAK

Tujuan utama dari penelitian ini adalah untuk mengkaji pencapaian dan peningkatan kemampuan *mathematical creative problem-solving* (MCPS) dan kemampuan berpikir kritis matematis (BKM) serta pencapaian *self-efficacy* (SE) yang ditinjau dari kemampuan awal matematis (tinggi, sedang dan rendah), sebagai akibat dari implementasi *experiential learning* dan pembelajaran biasa. Penelitian ini didasarkan pada pentingnya kemampuan *mathematical creative problem-solving* (MCPS), kemampuan berpikir kritis matematis (BKM) dan *self-efficacy* (SE) pada siswa SMP, akan tetapi pada kenyataannya masih banyak penelitian yang menemukan bahwa kemampuan *mathematical creative problem-solving* (MCPS) dan kemampuan berpikir kritis matematis (BKM) serta *self-efficacy* (SE) siswa masih rendah. Metode penelitian yang digunakan adalah *quasi-eksperimen* dengan *the non-equivalent control design.* Populasi dalam penelitian ini adalah seluruh siswa di salah satu SMP Negeri di Kota Cimahi pada Tahun 2019. Adapun sampelnya adalah siswa kelas VIII pada SMP Negeri yang terpilih. Dipilih dua kelas secara acak dari enam kelas yang berada di SMP Negeri yang terpilih tersebut, satu sebagai kelompok eksperimen dan yang satu sebagai kelompok kontrol. Kelompok eksperimen diberi pembelajaran *experiential learning* dan kelompok kontrol diberi pembelajaran biasa yaitu ekspositori. Instrumen yang digunakan dalam penelitian ini terdiri atas tes kemampuan awal matematis (KAM), tes kemampuan *mathematical creative problem-solving*, tes kemampuan berpikir kritis matematis, dan skala *self-efficacy.* Hasil analisis data menggunakan uji-*t*, uji-t', uji Mann-Whitney, uji Anova dua jalur, dan uji Pearson Chi-square. Hasil penelitian menunjukkan bahwa (1) terdapat perbedaan pencapaian dan peningkatan kemampuan *mathematical creative problem-solving* dan kemampuan berpikir kritis matematis antara siswa yang mendapat *experiential learning* dan siswa yang mendapat pembelajaran biasa, baik ditinjau dari faktor pembelajaran maupun dari level KAM (tinggi, sedang, rendah); (2) terdapat perbedaan pencapaian *self-efficacy* antara siswa yang mendapat *experiential learning* dan siswa yang mendapat pembelajaran biasa, baik ditinjau dari faktor pembelajaran maupun level KAM (tinggi, sedang, rendah); (3) tidak terdapat efek interaksi faktor pembelajaran dan level KAM terhadap pencapaian dan peningkatan kemampuan *mathematical creative problem-solving* dan kemampuan berpikir kritis matematis serta terhadap pencapaian *self-efficacy* siswa; (4) terdapat korelasi yang sangat kuat antara kemampuan *mathematical creative problem-solving* dan kemampuan berpikir kritis matematis pada siswa yang mendapat *experiential learning;* (5) terdapat korelasi yang kuat antara kemampuan *mathematical creative problem-solving* dan *self-efficacy* pada siswa yang mendapat *experiential learning;* dan (6) terdapat korelasi yang kuat antara kemampuan berpikir kritis matematis dan *self-efficacy* pada siswa yang mendapat *experiential learning.*

Kata kunci: *Mathematical Creative Problem-Solving*, Berpikir Kritis Matematis, *Experiential Learning*

Mathematical Creative Problem-Solving Ability, Mathematical Critical Thinking Ability and Self-Efficacy of Junior High School Students in the Implementation of Experiential Learning Model

ABSTRACT

The main objective of this research is to examine the achievement and enhancement of mathematical creative problem-solving abilities (MCPS) and mathematical critical thinking abilities (BKM) as well as the achievement of self-efficacy (SE) in terms of initial mathematical abilities (high, medium and low), as a result of the implementation of experiential learning and dirrect instruction. This research is based on the importance of mathematical creative problem-solving abilities (MCPS), mathematical critical thinking abilities (BKM) and self-efficacy (SE) in junior high school students, but in reality there are still many studies that find mathematical creative problem-solving abilities (MCPS) and mathematical critical thinking abilities (BKM) as well as students' self-efficacy (SE) are still low. The research method used is quasi-experimental with the non-equivalent control design. The population in this study were all students in one of the State Junior High School students in Cimahi City in 2019. The sample was class VIII students at the selected State Junior High School. Two classes were randomly selected from the six classes in the selected State Junior High School, one as the experimental group and the other as the control group. The experimental group was given experiential learning and the control group was given dirrect instruction. The instruments used in this study consist of a prior mathematical knowledge test (PMK), a mathematical creative problem-solving abilities test, a mathematical critical thinking abilities test, and a self-efficacy scale. The results of data analysis used t-test, t'-test, Mann-Whitney test, two-way Anova test, and Pearson Chi-square test. The results show that (1) there are differences in the achievement and enhancement of mathematical creative problem solving abilities and mathematical critical thinking abilities between the students who received experiential learning and the students who received dirrect instruction, both in terms of learning factors and from the PMK level (high, medium, low); (2) there are differences in the achievement of self-efficacy between the students who received experiential learning and students who received dirrect instruction, both in terms of learning factors and PMK levels (high, medium, low); (3) there is no interaction effect of learning factors and PMK level on the achievement and enhancement of mathematical creative problem solving abilities and mathematical critical thinking skills as well as on the achievement of students' self-efficacy; (4) there is a very strong correlation between the students' mathematical creative problem solving abilities and mathematical critical thinking abilitie in experiential learning classroom; (5) there is a strong correlation between mathematical the students' creative problem solving abilities and self-efficacy in experiential learning classroom; and (6) there is a strong correlation between the students' mathematical critical thinking abilities and self-efficacy in experiential learning classroom.

Keywords: Mathematical Creative Problem-Solving, Mathematical Critical Thinking, Experiential Learning

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