PENCAPAIAN DAN PENINGKATAN KECAKAPAN MATEMATIS DAN KEMANDIRIAN BELAJAR SISWA DALAM *E-LEARNING*

DRAFT DISERTASI

Diajukan untuk Memenuhi Sebagian dari
Persyaratan Memperoleh Gelar Doktor Ilmu Pendidikan
dalam Bidang Pendidikan Matematika

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Pencapaian dan Peningkatan Kecakapan Matematis dan Kemandirian Belajar Siswa Dalam E-learning

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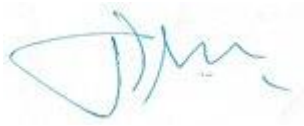

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ABSTRAK

Penelitian ini bertujuan untuk menganalisis pencapaian dan peningkatan kecakapan matematis dan kemandirian belajar siswa SMP yang memperoleh pembelajaran *full e-learning, blended learning,* dan *direct instruction*. Penelitian ini merupakan penelitian kuantitatif dengan desain faktorial 3×3. Populasi dalam penelitian ini adalah siswa SMP kelas VIII tahun akademik 2018/2019 dan sampelnya adalah 91 orang yang terdiri dari 30 orang kelas VIII-I sebagai kelompok eksperimen 1, 31 orang kelas VIII-J sebagai kelompok eksperimen 2, dan 30 orang kelas VIII-H sebagai kelompok kontrol. Instrumen yang digunakan adalah tes untuk mengukur kecakapan matematis, angket disposisi produktif, angket kemandirian belajar matematis, lembar observasi, dan pedoman wawancara. Analisis data yang digunakan adalah uji Anova 2 jalur dilanjutkan uji *Tukey HSD* untuk menguji perbedaan pencapaian dan peningkatan kecakapan matematis dan kemandirian belajar matematis siswa, dan mengetahui pengaruh interaksi model pembelajaran dan KAM terhadap kecakapan matematis dan kemandirian belajar matematis. Hasil yang diperoleh dalam penelitian ini adalah: (1) tidak terdapat perbedaan yang signifikan pencapaian dan peningkatan kecakapan matematis siswa yang memperoleh pembelajaran *full e-learning, blended learning,* dan *direct instruction*; (2) terdapat perbedaan yang signifikan kemandirian belajar matematis siswa yang memperoleh pembelajaran *full e-learning, blended learning,* dan *direct instruction*; (3) terdapat perbedaan kecakapan matematis dan kemandirian belajar antara siswa yang berkemampuan awal tinggi, sedang, dan rendah; (3) terdapat perbedaan kecakapan matematis antara siswa yang berkemampuan awal tinggi, sedang, dan rendah pada siswa yang memperoleh pembelajaran *full e-learning, blended learning,* dan *direct instruction;* (4) tidak terdapat pengaruh interaksi antara model pembelajaran dan kemampuan awal siswa terhadap kecakapan matematis dan kemandirian belajar siswa.

Kata Kunci : *e-learning*, *blended learning*, kecakapan matematis, kemandirian belajar

ABSTRACT

This study aims to analyze the achievement and improvement of mathematical proficiency and mathematical self regulated learning of junior high school students who receive full e-learning, blended learning, and direct instruction. This research is a quasi-experimental with a 3×3 *factorial design. The population in this study were VIII grade junior high schools students in the 2018/2019 academic year and the sample was 91 people consisting of 30 class VIII-I students as experimental group 1, 31 class VIII-J students as experimental group 2, and 30 class VIII-H students as control group. The instruments used were a test to measure mathematical proficiency, a productive disposition questionnaire, a self regulated learning questionnaire, an observation sheet, and an interview guide. The data analysis used was the 2-way ANOVA tes followed by the Tukey HSD test to measure differences in achievement and improvement of mathematical proficiency and self regulated learning mathematics, and to determine the effect of the interaction between learning models and KAM on mathematis proficiency and mathematical self regulated learning. The results obtained in this study are: (1) there is no significant difference in the achievement and improvement of mathematical proficiency of students who receive full e-learning, blended learning, and direct instruction; (2) there is a significant difference in the mathematical*

self regulated learning of students who receive full e-learning, blended learning, and direct instruction; (3) there are differences in mathematical proficiency between students with high, medium, and low initial abilities in students who receive full e-learning, blended learning, and direct instruction; (4) there is no interaction effect between the learning model and students' initial abilities on students' mathematical proficiency and self regulated learning.

Keywords: e-learning, blended learning, mathematical proficiency, self regulated learning

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