

ABSTRAK

Desy Annisa Nugraha. (2017). **Peningkatan Kemampuan Representasi Matematis dan *Self Regulated Learning* Siswa SMA melalui Model Pembelajaran *Problem Based Instruction*.**

Pada proses pembelajaran matematika masih banyak siswa masih sulit merepresentasikan ide atau gagasan matematis yang mereka miliki baik dalam memahami suatu konsep ataupun penyelesaian masalah matematika secara mandiri. Apabila diamati, penyebab rendahnya kemampuan representasi matematis dan *Self Regulated Learning* siswa terletak pada faktor model pembelajaran yang kurang tepat. Oleh karena itu diperlukan suatu model pembelajaran yang bertujuan untuk mengembangkan kemampuan representasi matematis dan *Self Regulated Learning* siswa, salah satunya ialah model pembelajaran *Problem Based Instruction*. Tujuan penelitian ini adalah: 1) Untuk mengetahui peningkatan kemampuan representasi matematis siswa yang memperoleh model pembelajaran *Problem Based Instruction* lebih tinggi daripada siswa yang memperoleh model pembelajaran Konvensional 2) Untuk mengetahui *Self Regulated Learning* siswa yang memperoleh model pembelajaran *Problem Based Instruction* lebih tinggi daripada siswa yang memperoleh model pembelajaran Konvensional. Penelitian ini menggunakan metode eksperimen murni. Desain penelitian yang digunakan adalah *Pretest-Posttest Control Group Design*. Populasi dalam penelitian ini adalah seluruh siswa kelas XI SMA PGRI 2 Bandung. Adapun sampel dari penelitian ini adalah siswa kelas XI MIPA 2 sebagai kelas eksperimen dan siswa kelas XI MIPA 1 sebagai kelas kontrol. Instrumen yang digunakan adalah tes kemampuan representasi matematis dan angket *Self Regulated Learning* siswa. Pengolahan dan analisis data menggunakan *uji two Independent Sample t-Test* dan *uji Mann Whitney* dengan bantuan *software Microsoft Excel* dan *software SPSS 18.0 for windows*. Hasil penelitian menunjukkan bahwa: 1) Peningkatan kemampuan representasi matematis siswa yang memperoleh model pembelajaran *Problem Based Instruction* lebih tinggi daripada siswa yang memperoleh model pembelajaran Konvensional 2) Peningkatan *Self Regulated Learning* siswa yang memperoleh model pembelajaran *Problem Based Instruction* lebih tinggi daripada siswa yang memperoleh model pembelajaran Konvensional. Dengan demikian model *Problem Based Instruction* dapat dijadikan sebagai alternatif bagi guru dalam melaksanakan pembelajaran di kelas.

Kata Kunci: Kemampuan Representasi Matematis, *Self Regulated Learning*, Model Pembelajaran *Problem Based Instruction*.

ABSTRACT

Desy Annisa Nugraha. (2017). **Improved Ability of Mathematical Representation and Self Regulated Learning High School Students Through Problem Based Instruction Model.**

In the process of learning mathematics is still a lot of students are still difficult to represent ideas or mathematical ideas that they have either in understanding a concept or solving math problems independently. If observed, the cause of the low ability of mathematical representation and Self Regulated Learning students lies in the factor of less precise learning model. Therefore we need a learning model that aims to develop the ability of mathematical representation and Self Regulated Learning students, one of which is the model of learning Problem Based Instruction. The purpose of this study is: 1) To know the improvement of mathematical representation ability of students who get the model of Problem Based Instruction is better than the students who get the learning Conventional 2) To know Self Regulated Learning the students who get the model of Problem Based Instruction is better than the students who get the learning Conventional. This research uses pure experiment method. The research design used is Pretest-Posttest Control Group Design. Population in this research is all student of class XI SMA PGII 2 Bandung. The sample of this research is the students of class XI MIPA 2 as the experimental class and the students of class XI MIPA 1 as the control class. The instrument used is a test of mathematical representation ability and self regulated learning questionnaire of students. Processing and data analysis using two Independent Sample t-Test and Mann Whitney test with the help of Microsoft Excel software and software SPSS 18.0 for windows. The results showed that: 1) Improving the ability of mathematical representation of students who obtained the model of Problem Based Instruction is better than students who get the learning Conventional 2) Improving of Self Regulated Learning students who acquired the Problem Based Instruction model of learning is better than the students who acquired the learning Conventional. Thus the model of Problem Based Instruction can be used as an alternative for teachers in implementing learning in the classroom.

Keywords: Ability of Mathematical Representation, Self Regulated Learning Students, Problem Based Instruction.