

ABSTRAK

Irene Yoseva Sinaga, NIM 4213311017 (2026). Pengaruh Pendekatan *Realistic Mathematics Education* berbantuan *Cabri 3D* untuk Meningkatkan Kemampuan Spasial Siswa SMPN 10 Medan

Penelitian ini bertujuan untuk mendeskripsikan pengaruh pendekatan *realistic mathematics education* terhadap kemampuan spasial siswa dan mendeskripsikan perbedaan ketuntasan klasikal serta besar skor N-Gain kemampuan spasial siswa dengan pendekatan *realistic mathematics education*. Penelitian ini dilaksanakan di SMP Negeri 10 Medan. Adapun populasi dalam penelitian ini yaitu seluruh siswa kelas IX SMP Negeri 10 Medan yang berjumlah 12 kelas. Sampel dalam penelitian ini yaitu kelas IX-G sebagai kelas eksperimen dan IX-F sebagai kelas kontrol yang diambil dengan cara *purposive sampling*. Penelitian ini menggunakan metode eksperimen dengan *pretest-posttest control group design*. Instrumen penelitian berupa tes kemampuan spasial sebelum dan sesudah perlakuan. Analisis data menggunakan uji independent sample t-test, ketuntasan klasikal serta skor N-Gain. Hasil penelitian menunjukkan bahwa nilai posttest siswa kelas eksperimen sebesar 82,97, lebih tinggi dibandingkan kelas kontrol sebesar 76,02, maka tolak H_0 dan terima H_1 sehingga diperoleh bahwa pengaruh pendekatan *Realistic Mathematics Education* berbantuan *cabri 3D* lebih baik dibandingkan pembelajaran konvensional. Ketuntasan klasikal kelas eksperimen mencapai 90,62 % yang termasuk dalam kategori Baik, sedangkan kelas kontrol hanya mencapai 62,5 % termasuk kategori sangat kurang artinya ketuntasan klasikal kemampuan spasial siswa dengan pendekatan *Realistic Mathematics Education* lebih baik dibandingkan pembelajaran konvensional pada siswa SMPN 10 Medan. Skor N-Gain kategori tinggi ($g > 0,7$) sebanyak 14 siswa dan kategori sedang ($0,3 \leq g \leq 0,7$) sebanyak 18 siswa, penerapan pendekatan *Realistic Mathematics Education* berbantuan *Cabri 3D* mampu memberikan peningkatan kemampuan spasial siswa secara efektif, karena seluruh siswa mengalami peningkatan pada kategori sedang hingga tinggi tanpa adanya siswa yang berada pada kategori rendah.

Kata Kunci : Pendekatan *Realistic Mathematics Education*, Kemampuan Spasial, Media Pembelajaran *Cabri 3D*

ABSTRACT

Irene Yoseva Sinaga, NIM 4213311017 (2026). The Effect of the Realistic Mathematics Education Approach Assisted by Cabri 3D on Improving the Spatial Ability of Students at SMP Negeri 10 Medan

This study aims to describe the difference in the effect of the *Realistic Mathematics Education* approach compared to conventional learning on students' spatial ability, as well as to describe the differences in classical mastery and the magnitude of the N-Gain score of students' spatial ability using the *Realistic Mathematics Education* approach compared to conventional learning. This research was conducted at SMP Negeri 10 Medan. The population of this study consisted of all ninth-grade students of SMP Negeri 10 Medan, totaling 12 classes. The sample of this study was class IX-G as the experimental class and class IX-F as the control class. This study employed an experimental method with a pretest–posttest control group design. The research instrument was a spatial ability test administered before and after the treatment. The data were analyzed using the independent samples t-test and the classical mastery formula. The results of the study showed that: (1) the posttest mean score of the experimental class was 82.97, which was higher than the control class score of 76.02; therefore, H_0 was rejected and H_1 was accepted, indicating that the effect of the *Realistic Mathematics Education* approach assisted by Cabri 3D was better than conventional learning; (2) the classical mastery of the experimental class reached 90.62%, categorized as Good, while the control class only reached 62.5%, categorized as Very Poor, indicating that the classical mastery of students' spatial ability using the *Realistic Mathematics Education* approach was better than conventional learning at SMP Negeri 10 Medan; (3) the N-Gain scores showed that 14 students were in the high category ($g > 0.7$) and 18 students were in the medium category ($0.3 \leq g \leq 0.7$). The implementation of the *Realistic Mathematics Education* approach assisted by Cabri 3D effectively improved students' spatial ability, as all students experienced improvement in the medium to high categories with no students in the low category.

Keywords: Realistic Mathematics Education Approach, Spatial Ability, Cabri 3D Learning Media.