

ABSTRAK

Fransiscus Dimas Permadi. 2013. Pemanfaatan Program GeoGebra Pada Pokok Bahasan Teorema Pythagoras Di Kelas VIII SMP Pangudi Luhur Gantiwarno Klaten. Program Studi Pendidikan Matematika, Jurusan Pendidikan Matematika dan Ilmu Pengetahuan Alam, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Sanata Dharma.

Penelitian ini bertujuan untuk mengetahui perbedaan hasil belajar siswa serta untuk mengetahui efektivitas pembelajaran dengan program *GeoGebra* pada pokok bahasan Teorema Pythagoras dilihat dari hasil belajar siswa kelas VIII SMP Pangudi Luhur Gantiwarno Klaten tahun pelajaran 2012/2013, metode penelitian yang digunakan adalah metode diskriptif-kualitatif dan kuantitatif. Data dikumpulkan dengan cara observasi langsung melalui pengamatan di kelas dan wawancara dengan guru matematika. Penelitian ini dilakukan pada dua kelas yang memiliki kemampuan akademis hampir sama, yaitu kelas VIIIA dan VIIIB.

Pada kelas VIIIA pembelajaran dilaksanakan dengan menggunakan program *GeoGebra*, sedangkan kelas VIIIB pembelajaran dengan menggunakan pembelajaran konvensional, data penelitian diperoleh dari pengamatan proses belajar mengajar, pemberian materi, tes evaluasi, angket dan wawancara.

Hasil penelitian menunjukkan bahwa ada perbedaan hasil belajar antara dua kelas, ditunjukkan dengan 13 siswa kelas VIIIA yang tuntas KKM dengan persentase ketuntasan sebesar 54,17% serta nilai rata-rata sebesar 72,71. Sedangkan untuk kelas VIIIB sebanyak 7 siswa tuntas KKM dengan persentase ketuntasan sebesar 29,17% serta nilai rata-rata sebesar 61,39. Berdasarkan kriteria efektivitas hasil belajar secara kualitatif, kelas VIII A tergolong dalam kriteria cukup dan kelas VIIIB tergolong dalam kriteria rendah. Dari kedua pembelajaran tersebut dapat disimpulkan bahwa secara numerik dan kriteria efektivitas hasil belajar siswa, pembelajaran menggunakan program lebih baik daripada pembelajaran konvensional.

Kata-kata kunci : Efektivitas, Teorema Pythagoras, hasil belajar, *GeoGebra*.

ABSTRACT

Fransiscus Dimas Permadi. 2013. *The Use of GeoGebra Program on the main subject of Pythagorean Theorem at VIII Grade of Pangudi Luhur Gantiwarno Klaten Junior High school. Mathematics Education Study Program, Department of Mathematics and Natural Science, Faculty of Teachers Training and Education, Sanata Dharma University.*

This research aimed at finding out the effectiveness of learning using *GeoGebra* program compared to conventional learning in Pythagoras Theorem subject observed from the results of Grade VII students of *SMP Pangudi Luhur Gantiwarno Klaten* in 2012/2013 academic year. The methods used in this research were descriptive qualitative and quantitative method. The data was gathered using direct observation by observing the classroom and interview with the Mathematics teacher. This research was conducted in two classes which had the same academic ability, namely class VIIIA and class VIIIB.

In class VIIIA, the learning process was conducted using *GeoGebra* program, meanwhile the learning process in class VIIIB was conducted using conventional learning. The data of the research was from the observation of the teaching learning process, material giving, evaluation test, questionnaire, and interview.

The results showed that there was a difference in the learning results between those two classes. There were 7 students of class VIIIB who passed the Minimum Mastery Criteria (MMC) with the percentage 29.17 % and the average score 61.39. Meanwhile, in class VIIIA, there were 13 students who passed the MMC with the percentage 54.17 % and the average score 72.71. Based on the criteria of qualitative learning result effectiveness, class VIIIA was classified as average and class VIIIB was classified as below average. From those two learning processes, it could be concluded that of numeric and criteria of learning result effectiveness, learning using *GeoGebra* program was better than the conventional learning.

Key words : Effectiveness, Pythagoras Theorem, Learning results, *GeoGebra*.