

ABSTRAK

Siti Syahla NS, 1222050152, 2026 “Penerapan Model *Focus, Explore, Reflect, And Apply* (FERA) Berbantuan Aplikasi *Baamboozle* Untuk Meningkatkan Representasi Matematis dan *Self Regulated Learning* Siswa”

Penelitian ini dilatarbelakangi oleh kemampuan representasi matematis siswa yang masih perlu ditingkatkan serta pentingnya *self regulated learning* dalam pembelajaran matematika. Penelitian bertujuan untuk mengetahui keterlaksanaan pembelajaran menggunakan model *Focus, Explore, Reflect and Apply* (FERA) berbantuan aplikasi *Baamboozle*, peningkatan kemampuan representasi matematis siswa lebih baik dibandingkan pembelajaran konvensional, serta bagaimana *self regulated learning* siswa terhadap model FERA berbantuan aplikasi *Baamboozle*. Metode yang digunakan adalah kuasi eksperimen dengan desain *Nonequivalent Control Group Design*. Sampel ditentukan menggunakan teknik *purposive sampling*, yaitu kelas X-2 sebagai kelas eksperimen dan kelas X-1 sebagai kelas kontrol yang masing-masing berjumlah 30 siswa. Data dikumpulkan melalui tes kemampuan representasi matematis, angket *self regulated learning*, dan lembar observasi, kemudian dianalisis menggunakan N_{gain} , uji normalitas, uji homogenitas, dan *independent samples t-test*. Hasil menunjukkan rata-rata keterlaksanaan pembelajaran oleh guru sebesar 90,93% dan aktivitas siswa sebesar 87,50% dengan kategori sangat baik. Rata-rata N_{gain} kelas eksperimen sebesar 0,756 lebih tinggi dibandingkan kelas kontrol sebesar 0,556. Hasil uji *independent samples t-test* menunjukkan perbedaan peningkatan kemampuan representasi matematis yang signifikan $t(58) = 4,95; p < 0,001$ dengan (*Cohen's d*) sebesar 1,278 (efek besar), yang menunjukkan bahwa penerapan model FERA berbantuan aplikasi *Baamboozle* dapat meningkatkan kemampuan representasi matematis yang lebih baik dibandingkan pembelajaran konvensional. Selain itu, *self regulated learning* siswa memperoleh skor rata-rata 3,48 dengan kategori baik, yang menunjukkan bahwa siswa memiliki kemampuan mengelola proses belajarnya secara mandiri dengan baik.

Kata Kunci: *Focus, Explore, Reflect and Apply* (FERA), *Baamboozle*, Kemampuan Representasi Matematis, *Self Regulated Learning*.

ABSTRACT

Siti Syahla NS, 1222050152, 2026 "Implementation of the Focus, Explore, Reflect, and Apply (FERA) Model Assisted by the Baamboozle Application to Improve Students' Mathematical Representation and Self Regulated Learning"

This study was motivated by the need to improve students' mathematical representation ability and the importance of self-regulated learning in mathematics learning. It aimed to examine the implementation of the FERA learning model assisted by the Baamboozle application, determine whether students' mathematical representation ability improved better than through conventional learning, and describe students' self-regulated learning in the implementation of the FERA learning model. This study employed a quasi-experimental method with a Nonequivalent Control Group Design. The research was conducted at a senior high school in Sukabumi using purposive sampling, involving 30 students in the experimental class X-) and 30 students in the control class X-1. The study was conducted on the Statistics topic over three meetings. Data were collected using a mathematical representation test, a self-regulated learning questionnaire, and observation sheets, and analyzed using the N_{gain} test, normality test, homogeneity test, and an independent-samples t-test. The results of the independent samples t-test showed a significant difference in the improvement of mathematical representation skills ($t(58) = 4.95$; $p < 0.001$) with a Cohen's d of 1.278 (large effect), indicating that the implementation of the FERA model aided by the Baamboozle app resulted in a greater improvement in mathematical representation skills compared to conventional learning. In addition, students' self-regulated learning scored an average of 3.48, falling into the "good" category, indicating that students are capable of effectively managing their own learning processes.

Keywords: *Focus, Explore, Reflect, and Apply (FERA), Baamboozle, Mathematical Representation Ability, Self Regulated Learning.*