

ABSTRAK

Siti Nursifa Rahmawati, "Penerapan Model Pembelajaran CORE Berbantuan Aplikasi Desmos untuk Meningkatkan Kemampuan Koneksi Matematis dan *Self-Efficacy* Siswa"

Penelitian ini dilatarbelakangi oleh rendahnya kemampuan koneksi matematis dan *self-efficacy* siswa akibat pembelajaran matematika yang masih berfokus pada prosedur dan belum optimal dalam mengaitkan konsep secara bermakna. Salah satu upaya yang dapat dilakukan adalah penerapan model pembelajaran *Connecting, Organizing, Reflecting, Extending* (CORE) berbantuan aplikasi Desmos. Penelitian ini bertujuan untuk mengetahui peningkatan kemampuan koneksi matematis dan *self-efficacy* siswa berdasarkan model pembelajaran serta mengetahui pengaruh *self-efficacy* dan interaksi antara model pembelajaran dengan *self-efficacy* terhadap kemampuan koneksi matematis siswa. Metode penelitian yang digunakan adalah quasi experiment dengan desain *Non-Equivalent Control Group Design*. Populasi penelitian adalah seluruh siswa kelas VIII di salah satu SMP Negeri di Kabupaten Garut. Sampel penelitian terdiri atas tiga kelas, yaitu kelas VIII A sebagai eksperimen 1 (CORE berbantuan Desmos), VIII B sebagai eksperimen 2 (CORE tanpa Desmos), dan VIII D sebagai kelas kontrol (pembelajaran konvensional). Data dikumpulkan melalui *pretest*, *posttest*, dan angket *self-efficacy*, kemudian dianalisis menggunakan uji parametrik dan nonparametrik. Hasil penelitian menunjukkan adanya perbedaan peningkatan kemampuan koneksi matematis antar kelompok, tetapi tidak terdapat perbedaan signifikan antara CORE berbantuan Desmos dan CORE tanpa Desmos. *Self-efficacy* berpengaruh terhadap kemampuan koneksi matematis, namun tidak terdapat interaksi antara model pembelajaran dan *self-efficacy*.

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Kata kunci: Desmos, Kemampuan Koneksi Matematis, Model CORE, Pembelajaran Matematika, *Self-efficacy*

ABSTRACT

Siti Nursifa Rahmawati, "Implementation of the CORE Learning Model Assisted by Desmos Application to Improve Students' Mathematical Connection Skills and Self-Efficacy"

This study was motivated by the low level of students' mathematical connection skills and self-efficacy due to mathematics learning that still focuses on procedures and has not optimally facilitated meaningful connections among concepts. One effort to address this issue is the implementation of the Connecting, Organizing, Reflecting, Extending (CORE) learning model assisted by the Desmos application. This study aimed to examine the improvement of students' mathematical connection skills and self-efficacy based on the learning model, as well as to determine the effect of self-efficacy and the interaction between the learning model and self-efficacy on students' mathematical connection skills. The research employed a quasi-experimental method with a Non-Equivalent Control Group Design. The population consisted of all eighth-grade students at one of the public junior high schools in Garut Regency. The sample comprised three classes: Class VIII A as Experimental Group 1 (CORE assisted by Desmos), Class VIII B as Experimental Group 2 (CORE without Desmos), and Class VIII D as the Control Group (conventional learning). Data were collected through pretests, posttests, and self-efficacy questionnaires, then analyzed using parametric and nonparametric tests. The results showed differences in the improvement of students' mathematical connection skills among the groups; however, there was no significant difference between the CORE model assisted by Desmos and the CORE model without Desmos. Self-efficacy had an effect on mathematical connection skills, but there was no interaction between the learning model and self-efficacy.

Keywords: CORE Learning Model, Desmos, Mathematical Connection Skills, Mathematics Learning, Self-Efficacy.