

## ABSTRAK

### **Isty Yulianti. (1402165). Peningkatan Kemampuan Pemecahan Masalah dan Komunikasi Matematis serta *Self-Efficacy* Siswa SMP Melalui Pendekatan Visualisasi.**

Penelitian ini dilatarbelakangi oleh rendahnya kemampuan pemecahan masalah dan komunikasi matematis serta *self-efficacy* siswa berdasarkan hasil survey dan penelitian terdahulu. Salah satu pendekatan pembelajaran yang dapat diterapkan untuk meningkatkan kemampuan pemecahan masalah matematis (KPMM) dan kemampuan komunikasi matematis (KKM) serta *self-efficacy* matematis (SEM) siswa adalah pendekatan visualisasi. Penelitian ini bertujuan untuk menelaah peningkatan KPMM dan KKM serta pencapaian SEM siswa melalui penerapan pendekatan visualisasi ditinjau dari keseluruhan siswa dan *gender*. Penelitian ini menggunakan metode kuasi eksperimen dengan desain penelitian kelompok kontrol non ekuivalen untuk aspek kognitif, sedangkan desain perbandingan kelompok statik untuk aspek afektif. Penelitian dilakukan terhadap 48 siswa kelas VII SMP negeri di Banjarsari, Kabupaten Ciamis. Instrumen yang digunakan meliputi tes KPMM dan KKM, skala SEM, skala penilaian diri, dan lembar observasi. Analisis data hasil penelitian menggunakan uji-t untuk uji statistik parametrik, sedangkan uji *Mann-Whitney U* untuk uji statistik nonparametrik. Berdasarkan hasil analisis tersebut, diperoleh kesimpulan bahwa peningkatan KPMM dan KKM siswa yang mendapat pembelajaran dengan pendekatan visualisasi (PV) lebih baik daripada siswa yang mendapat pembelajaran ekspositori (PE) ditinjau dari keseluruhan siswa dan *gender*; tidak terdapat perbedaan peningkatan KPMM dan KKM antara siswa laki-laki dan perempuan pada kelas PV, pencapaian SEM siswa pada kelas PV lebih baik daripada siswa kelas PE ditinjau dari keseluruhan siswa dan *gender*; tidak terdapat perbedaan pencapaian SEM antara siswa laki-laki dan perempuan pada kelas PV; dan persepsi siswa terhadap pendekatan visualisasi dalam pembelajaran matematika termasuk kategori baik.

**Kata Kunci:** Pemecahan Masalah Matematis, Komunikasi Matematis, *Self-Efficacy* Matematis, Pendekatan Visualisasi

## ABSTRACT

### **Isty Yulianti. (1402165). The Enhancement of Students' Mathematical Problem Solving and Communication Ability and Students' Self-Efficacy Through Visualization Approach.**

The research was grounded by the the lack of problem solving and communication ability and students' self-efficacy in mathematics based on survey results and previous research. One of learning approach for enhancing mathematical problem solving and communication ability and students' mathematical self-efficacy is visualization approach. This study examines the enhancement of students' mathematical problem solving and communication ability and students' mathematical self-efficacy through the application of visualization approach (PV) viewed from whole students and gender. This study used quasi experiment with non-equivalent control group design for the cognitive ability and static group comparison for the affective ability. This study involved 48 seven-grade students from a junior high school in Banjarsari, Ciamis Regency. Instrument of the study consists of a set of mathematical problem solving and communication ability test, a set of mathematical self-efficacy scale, a set of self-assessment scale, and observation sheet. Data are analyzed by using t-test for parametric test and Mann-Whitney test for the nonparametric test. The results showed that the enhancement of students' mathematical problem solving and communication ability who get PV is better than those who get expository learning (PE) viewed from the whole students and gender; there is no differences enhancements of students' mathematical problem solving and communication ability between boys and girls who get PV; the achievement of students' mathematical self-efficacy who get PV is better than those who get PE viewed from whole students and gender; there is no differences of students' mathematical self-efficacy between boys and girls who get PV, and the students' perceptions of visualization approach in learning mathematics are categorized as good.

**Keywords:** Mathematical Problem Solving, Mathematical Communication, Self-Efficacy, Visualization Approach