ABSTRAK

Fannisa Rahmadani, NIM 4172111029 (2024). PENGARUH MODEL *PROBLEM BASED LEARNING* TERHADAP KEMAMPUAN BERPIKIR KRITIS MATEMATIS SISWA SMP.

Penelitian ini bertujuan untuk mengetahui apakah terdapat pengaruh model *problem based learning* terhadap kemampuan berpikir kritis matematis siswa pada siswa kelas VIII MTsN 2 Medan Tahun Ajaran 2023/2024, dengan melihat apakah kemampuan berpikir kritis matematis siswa yang diajarkan dengan model *problem based learning* lebih tinggi dari kemampuan berpikir kritis matematis siswa yang diajarkan dengan model pembelajaran konvensional pada materi bangun ruang sisi datar (kubus dan balok). Penelitian ini menggunakan jenis penelitian eksperimen semu. Populasi peneltian ini adalah seluruh kelas VIII MTsN 2 Medan yang berjumlah 14 kelas. Adapun yang menjadi sampel penelitian ini ialah kelas VIII-2 berjumlah 30 siswa sebagai kelas eksperimen yang diajarkan dengan model problem based learning dan kelas VIII-3 berjumlah 30 siswa yang diajarkan dengan model konvensional. Instrumen tes menggunakan soal *pre-test* dan *post-test* dalam bentuk uraian yang berjumlah 4 soal yang disesuaikan dengan indikator kemampuan berpikir kritis matematis dan sudah divalidasi. Sebelum dilakukan pengujian hipotesis, terlebih dahulu dilakukan uji normalitas data menggunakan uji liliefors dan uji homogenitas data menggunakan uji F. Setelah diberi perlakuan pada kelas *problem based learning* diperoleh nilai rata-rata 90,42 dan kelas konvensional mendapatkan nilai rata-rata 79,82. Dari hasil perhitungan uji-t satu pihak, diperoleh hasil uji hipotesis $t_{hitung} > t_{tabel}$ yaitu 4,5875 $>$ 1,672, maka dapat diambil Kesimpulan H_0 ditolak atau H_a diterima. Dengan demikian terdapat pengaruh model problem based learning terhadap kemampuan berpikir kritis siswa, Dimana kemampuan berpikir kritis matematis siswa yang diajarkan dengan model *problem based learning* lebih tinggi dari kemampuan berpikir kritis matematis siswa yang diajarkan dengan model pembelajaran konvensional pada materi bangun ruang sisi datar (kubus dan balok) pada kelas VIII MTsN 2 Medan Tahun Ajaran 2023/2024.

Kata kunci : Kemampuan Berpikir Kritis Matematis, Model *Problem Based Learning*, Model Pembelajaran Konvensional

ABSTRACT

Fannisa Rahmadani, NIM 4172111029 (2024). THE INFLUENCE OF THE PROBLEM BASED LEARNING MODEL ON THE MATHEMATICAL CRITICAL THINKING ABILITY OF MIDDLE SCHOOL STUDENTS.

This research aims to determine whether there is an influence of the problem based learning model on students' mathematical critical thinking abilities in class VIII MTsN 2 Medan for the 2023/2024 academic year, by seeing whether the mathematical critical thinking abilities of students taught using the problem based learning model are higher than their abilities. Students' critical mathematical thinking is taught using conventional learning models on flat-sided geometric material (cubes and blocks). This research uses a quasi-experimental type of research. The population of this research was all 14 classes of class VIII MTsN 2 Medan. The samples for this research were class VIII-2 with 30 students as an experimental class taught using the problem based learning model and class VIII-3 with 30 students taught using the conventional model. The test instrument uses pre-test and post-test questions in the form of descriptions totaling 4 questions which are adapted to indicators of mathematical critical thinking abilities and have been validated. Before testing the hypothesis, a data normality test was first carried out using the Liliefors test and a data homogeneity test using the F test. After being treated in the problem based learning class, an average score of 90,42 was obtained and the conventional class received an average score of 79,82. From the results of one party t-test calculations, the results of the hypothesis test $t_{count} > t_{table}$ are 4,5875 > 1,672, so it can be concluded that H_0 is rejected or H_a is accepted. Thus, there is an influence of the problem based learning model on students' critical thinking abilities, where the mathematical critical thinking abilities of students taught using the problem based learning model are higher than the mathematical critical thinking abilities of students taught using conventional learning models on flat-sided geometric material (cubes and beam) in class VIII MTsN 2 Medan for the 2023/2024 academic year.

Keywords: Mathematical Critical Thinking Ability, Problem Based Learning Model, Conventional Learning Model