

ABSTRAK

Abstract: The background of this research was the importance to enhancing students's spatial ability and mathematical communication skill. This research focused to explain *Learning Based Computer aid with software Geogebra* with using three model of teaching. This research was an experimental study with pretest-posttest as the research of design. The population of this research was all students of grade 11th on SMK Negeri Kota Kuningan-Jawa Barat with three classes samples, the first experiment class taught by *Technologically Aligned Classroom Model*, second experiment class taught by *Technologically-Based Guided Inquiry Model* and third experiment class was taught *Technologically Misaligned Classroom Model* which taken through purposive sampling technique of eighteen parallel class. Instruments used in this research were spatial ability test, mathematical communication tests and Mathematics and Technology Attitude Scale. Data analysis were One Way Anova for spatial ability and mathematical communication tests, and Mathematics and Technology Attitude Scale used modes and percentage of distribution frequency. Research results can be concluded that the improvement of spatial ability of students who were taught by using *Technologically Aligned Classroom model* was better than those of students who were taught by using other teaching model and mathematical communication skill of students who were taught by using *Technologically Misaligned Classroom Model* was better than those of students who were taught by using other teaching model, data analysis also showed positive responses when they were taught by using *Learning Based Computer aid with software Geogebra*.

Keyword: *Spatial Ability, mathematical communication skill, Learning Based Computer, software Geogebra.*

ABSTRAK

Abstrak: Latar belakang penelitian ini adalah pentingnya kemampuan *spatial ability* dan kemampuan komunikasi matematis siswa. Penelitian ini fokus mengkaji pembelajaran berbasis komputer berbantuan *software* GeoGebra dengan menggunakan 3 model pembelajaran yang berbeda. Penelitian ini merupakan penelitian eksperimen dengan desain kelompok kontrol pretes-postes. Populasi penelitian ini adalah siswa kelas XI SMK Kota Kuningan-Jawa Barat dengan sampel penelitian 3 buah kelas eksperimen yang dipilih secara acak kelas dari delapan belas kelas, kelas eksperimen 1 diajar dengan model *Technologically Aligned Classroom Model*, kelas eksperimen 2 diajar dengan model *Technologically-Based Guided Inquiry Model* dan kelas eksperimen 3 diajar dengan model *Technologically Misaligned Classroom Model*. Instrumen yang digunakan berupa tes *spatial ability*, tes kemampuan komunikasi matematis dan skala sikap terhadap matematika dan teknologi. Analisis data kemampuan *spatial ability* dan kemampuan komunikasi matematis menggunakan ANOVA satu jalur, sedangkan skala sikap siswa menggunakan modus dan persentase distribusi frekuensi. Hasil penelitian menunjukkan bahwa peningkatan kemampuan *spatial ability* siswa yang mendapat pembelajaran matematika dengan model TAC (*Technologically Aligned Classroom Model*) lebih baik daripada siswa yang mendapat pembelajaran yang lainnya, kemudian peningkatan kemampuan komunikasi matematis siswa yang mendapat pembelajaran matematika dengan model TMC (*Technologically Misaligned Classroom Model*) lebih baik daripada siswa yang mendapat pembelajaran yang lainnya. Analisis data skala sikap memperlihatkan bahwa siswa menunjukkan respon yang positif terhadap pembelajaran matematika berbasis komputer berbantuan *software* GeoGebra.

Kata Kunci: *Spatial Ability*, Kemampuan Komunikasi Matematis, pembelajaran matematika berbasis komputer, *software* Geogebra.