ABSTRAK

Fahla Wulan Fauzia.N, 1212050054, 2025, "Penerapan Model FERA *(Focus, Explore, Reflect, and Apply)* Berbantuan Platform *Mathigon* untuk Meningkatkan Kemampuan Penalaran Matematika dan *Self-Confidence* "

Penelitian ini dilatabelakangi oleh perlunya peningkatan kemampuan penalaran matematika siswa yang didukung dari hasil studi pendahuluan di SMPN 3 Rancakalong. Model FERA *(Focus, Explore, Reflect, and Apply)* berbantuan platform *Mathigon* menjadi alternatif agar siswa merasa nyaman dalam pembelajaran matematika dan menumbuhkan rasa percaya diri yang ada dalam salah satu indikator *self-confidence.* Tujuan penelitian ini adalah: (a). Untuk mengetahui sintak pembelajaran matematika yang menerapkan model FERA berbantuan platform *Mathigon,* (b). Untuk mengetahui peningkatan kemampuan penalaran matematika pada siswa dengan menerapkan model FERA berbantuan platform *Mathigon* lebih baik daripada siswa yang mengimplementasikan pembelajaran konvensional, (c). Untuk mengetahui peningkatan *self-confidence* pada siswa dengan menerapkan model FERA berbantuan platform *Mathigon* lebih baik daripada siswa yang mengimplementasikan pembelajaran konvensional. Metode penelitian ini menggunakan metode kuasi eksperimen. Hasil penelitian ini yaitu: (a). Sintaks pembelajaran matematika kelas dengan Model FERA berbantuan platform *Mathigon* memperoleh presentase dengan kategori baik, (b). Peningkatan kemampuan penalaran matematika antara siswa yang menerapkan model FERA berbantuan platform *Mathigon* lebih baik daripada siswa yang menerapkan pembelajaran konvensional, (c). Peningkatan *self-confidence* antara siswa yang menerapkan model FERA berbantuan platform *Mathigon* tidak lebih baik secara signifikan daripada siswa yang menerapkan pembelajaran konvensional.

Kata kunci: FERA, *Mathigon*, Penalaran Matematika, *Self-Confidence*

ABSTRACT

Fahla Wulan Fauzia.N, 1212050054, 2025, "*The Implementation of the FERA (Focus, Explore, Reflect, and Apply) Model Assisted by the Mathigon Platform to Improve Mathematical Reasoning Ability and Self-Confidence* "

This research is motivated by the need to improve students' mathematical reasoning abilities, as identified through a preliminary study conducted at State Junior High School 3 Rancakalong. The FERA (Focus, Explore, Reflect, and Apply) model assisted by the Mathigon platform is considered an alternative approach to make students feel more comfortable in learning mathematics and to foster self-confidence, one of the key indicators of personal growth. The objectives of this study are: (a) to examine the learning syntax of mathematics instruction that applies the FERA model assisted by the Mathigon platform; (b) to determine whether the improvement in students' mathematical reasoning ability using the FERA model assisted by Mathigon is better than that of students taught through conventional methods; and (c) to determine whether the improvement in students' self-confidence using the FERA model assisted by Mathigon is better than that of students taught through conventional methods. This study employed a quasi-experimental method. The findings of the study are: (a) the learning syntax of mathematics classes using the FERA model assisted by Mathigon received a high percentage in the good category; (b) the improvement in mathematical reasoning ability among students who used the FERA model assisted by Mathigon was better than those who received conventional instruction; and (c) the improvement in self-confidence among students who used the FERA model assisted by Mathigon was not significantly better than those who received conventional instruction.

Keywords: *FERA, Mathematical Reasoning, Mathigon, Self-Confidence*