

ABSTRAK

JESSICA DEBORA SIMBOLON. Pengembangan *Macromedia Flash* Dalam Pembelajaran Matematika Berbasis Model *Discovery Learning* Untuk Meningkatkan Kemampuan Metakognisi Dan Kemampuan Pemecahan Masalah Matematis Siswa. Tesis. Medan: Program Studi Pendidikan Matematika Pascasarjana Universitas Negeri Medan, 2023.

Penelitian ini bertujuan untuk: 1) Mendeskripsikan kevalidan *macromedia flash* berbasis model *discovery learning* yang dikembangkan; 2) Menganalisis peningkatan kemampuan metakognisi dan kemampuan pemecahan masalah matematis siswa setelah menggunakan *macromedia flash* berbasis model *discovery learning*; 3) Mendeskripsikan kepraktisan *macromedia flash* berbasis model *discovery learning* yang dikembangkan; 4) Mendeskripsikan keefektifan *macromedia flash* berbasis model *discovery learning* yang dikembangkan. Penelitian ini merupakan penelitian pengembangan dengan menggunakan model pengembangan ADDIE. Populasi dalam penelitian ini adalah siswa SMA Negeri 5 Medan dengan sampel adalah siswa X MIPA 4 dan 9 SMA Negeri 5 Medan. Berdasarkan hasil penelitian diperoleh: 1) *Macromedia Flash* berbasis model *discovery learning* yang dikembangkan telah memenuhi kriteria valid; 2) ditemukannya peningkatan kemampuan metakognisi dan kemampuan pemecahan masalah matematis siswa setelah menggunakan *macromedia flash* berbasis model *discovery learning* dilihat dari nilai N-gain pada uji coba I kategori “rendah” meningkat menjadi kategori “sedang” pada uji coba II; 3) *Macromedia Flash* berbasis model *discovery learning* yang dikembangkan telah memenuhi kriteria praktis; 4) *Macromedia Flash* berbasis model *discovery learning* yang dikembangkan telah memenuhi kriteria efektif.

Kata Kunci: Media Pembelajaran *Macromedia Flash*, Model *Discovery Learning*, Kemampuan Metakognisi, Kemampuan Pemecahan Masalah Matematis



ABSTRACT

JESSICA DEBORA SIMBOLON. Development of Macromedia Flash in Mathematics Learning Based on the Discovery Learning Model to Improve Students' Metacognition and Problem Solving Ability. Thesis. Medan: Postgraduate Mathematics Education Study Program, State University of Medan, 2023.

This study aims to: 1) Describe the validity of macromedia flash based on the developed discovery learning model; 2) Analyzing the increase in metacognition abilities and students' mathematical problem solving abilities after using macromedia flash based on the discovery learning model; 3) Describe the practicality of macromedia flash based on the developed discovery learning model; 4) Describe the effectiveness of macromedia flash based on the developed discovery learning model. This study uses the ADDIE development model. The population in this study were students of SMA Negeri 5 Medan with the sample being students X MIPA 4 and 9 SMA Negeri 5 Medan. The research results show: 1) Macromedia Flash based on the discovery learning model that has been developed meets valid criteria; 2) found an increase in students' metacognition abilities and mathematical problem solving abilities after using macromedia flash based on the discovery learning model seen from the N-gain value in trial I the "low" category increased to the "medium" category in trial II; 3) Macromedia Flash based on the discovery learning model that has been developed meets practical criteria; 4) Macromedia Flash based on the discovery learning model that has been developed meets the criteria of being effective.

Keywords: Learning Media, Macromedia Flash, Discovery Learning Model, Metacognition Ability, Mathematical Problem Solving Ability

