ABSTRACT

Iis Wasiatul Fitria, Student ID. 1202050059. Enhancing Students' Mathematical Problem-Solving Ability and Disposition through Skimming, Mind Mapping, Questioning, Exploring, Writing, Communicating (SIMAS ERIC) Learning Assisted by Geogebra.

The background of this research is based on preliminary findings indicating the need to improve the problem-solving ability and mathematical disposition of students at SMA Mekar Arum. This study aims to: (1) understand the implementation of the SIMAS ERIC learning process in teaching algebraic function derivatives; (2) identify the difference in the improvement of students' mathematical problem-solving abilities between those using SIMAS ERIC learning and conventional learning; (3) determine the difference in the achievement of mathematical problem-solving abilities between students using SIMAS ERIC learning and those using conventional learning; and (4) explore the mathematical disposition of students who received the SIMAS ERIC learning model assisted by the Geogebra application. This study utilized a quantitative approach with a quasi-experimental method and the Nonequivalent Pre-Test Post-Test Control Group Design. The sample consisted of 24 students in the experimental class (XI MIPA 3) and 24 students in the control class (XI MIPA 2), selected using simple random sampling. The results show that: (1) the implementation of teacher and student activities in SIMAS ERIC learning is categorized as very good; (2) there is a difference in the improvement of mathematical problem-solving abilities between students using SIMAS ERIC learning and those using conventional learning; (3) there is a difference in the achievement of mathematical problem-solving abilities between students using SIMAS ERIC learning and those using conventional learning; and (4) students' mathematical dispositions generally exhibit positive attitudes after using the SIMAS ERIC learning model assisted by the Geogebra application.

Keywords: Mathematical problem-solving ability, mathematical disposition, SIMAS ERIC, Geogebra

ABSTRAK

Iis Wasiatul Fitria, NIM. 1202050059. Peningkatan Kemampuan Pemecahan Masalah dan Disposisi Matematis Siswa Melalui Pembelajaran *Skimming, Mind Mapping, Questioning, Eksploring, Writing, Communicating (SIMAS ERIC)* Berbantuan *Geogebra*.

Latar belakang penelitian ini didasarkan pada hasil riset pendahuluan yang menunjukkan bahwa perlu adanya peningkatan kemampuan pemecahan masalah dan disposisi matematis peserta didik di SMA Mekar Arum. Penelitian ini bertujuan untuk (1) mengetahui keterlaksanaan proses pembelajaran *SIMAS ERIC* pada materi turunan fungsi aljabar; (2) mengetahui perbedaan peningkatan kemampuan pemecahan masalah matematis antara peserta didik yang menggunakan pembelajaran *SIMAS ERIC* dengan pembelajaran konvensional; (3) mengetahui perbedaan pencapaian kemampuan kemampuan pemecahan masalah matematis antara peserta didik yang menggunakan pembelajaran *SIMAS ERIC* dengan pembelajaran konvensional; serta (4) mengetahui bagaimana disposisi matematis peserta didik yang memperoleh model pembelajaran *SIMAS ERIC* berbantuan Aplikasi *Geogebra*. Penelitian ini menggunakan pendekatan kuantitatif dengan metode kuasi eksperimen dan desain penelitian *The Nonequivalent Pre-Test PostTest Control Group Design*. Sampel terdiri dari 24 peserta didik kelas eksperimen (XI MIPA 3) dan 24 peserta didik kelas kontrol (XI MIPA 2), dipilih menggunakan teknik *simple random sampling*. Hasil penelitian menunjukkan bahwa: (1) keterlaksanaan aktivitas guru dan peserta didik dalam pembelajaran *SIMAS ERIC* dikategorikan sangat baik; (2) terdapat perbedaan peningkatan kemampuan pemecahan masalah matematis antara peserta didik yang menggunakan pembelajaran *SIMAS ERIC* dengan pembelajaran konvensional; (3) terdapat perbedaan pencapaian pemecahan masalah matematis antara peserta didik yang menggunakan pembelajaran *SIMAS ERIC* dengan pembelajaran konvensional; serta (4) disposisi matematis peserta didik umumnya memberikan sikap positif setelah menggunakan model pembelajaran *SIMAS ERIC* berbantuan Aplikasi *Geogebra*.

Kata Kunci: Kemampuan pemecahan masalah matematis, disposisi matematis, *SIMAS ERIC, Geogebra*