

ABSTRAK

Diaz Munzia, 1212050045, 2025, “Pendekatan *Heutagogy (Self-Determined Learning)* Dengan Berbantuan *Desmos* untuk Meningkatkan Kemampuan Pemahaman Konsep Matematis dan *Self-Efficacy* Peserta Didik”

Kemampuan pemahaman konsep matematis dan *self-efficacy* merupakan aspek penting yang harus dimiliki peserta didik dalam pembelajaran matematika, namun kenyataan di lapangan serta hasil studi pendahuluan menunjukkan bahwa kedua aspek tersebut masih tergolong rendah. Tujuan dari penelitian ini untuk mengetahui: keterlaksanaan proses pembelajaran, peningkatan kemampuan pemahaman konsep matematis peserta didik yang memperoleh pembelajaran dengan pendekatan *Heutagogy (Self-Determined Learning)* berbantuan *Desmos* lebih baik daripada peserta didik yang memperoleh pembelajaran konvensional, dan *Self efficacy* peserta didik yang memperoleh pembelajaran dengan pendekatan *Heutagogy (Self-Determined Learning)* berbantuan *desmos*. Penelitian ini menggunakan metode kuasi eksperimen dengan desain *The Nonequivalent Control Group Design*. Populasi penelitian mencakup seluruh peserta didik kelas X pada salah satu sekolah di Kabupaten Garut tahun ajaran 2024/2025 sebanyak sembilan kelas. Sampel penelitian adalah dua kelas yang dipilih melalui metode *purposive sampling*. Instrumen yang digunakan meliputi tes kemampuan pemahaman konsep matematis yang memiliki validitas dan realibilitas tinggi, lembar observasi aktivitas pendidik dan peserta didik, serta angket *self efficacy* yang telah divalidasi oleh para ahli. Data dianalisis menggunakan uji-T dan uji statistik deskriptif. Hasil dari penelitian ini yaitu: keterlaksanaan kegiatan pembelajaran dikategorikan sangat baik, peningkatan kemampuan pemahaman konsep matematis peserta didik yang memperoleh pembelajaran dengan pendekatan *Heutagogy (Self-Determined Learning)* berbantuan *desmos* lebih baik daripada peserta didik yang memperoleh pembelajaran konvensional, dan *Self efficacy* peserta didik yang memperoleh pembelajaran dengan pendekatan *Heutagogy (Self-Determined Learning)* berbantuan *desmos* menunjukkan kategori respon positif. Temuan ini mengindikasikan bahwa pendekatan *Heutagogy (Self-Determined Learning)* berbantuan *desmos* efektif dalam meningkatkan kemampuan pemahaman konsep matematis peserta didik dan berpotensi menjadi alternatif strategi pembelajaran dalam mata pelajaran matematika.

Kata kunci: *Desmos*, Kemampuan Pemahaman Konsep Matematis, Pendekatan *Heutagogy (Self-Determined Learning)*, *Self Efficacy*

ABSTRACT

Diaz Munzia, 1212050045, 2025, “Heutagogy (Self-Determined Learning) Approach Assisted by Desmos to Improve Students’ Mathematical Conceptual Understanding and Self-Efficacy”

The ability to understand mathematical concepts and self-efficacy are important aspects that students must have in learning mathematics, but the reality in the field and the results of preliminary studies show that both aspects are still relatively low. The purpose of this study was to determine: the implementation of the learning process, the improvement of the ability to understand mathematical concepts of students who received learning with the Heutagogy (Self-Determined Learning) approach assisted by Desmos is better than students who received conventional learning, and the self-efficacy of students who received learning with the Heutagogy (Self-Determined Learning) approach assisted by Desmos. This study used a quasi-experimental method with the Nonequivalent Control Group Design. The study population included all grade X students at one of the schools in Garut Regency in the 2024/2025 academic year totaling nine classes. The research sample was two classes selected through a purposive sampling method. The instruments used include a mathematical concept comprehension test that has high validity and reliability, observation sheets for educators and students' activities, and a self-efficacy questionnaire that has been validated by experts. Data were analyzed using T-tests and descriptive statistical tests. The results of this study are: the implementation of learning activities is categorized as very good, the increase in the ability to understand mathematical concepts of students who received learning with the Heutagogy (Self-Determined Learning) approach assisted by Desmos is better than students who received conventional learning, and the students' self-efficacy shows a positive response category. These findings indicate that the Heutagogy (Self-Determined Learning) approach assisted by Desmos is effective in improving students' ability to understand mathematical concepts and has the potential to be an alternative learning strategy in mathematics subjects.

Keywords: Desmos, Mathematical Conceptual Understanding, Heutagogy (Self-Determined Learning) Approach, Self-Efficacy