

## ABSTRACT

Margaretha Indira (1403901). **Improving Spatial Ability of Junior High School Students Through Project Based Learning Assisted by Teaching Aids.**

This research is motivated by the importance of students' spatial abilities and facts that there is a lack of spatial ability among students. The purpose of this study is 1) to know the improvement of students' spatial abilities using project based learning assisted by teaching aids with students who obtained scientific learning, 2) find out students' response to the mathematics learning process by using project based learning assisted by teaching aids, as well as 3) the difficulties experienced by students in describing shapes from three-dimensional space to two-dimensional figure, or vice versa. The method used in this study is quasi experimental with nonequivalent control group design. The population in this study were all eighth grade students in one of the state junior high school in Cimahi, while the samples were two classes of the population. Research data was obtained from spatial ability test and questionnaire tests. The results show that 1) the improvement of students' spatial ability through project based learning assisted by teaching aids was better than students' spatial abilities through learning scientific approaches, 2) students show a positive attitude towards project based learning assisted by teaching aids, and 3) the difficulties experienced by students is the difficulty of understanding the meaning of the question, determining the shape of the two-dimensional figure based on the given three-dimensional space, or vice versa, and determining the right two-dimensional figure or three dimensional.

***Keyword: Project Based Learning, Teaching Aids, Spatial Ability***

**Margaretha Indira, 2018**

**PENINGKATAN KEMAMPUAN SPASIAL SISWA SMP MELALUI PROJECT BASED LEARNING BERBANTUAN ALAT PERAGA**

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Penelitian ini dilatarbelakangi oleh pentingnya kemampuan spasial siswa dan fakta kurangnya kemampuan spasial siswa. Tujuan dari penelitian ini adalah mengetahui 1) peningkatan kemampuan spasial siswa menggunakan pembelajaran *project based learning* berbantuan alat peraga dengan siswa yang memperoleh pembelajaran saintifik, 2) respon siswa terhadap proses pembelajaran matematika dengan menggunakan *project based learning* berbantuan alat peraga, serta 3) kesulitan yang dialami siswa dalam menggambarkan bentuk dari bangun ruang ke bangun datar, maupun sebaliknya. Metode yang digunakan dalam penelitian ini adalah kuasi eksperimen dengan desain *nonequivalent control group design*. Populasi dalam penelitian adalah seluruh siswa kelas VIII di salah satu SMP Negeri di Kota Cimahi, sedangkan sampel dalam penelitian ini adalah dua kelas dari populasi tersebut. Data penelitian diperoleh dari tes kemampuan spasial dan angket. Hasil penelitian menunjukkan bahwa 1) peningkatan kemampuan spasial siswa melalui *project based learning* berbantuan alat peraga lebih tinggi dibandingkan kemampuan spasial siswa melalui pembelajaran pendekatan saintifik, 2) siswa menunjukkan sikap positif terhadap pembelajaran *project based learning* berbantuan alat peraga, dan 3) kesulitan yang dialami siswa adalah kesulitan memahami makna soal, menentukan bentuk bangun datar berdasarkan bangun ruang yang diberikan, maupun sebaliknya, dan menentukan bangun datar atau bangun ruang yang tepat.

***Kata Kunci : Project Based Learning, Alat Peraga, Kemampuan Spasial***

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