

## ABSTRAK

Nur Aini, Siti. 2020. *Pengaruh Problem Based Instruction (PBI) Berbantuan Program Geogebra Terhadap Kemampuan Pemecaha Masalah Matematis Siswa*. Skripsi. Program Studi Pendidikan Matematika STKIP PGRI Sidoarjo. Dosen Pembimbing: 1) Eka Nurmala Sari Agustina, S.Pd., M.Pd. 2) Intan Bigita Kusumawati, S.Pd., M.Pd.

*Kata Kunci* : *Problem Based Instruction (PBI), Program Geogebra, Kemampuan Pemecahan Masalah Matematis Siswa.*

*Problem Based Instruction (PBI)* merupakan suatu pembelajaran siswa mengerjakan permasalahan yang autentik dengan maksud untuk menyusun pengetahuan mereka sendiri, mengembangkan inkuiri dan ketrampilan berpikir tingkat lebih tinggi, mengembangkan kemandirian, dan percaya diri. Tujuan penelitian ini untuk mengetahui pengaruh kemampuan pemecahan masalah matematis siswa yang mengikuti pembelajaran menggunakan *Problem Based Instruction (PBI)* berbantuan program *geogebra* yang dilakukan oleh peneliti pada siswa kelas XI AK-1 SMK PGRI 3 Sekardangan. Jenis penelitian ini merupakan penelitian *eksperimen* dengan pendekatan kuantitatif dengan desain perlakuan tunggal (*One-Shot Case Study*). Populasi dalam penelitian ini adalah siswa kelas XI AK-1 SMK PGRI 3 Sekardangan tahun pelajaran 2019/2020, Teknik pengambilan sampel ini peneliti menggunakan teknik *Simple Random Sampling* sampel dilakukan secara acak tanpa memperhatikan strata yang ada pada populasi itu. Sampel dalam penelitian ini yaitu 10 siswa XI jurusan akuntansi. Hasil penelitian menunjukkan bahwa tidak terdapat pengaruh *Problem Based Instruction (PBI)* berbantuan program *geogebra* terhadap kemampuan pemecahan masalah yang ditunjukkan dari nilai  $t_{hitung} = 0,520 < t_{tabel} = 2,306$  dan didukung dengan kondisi probabilitas signifikan sebesar (0,617) yang lebih dari  $\alpha 0,05$ . Selain itu ditunjukkan juga dengan persamaan regresi linearnya yaitu  $\hat{Y} = 34,577 + 0,001X$  yang memperlihatkan bahwa *Problem Based Instruction (PBI)* berbantuan program *geogebra* dilaksanakan kurang baik maka kemampuan pemecahan masalah siswa juga kurang baik. *Problem Based Instruction (PBI)* berbantuan program *geogebra* memiliki kontribusi/pengaruh sebesar 3,3% terhadap kemampuan pemecahan masalah matematis siswa.

## ABSTRACT

Nur Aini, Siti. 2020. The Effect of Problem Based Instruction (PBI) Assisted by Geogebra Program on Students' Mathematical Problem Solving Ability. Essay Mathematics Education Study Program STKIP PGRI Sidoarjo. Supervisor: 1) Eka Nurmala Sari Agustina, S.Pd., M.Pd. 2) Intan Bigita Kusumawati, S.Pd., M.Pd.

*Keywords: Problem Based Instruction (PBI), Geogebra Program, Students' Mathematical Problem Solving Ability.*

Problem Based Instruction (PBI) is a student learning to work on authentic problems with the aim of compiling their own knowledge, developing inquiry and higher-order thinking skills, developing independence, and self-confidence. The purpose of this study was to determine the effect of the mathematical problem solving abilities of students who took learning using Problem Based Instruction (PBI) assisted by the geogebra program carried out by researchers in class XI AK-1 SMK PGRI 3 Sekardangan. This type of research is an experimental research with a quantitative approach with a single treatment design (One-Shot Case Study). The population in this study were students of class XI AK-1 SMK PGRI 3 Sekardangan academic year 2019/2020. The sampling technique used was the simple random sampling technique, the sample was carried out randomly without paying attention to the strata in the population. The sample in this study were 10 XI students majoring in accounting. The results showed that there was no effect of Problem Based Instruction (PBI) assisted by geogebra programs on problem solving abilities as indicated by the value of  $t_{\text{count}} = 0.520 < t_{\text{table}} = 2.306$  and supported by a significant probability condition of (0.617) which was more than  $\alpha 0.05$ . In addition, it is also shown by the linear regression equation, namely  $\hat{Y} = 34.577 + 0.001X$  which shows that the Problem Based Instruction (PBI) assisted by the geogebra program is implemented poorly so the student's problem-solving ability is also not good. Problem Based Instruction (PBI) assisted by the geogebra program has a contribution / influence of 3,3% on students' mathematical problem solving abilities.