

ABSTRAK

Muhammad Nurul Iman, “PENINGKATKAN KEMAMPUAN PEMECAHAN MASALAH DAN KEMANDIRIAN BELAJAR MATEMATIKA SISWA MENGGUNAKAN MODEL PEMBELAJARAN *MINGLE* BERBASIS APLIKASI *QUANTITATIVE METHOD FOR WINDOWS 5*” (Penelitian Kuasi Eksperimen).

Penelitian ini dilatarbelakangi dari hasil studi pendahuluan yang dilakukan di SMA Negeri 1 Klari yang memberikan kesimpulan bahwa masih perlu ditingkatkannya lagi kemampuan pemecahan masalah matematis. Salah satu alternatif untuk menanggulangi permasalahan tersebut yaitu dengan model pembelajaran *Mingle* berbasis aplikasi *Quantitative Method for Windows 5*. Tujuan dari penelitian ini untuk mengetahui: (a) perbedaan peningkatan kemampuan pemecahan masalah matematis siswa; (b) perbedaan pencapaian kemampuan pemecahan masalah matematis siswa ditinjau dari Pengetahuan Awal Matematika (PAM) siswa; (c) peningkatan sikap kemandirian belajar siswa pada penggunaan model *Mingle* berbasis aplikasi *Quantitative Method for Windows 5*. Penelitian ini dilakukan di SMK Mekar Galih kelas X-A dan X-B menggunakan metode kuasi eksperimen. Hasil penelitian sebagai berikut: (a) Peningkatan kemampuan pemecahan masalah matematis siswa dengan pembelajaran model *Mingle* berbasis aplikasi *Quantitative Method for Windows 5* lebih baik daripada model pembelajaran konvensional; (b) Tidak terdapat perbedaan yang signifikan pada PAM kelas model pembelajaran *Mingle* berbasis aplikasi *Quantitative Method for Windows 5* maupun pada kelas konvensional berdasarkan pengujian anova dua jalur; (c) Terdapat peningkatan kemandirian belajar siswa pada penggunaan model *Mingle* berbasis aplikasi *Quantitative Method for Windows 5*. Maka, model *Mingle* berbasis aplikasi *Quantitative Method for Windows 5* mampu meningkatkan kemampuan pemecahan masalah matematis siswa dan kemandirian belajar siswa.

Kata Kunci : Model *Mingle*, Kemampuan Pemecahan Masalah Matematis, Kemandirian Belajar, Aplikasi *Quantitative Method for Windows 5*.

ABSTRACT

Muhammad Nurul Iman, "INCREASING PROBLEM-SOLVING ABILITY AND STUDENT MATHEMATICS LEARNING INDEPENDENCE USING MINGLE LEARNING METHOD BASED ON QUANTITATIVE METHOD FOR WINDOWS 5 APPLICATION" (Quasi Experimental Research).

This research is based on the results of a preliminary study conducted at SMA Negeri 1 Klari which concluded that there is still a need to improve mathematical problem solving abilities. One alternative to overcome these problems is the Mingle learning method based on the Quantitative Method for Windows 5 application. The purpose of this study was to determine: (a) differences in the improvement of students' mathematical problem solving abilities; (b) differences in the achievement of students' mathematical problem solving abilities in terms of students' Pre-Mathematics Knowledge (PAM); (c) increasing students' independent learning attitudes using the Mingle learning based on the Quantitative Method for Windows 5 application. This research was conducted at SMK Mekar Galih class X-A and X-B using a quasi-experimental method. The results of the study are as follows: (a) The improvement of students' mathematical problem solving skills by learning the Mingle learning based on the Quantitative Method for Windows 5 application is better than the conventional learning model; (b) There is no significant difference in the PAM class for the Mingle learning learning based on the Quantitative Method for Windows 5 application and in the conventional class based on the two-way ANOVA test; (c) There is an increase in students' learning independence in the use of the Mingle Learning based on the Quantitative Method for Windows 5 application. Thus, the Mingle learning based on the Quantitative Method for Windows 5 application is able to improve students' mathematical problem solving abilities and student learning independence.

Keywords: *Mingle Learning, Mathematical Problem Solving Ability, Independent Learning, Quantitative Method for Windows 5.*