PENGARUH MODEL *FLIPPED CLASSROOM* TERHADAP KEMAMPUAN BERPIKIR TINGKAT TINGGI MATEMATIS: META-ANALISIS

TESIS

Disusun untuk memenuhi sebagian syarat untuk memperoleh gelar Magister Pendidikan Matematika

Oleh

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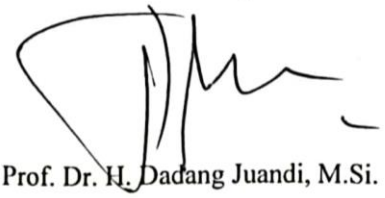

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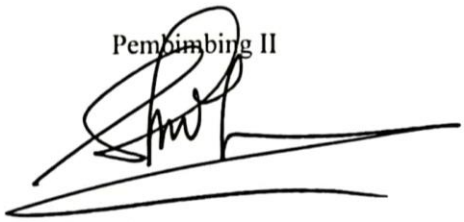

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PERNYATAAN

Dengan ini saya menyatakan bahwa tesis dengan judul "**Pengaruh Penerapan Model *Flipped Classroom* terhadap Kemampuan Berpikir Tingkat Tinggi Matematis: Meta-Analisis**" ini beserta seluruh isinya adalah karya saya sendiri. Saya tidak melakukan penjiplakan atau pengutipan dengan cara-cara yang tidak sesuai dengan etika ilmu yang berlaku. Atas pernyataan ini, saya siap menanggung resiko/sanksi apabila di kemudian hari ditemukan adanya pelanggaran etika keilmuan dan atau ada klaim dari pihak lain terhadap keaslian karya saya ini.

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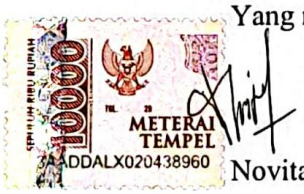

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KATA PENGANTAR

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Bandung, Desember 2023

Penulis,

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ABSTRAK

Novita Fatmiyati, (2023) Pengaruh Model *Flipped Classroom* terhadap Kemampuan Berpikir Tingkat Tinggi Matematis: Meta-Analisis

Abstrak. Banyak studi telah melaporkan pengaruh model *flipped classroom* dalam pembelajaran, khususnya terhadap hasil belajar, kepuasan, serta sikap atau respon siswa dan guru. Namun, hingga saat ini belum terdapat penelitian yang mengkaji pengaruh model *flipped classroom* terhadap kemampuan berpikir tingkat tinggi secara komprehensif dan sistematis. Penelitian meta-analisis ini bertujuan untuk mengetahui besar ukuran efek penerapan model *flipped classroom* terhadap kemampuan berpikir tingkat tinggi matematis siswa. Tahapan meta-analisis yaitu merumuskan masalah, penelusuran literatur, pengkodingan, analisis statistik, serta representasi dan interpretasi hasil. Sampel dalam penelitian ini adalah data sekunder yang terdiri dari penelitian-penelitian primer yang berupa artikel jurnal dan prosiding serta tugas akhir (skripsi/tesis/disertasi). Studi primer tersebut ditelusuri dari enam database yaitu Scopus, Google Scholar, Semantic Scholar, ERIC, Portal Garuda, dan DOAJ. Studi primer dipilih berdasarkan kriteria inklusi elemen PICOS dengan protokol PRISMA *Statements*. Terdapat 30 studi primer yang memenuhi kriteria dan selanjutnya diolah menggunakan *software Comprehensive Meta-Analysis* (CMA) versi 4. Data diekstrak dari semua studi primer dengan instrumen yang terdiri dari lembar koding dan lembar protokol skema koding. Ketiga puluh studi primer tersebut melibatkan 1.043 peserta didik pada kelas eksperimen dan 970 pada kelas kontrol. Berdasarkan olahan *software* CMA, dihasilkan 34 ukuran efek *Hedges's g* dengan ukuran efek gabungan sebesar 1,094. Hasil penelitian ini menunjukkan ukuran efek yang diperoleh berada pada kategori tinggi. Selain itu, tidak terdapat perbedaan pengaruh apabila ditinjau dari karakteristik studi jenjang pendidikan, ukuran sampel kelas *flipped classroom*, tahun studi, jenis media pembelajaran, dan indikator berpikir tingkat tinggi. Hal ini mengindikasikan penerapan model *flipped classroom* dapat diterapkan di jenjang pendidikan manapun, khususnya SMP, SMA, dan perguruan tinggi pada kelas dengan sampel besar maupun kecil dengan bantuan media sosial, media pendidikan, video pembelajaran, dan lain-lain yang dapat meningkatkan kemampuan berpikir tingkat tinggi seperti berpikir kritis, berpikir kreatif, pemecahan masalah, dan penalaran.

Kata Kunci: *Flipped Classroom*, Berpikir Tingkat Tinggi, Meta-analisis

ABSTRACT

Novita Fatmiyati, (2023) The Effect of the Flipped Classroom Model on Mathematical Higher-Order Thinking: A Meta-Analysis

Abstract. Many studies have reported the effect of the flipped classroom model in learning, especially on learning outcomes, satisfaction, and attitudes or responses of students and teachers. However, until now there has been no research that examines the effect of the flipped classroom model on higher-order thinking in a comprehensive and systematic manner. This meta-analysis research aims to determine effect size of the flipped classroom model on students' mathematical higher-order thinking. The stages of the meta-analysis method are formulating the problem, literature search, coding, statistical analysis, and representation and interpretation of results. The sample in this research is secondary data consisting of primary research in the form of journal and proceedings articles as well as final assignments (thesis/dissertation). The primary study was searched from six databases, namely Scopus, Google Scholar, Semantic Scholar, ERIC, Portal Garuda, and DOAJ. Primary studies were selected based on the PICOS element inclusion criteria with the PRISMA Statements protocol. There were 30 primary studies that met the criteria and were further processed using Comprehensive Meta-Analysis (CMA) software version 4. Data was extracted from all primary studies with instrument consisting of a coding sheet and a coding scheme protocol sheet. The thirty primary studies involved 1,043 students in the experimental class and 970 in the control class. Based on the CMA software processing, 34 Hedges' g effect sizes were produced with a pooled effect size of 1.094. The results of this study show that the effect size obtained is in the high category. Apart from that, there are no differences in the effect when viewed from the study characteristics of educational level, sample size of the flipped classroom, year of study, type of learning media, and higher-order thinking indicators. This indicates that the flipped classroom model can be applied at any level of education, especially middle school, high school and college in classes with large or small samples with the help of social media, educational media, learning videos, etc. which can improve higher-order thinking, such as critical thinking, creative thinking, problem solving and reasoning.

Keywords: Flipped Classroom, Mathematical Higher Order Thinking, Meta-Analysis

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