ABSTRAK

ROHMAD ARI WIBOWO. **Pengembangan Model Pembelajaran Berbasis *Discovery Learning* Berbantuan Geogebra Applet Untuk Meningkatkan Kemampuan Berpikir Kreatif Siswa**. Tesis. Medan: Program Studi Pendidikan Matematika Pascasarjana Universitas Negeri Medan, 2022.

Penelitian ini bertujuan untuk: 1) Mendeskripsikan model pembelajaran berbasis *discovery learning* berbantuan geogebra applet yang memenuhi kriteria valid, praktis, dan efektif; 2) Mendeskripsikan peningkatan kemampuan berpikir kreatif dengan menggunakan model pembelajaran berbasis *discovery learning* berbantuan geogebra applet yang dikembangkan. Penelitian ini merupakan penelitian pengembangan yang dilakukan dalam empat tahap. Model pembelajaran yang dihasilkan pada penelitian ini adalah Model Pembelajaran Berbasis *Discovery Learning* Berbantuan Geogebra Applet (PB – DLGA). Sedangkan perangkat yang dihasilkan pada penelitian ini adalah RPP, Modul Digital, dan TKBK (Tes Kemampuan Berpikir Kreatif). Dari hasil uji coba I dan uji coba II diperoleh: 1) Model pembelajaran berbasis *discovery learning* berbantuan geogebra applet yang dikembangkan telah memenuhi kriteria valid, praktis dan efektif ditinjau dari kriteria masing – masing; 2) Terdapat peningkatan kemampuan berpikir kreatif siswa dengan menggunakan model pembelajaran berbasis *discovery learning* berbantuan geogebra applet yang dikembangkan pada uji coba I memperoleh rata – rata nilai preetest 57,12 dan nilai posttest 74,72 dan meningkat pada uji coba II dengan rata – rata nilai preetest 52,6 dan nilai posttest 80,4. Berdasarkan hasil penelitian disarankan agar guru matematika mengupayakan pembelajaran matematika menggunakan model pembelajaran berbasis *discovery learning* berbantuan geogebra applet yang dikembangkan dapat meningkatkan kemampuan berpikir kreatif siswa.

Kata kunci: pengembangan model pembelajaran, model plomp, *discovery learning* berbantuan geogebra applet, kemampuan berpikir kreatif.

ABSTRACT

ROHMAD ARI WIBOWO. Development of Learning Model Based on Discovery Learning Assisted by Geogebra Applets to Improve Students' Creative Thinking Ability. Thesis. Medan: Postgraduate Mathematics Education Study Program, Medan State University, 2022.

This study aims to: 1) describe a learning model based on discovery learning assisted by the geogebra applet that meets the criteria of being valid, practical, and effective; 2) Describe the improvement of creative thinking skills using the discovery learning-based learning model assisted by the geogebra applet that was developed. This research is a development research conducted in four stages. The learning model produced in this research is the Geogebra Applet-Assisted Discovery Learning-Based Learning Model (PB – DLGA). While the tools produced in this research are lesson plans, digital modules, and TKBK (Creative Thinking Ability Test). From the results of the first trial and second trial, it was obtained: 1) The discovery learning-based learning model assisted by the geogebra applet that was developed had met the valid, practical and effective criteria in terms of their respective criteria; 2) There is an increase in students' creative thinking skills using a discovery learning-based learning model with the help of the GeoGebra applet which was developed in the first trial, obtaining an average preetest value of 57.12 and a posttest value of 74.72 and increased in the second trial with an average score of 74.72. preetest 52.6 and posttest score 80.4. Based on the results of the study, it is suggested that mathematics teachers strive to learn mathematics using a discovery learning-based learning model assisted by the geogebra applet which was developed to improve students' creative thinking skills.

Keywords: development of learning model, plomp model, discovery learning assisted by geogebra applet, creative thinking ability