

ABSTRAK

Aida Fitri Harun Pakpahan, 8236171008 (2025). Pengaruh Model Pembelajaran *Problem Based Learning* Terhadap Kemampuan Komunikasi Matematis dan Motivasi Belajar Peserta Didik Kelas VIII MTs Negeri 2 Medan

Tujuan penelitian ini untuk mengetahui: (1) Apakah terdapat pengaruh model pembelajaran *Problem Based Learning* terhadap kemampuan komunikasi matematis peserta didik. (2) Apakah terdapat interaksi antara model pembelajaran *Problem Based Learning* dan kemampuan awal matematika (KAM) peserta didik terhadap kemampuan komunikasi matematis peserta didik. (3) Apakah terdapat pengaruh model pembelajaran *Problem Based Learning* terhadap motivasi belajar peserta didik. (4) Apakah terdapat interaksi antara model pembelajaran *Problem Based Learning* dan kemampuan awal matematika (KAM) peserta didik terhadap motivasi belajar peserta didik. Jenis penelitian ini adalah eksperimen semu. Populasi dalam penelitian ini adalah seluruh peserta didik MTs Negeri 2 Medan. Kemudian secara acak dipilih dua kelas, kelas VIII-D (30 peserta didik) dan kelas VIII-E (30 peserta didik). Kelas eksperimen diberi perlakuan model pembelajaran *Problem Based Learning* dan kelas kontrol diberi perlakuan pembelajaran biasa. Instrumen yang digunakan terdiri dari: (1) tes kemampuan komunikasi matematis, dan (2) angket motivasi belajar peserta didik. Instrumen tersebut dinyatakan telah memenuhi syarat validitas, serta koefisien reliabilitas untuk kemampuan komunikasi matematis dan angket motivasi belajar. Analisis data dilakukan dengan ANAVA 2 jalur. Hasil penelitian menunjukkan bahwa (1) Terdapat pengaruh model pembelajaran *Problem Based Learning* terhadap kemampuan komunikasi matematis peserta didik. (2) Terdapat interaksi antara model pembelajaran dan kemampuan awal matematika terhadap kemampuan komunikasi matematis peserta didik. (3) Terdapat pengaruh model pembelajaran *Problem Based Learning* terhadap motivasi belajar peserta didik. (4) Terdapat interaksi antara model pembelajaran dan kemampuan awal matematika terhadap motivasi belajar peserta didik.

Kata Kunci: *Problem Based Learning*, kemampuan Komunikasi Matematis, Motivasi Belajar

ABSTRACT

Aida Fitri Harun Pakpahan, 8236171008 (2025). The Effect of the Problem-Based Learning Model on Mathematical Communication Skills and Learning Motivation of Eighth-Grade Students at MTs Negeri 2 Medan

The purpose of this study is to determine: (1) Whether there is an effect of the Problem-Based Learning model on students' mathematical communication skills. (2) Whether there is an interaction between the Problem-Based Learning model and students' initial mathematical ability (KAM) on their mathematical communication skills. (3) Whether there is an effect of the Problem-Based Learning model on students' learning motivation. (4) Whether there is an interaction between the Problem-Based Learning model and students' initial mathematical ability (KAM) on their learning motivation. This study is a quasi-experimental design. The population in this study was all students at MTs Negeri 2 Medan. Then, two classes were randomly selected, class VIII-D (30 students) and class VIII-E (30 students). The experimental class was given the Problem-Based Learning model treatment, and the control class was given the usual learning treatment. The instruments used consisted of: (1) a mathematical communication ability test, and (2) a student learning motivation questionnaire. These instruments were found to meet validity requirements, as well as reliability coefficients for mathematical communication ability and the learning motivation questionnaire. Data analysis was conducted using a two-way ANOVA. The results of the study indicate that (1) There is an effect of the Problem-Based Learning model on students' mathematical communication ability. (2) There is an interaction between the learning model and initial mathematical ability on students' mathematical communication skills. (3) There is an effect of the Problem-Based Learning model on students' learning motivation. (4) There is an interaction between the learning model and initial mathematical ability on students' learning motivation.

Keywords: Problem-Based Learning, mathematical communication skills, learning motivation