ABSTRAK

Adelina Natalia Lubis, NIM 4182111001 (2022). Penerapan *Problem-Based Learning* berbantuan Edmodo untuk Meningkatkan Kemampuan Komunikasi Matematis Siswa Kelas XI di SMA Negeri 11 Medan T.A. 2022/2023.

Penelitian ini bertujuan untuk mengetahui: (1) tindakan apa saja yang dilakukan untuk meningkatkan kemampuan komunikasi matematis siswa melalui penerapan model pembelajaran *Problem-Based Learning* berbantuan Edmodo; (2) peningkatan kemampuan komunikasi matematis siswa setelah diterapkan model pembelajaran *Problem-Based Learning* berbantuan Edmodo; di kelas XI IPA-2 SMA Negeri 11 Medan T.A. 2022/2023. Penelitian ini merupakan Penelitian Tindakan Kelas (PTK) atau *Classroom Action Research* (CAR) yang dilaksanakan dalam dua siklus. Data dikumpulkan melalui tes kemampuan komunikasi matematis siswa di akhir setiap siklus dan lembar pengamatan terhadap kegiatan guru dan siswa. Hasil penelitian menunjukkan bahwa: (1) Tindakan yang dilakukan sehingga dapat meningkatkan kemampuan komunikasi matematis siswa, yaitu menerapkan pembelajaran dengan melaksanakan kelima tahapan *problem-based learning* yang dikombinasikan dengan penugasan diskusi kelompok di Edmodo, yang dikembangkan dengan menambah tindakan, yaitu memperbaiki langkah-langkah komunikasi matematis yang dimunculkan pada LKPD, pengaturan ulang posisi duduk siswa yang kurang aktif berdiskusi, menegaskan kegiatan diskusi yang ideal/partisipatif, memfasilitasi siswa bahan bacaan tambahan dari internet, membahas kesulitan siswa pada indikator penjelasan matematika di depan kelas, memperbanyak sesi tanya jawab dan memberikan penghargaan secara langsung kepada siswa yang mengajukan pendapat ataupun merespon pertanyaan, serta memotivasi siswa dengan menegaskan manfaat berdiskusi di Edmodo dan kemudahan berdiskusi yang disediakan melalui fitur-fiturnya; (2) Peningkatan kemampuan komunikasi matematis siswa setelah diterapkannya tindakan tergolong pada peningkatan kriteria sedang dengan nilai rata-rata *N-gain* 0,62. Ketuntasan klasikal kemampuan komunikasi matematis siswa pada siklus I adalah 18 orang siswa (60%) dengan nilai rata-rata 67,22 dan meningkat setelah diterapkannya tindakan siklus II menjadi 26 orang siswa (86,7%) dengan nilai rata-rata 78,75.

Kata kunci: *problem-based learning*, kemampuan komunikasi matematis, Edmodo.

ABSTRACT

Adelina Natalia Lubis, NIM 4182111001 (2022). The Application of Problem-Based Learning assisted by Edmodo to Improve Mathematical Communication Ability of Class XI Students at SMA Negeri 11 Medan in the academic year of 2022/2023.

This study aims to determine: (1) what actions are taken to improve students' mathematical communication skills through the application of Problem-Based Learning model assisted by Edmodo; (2) the improvement of students' mathematical communication skills after applying the Problem-Based Learning model assisted by Edmodo; in class XI IPA-2 SMA Negeri 11 Medan in the academic year of 2022/2023. This research is a Classroom Action Research (CAR) which is carried out in two cycles. Data were collected through tests of students' mathematical communication skills at the end of each cycle and observation sheets on teacher and student activities. The results showed that: (1) The actions taken so as to improve students' mathematical communication skills, namely applying learning by carrying out the five stages of problem-based learning combined with group discussion assignments in Edmodo, which were developed by adding actions, namely improve the mathematical communication steps that appear on the LKPD, rearrange the sitting position of students who are less active in discussing, emphasize ideal/participatory discussion activities, facilitate students with additional reading materials from the internet, discuss student difficulties on mathematical explanation indicators in front of the class, multiply sessions question & answer, and give awards directly to students who give opinions or respond to questions, as well as motivate students by emphasizing the benefits of discussing in Edmodo and the ease of discussion provided through its features; (2) The improvement of students' mathematical communication skills after applying the actions is classified as an increase in the medium criteria with an average N-gain value of 0,62. The classical mastery of students' mathematical communication skills in the first cycle was 18 students (60%) with an average value of 67,22 and increased after the implementation of the second cycle of actions to 26 students (86,7%) with an average value of 78,75.

Keywords: problem-based learning, mathematical communication skills, Edmodo.