

ABSTRAK

Euis Setiawati (2014). Mengembangkan Kemampuan Berpikir Logis, Kreatif, dan *Habits of Mind* Matematis Melalui Pembelajaran Berbasis Masalah (Eksperimen terhadap Siswa Madrasah Aliyah)

Penelitian ini adalah jenis penelitian eksperimen untuk mengetahui bagaimana kemampuan berpikir logis, kemampuan berpikir kreatif dan *Habits of Mind* matematis siswa sebagai akibat dari penerapan pembelajaran berbasis masalah. Subyek penelitian adalah siswa kelas X, dari dua Madrasah Aliyah yang termasuk sekolah level tinggi dan level sedang, berjumlah 147 siswa yang berasal dari empat kelas. Dari empat kelas penelitian, dua kelas terpilih sebagai kelas eksperimen dan diberi jenis pembelajaran berbasis masalah, sedangkan dua kelas lain terpilih sebagai kelas kontrol dan diberi jenis pembelajaran matematika biasa. Penelitian ini menggunakan instrumen jenis tes dan skala sikap tentang kebiasaan berpikir. Pengolahan data menggunakan uji statistik *Independent Sample-t Test*, *Paired Sample-t Test*, ANAVA satu jalur, ANAVA dua jalur yang dilanjutkan dengan uji-*Scheffe*, dan uji *Chi-Square*. Kesimpulan dari penelitian ini adalah: 1) kemampuan berpikir logis, kemampuan berpikir kreatif dan *Habits of Mind* matematis siswa, setelah mendapatkan jenis pembelajaran berbasis masalah lebih baik daripada siswa yang mendapatkan jenis pembelajaran matematika biasa ditinjau dari (a) keseluruhan siswa; (b) level sekolah; dan (c) Kemampuan Awal Matematis (KAM); 2) tidak terdapat interaksi antara: (a) faktor pembelajaran yang digunakan dan faktor level sekolah; (b) faktor pembelajaran yang digunakan dan faktor KAM siswa dalam meningkatkan kemampuan berpikir logis, berpikir kreatif dan *Habits of Mind* matematis; 3) terdapat asosiasi antara: kemampuan berpikir logis dan berpikir kreatif matematis; kemampuan berpikir logis dan perilaku *HOM* matematis; kemampuan berpikir kreatif dan perilaku *HOM* matematis siswa; 4) kegiatan siswa selama PBM lebih mendukung berkembangnya kemampuan berpikir logis, berpikir kreatif, dan perilaku *HOM* matematis daripada kegiatan siswa dalam PB.

Kata Kunci: Kemampuan berpikir logis matematis, kemampuan berpikir kreatif matematis, *habits of mind*, pembelajaran berbasis masalah

ABSTRACT

Euis Setiawati (2014). Enhancing Logical Thinking Ability, Mathematical Creative Thinking Ability, And Habits Of Mind Through Problem-Based Learning (Experimental Study in Islamic Senior High Schools Bandung)

The focus of this experimental research is logical thinking ability, mathematical creative thinking ability, and mathematical habits of mind of Islamic Senior High Schools students as the impacts of the implementation of Problem-Based Learning (PBL). The subject of this research is students at grade X from two Islamic Senior High Schools (high –levels school and medium-levels school), consisting of 147 students divided into four classes. From four classes, two classes were selected as experimental group and given PBL, while two other group were selected as control group and given the conventional mathematics learning. This research used two kinds of instruments: logical thinking ability and mathematical creative thinking ability tests and habits of mind attitude scales. This research uses Paired Samples t-Test, Independent Samples t-Test, One-Way ANOVA, Two-Way ANOVA and followed by Scheffe-Test, and Chi-Square Test. Conclusions of this research are: 1) logical thinking ability, mathematical creative thinking, and mathematical habits of mind of students who were given PBL are better than students who were given conventional learning, based on: (a) students of all; (b) school levels; and (c) Prior Mathematical Ability (PMA); 2) there are no interaction between: (a) the kinds of mathematics learning and school levels; (b) the kind of mathematics learning and PMA, toward the students enhancement of logical thinking ability, mathematical creative thinking ability, and mathematical habits of mind; 3) there are association between: (a) logical thinking ability and mathematical creative thinking ability; (b) logical thinking ability and mathematical habits of mind; (c) creative thinking ability and mathematical habits of mind; 4) student activity during PBL supported toward the students enhancement of logical thinking ability, mathematical creative thinking, and mathematical habits of mind are better than students activity who were given conventional learning.

Keywords: logical thinking ability, mathematical creative thinking, habits of mind, problem-based learning