

ABSTRAK

CINTA AULIA RITONGA: Pengaruh Pendekatan Pembelajaran *Deep learning* terhadap Kemampuan Pemahaman Konsep Matematis Siswa Berbantuan Media Educaplay. **Program Studi Pendidikan Matematika, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Malikussaleh, 2026.**

Penelitian ini dilatarbelakangi oleh masih rendahnya kemampuan pemahaman konsep matematis siswa, belum optimalnya penerapan pendekatan *deep learning*, serta pemanfaatan media pembelajaran interaktif yang belum dimanfaatkan dalam pembelajaran matematika. Penelitian ini bertujuan untuk mengetahui pengaruh pendekatan pembelajaran *deep learning* terhadap kemampuan pemahaman konsep matematis siswa berbantuan media Educaplay pada materi persamaan kuadrat di SMK Negeri 1 Gandapura. Penelitian menggunakan pendekatan kuantitatif dengan jenis *quasi experiment* dan *desain Posttest-Only Control Groups Design*. Penelitian dilaksanakan pada semester genap Tahun Ajaran 2025/2026. Populasi penelitian adalah seluruh siswa kelas X SMK Negeri 1 Gandapura, dengan sampel yang dipilih menggunakan teknik *purposive sampling*, yaitu kelas X BSN-1 sebagai kelas eksperimen (25 siswa) dan kelas X BSN-2 sebagai kelas kontrol (21 siswa). Data dikumpulkan melalui tes kemampuan pemahaman konsep matematis dan lembar observasi aktivitas guru serta siswa. Instrumen tes berupa soal uraian yang telah memenuhi uji validitas, reliabilitas, tingkat kesukaran, dan daya pembeda. Hasil uji instrumen menunjukkan bahwa dari 10 butir soal, terdapat 9 soal valid dengan koefisien reliabilitas 0,774 berkategori tinggi. Analisis data dilakukan menggunakan statistik deskriptif, uji normalitas, dan uji hipotesis dengan uji nonparametrik *Mann-Whitney U* karena data tidak berdistribusi normal. Hasil penelitian menunjukkan bahwa terdapat pengaruh yang signifikan dari pendekatan pembelajaran *deep learning* terhadap kemampuan pemahaman konsep matematis siswa berbantuan media Educaplay. Hal ini ditunjukkan oleh nilai Asymp. Sig. (2-tailed) sebesar $0,001 < 0,05$ sehingga H_0 ditolak dan H_a diterima. Dengan demikian, pendekatan pembelajaran *deep learning* berbantuan media Educaplay memberikan pengaruh yang signifikan terhadap kemampuan pemahaman konsep matematis siswa. Disarankan kepada guru untuk menerapkan pendekatan ini dalam pembelajaran matematika, sekolah mendukung penyediaan sarana berbasis teknologi, dan peneliti selanjutnya mengembangkan penelitian pada materi, media interaktif, maupun kemampuan matematis lainnya.

Kata Kunci: *deep learning*, Educaplay, kemampuan pemahaman konsep matematis, persamaan kuadrat.

ABSTRACT

CINTA AULIA RITONGA: *The Effect of the Deep Learning Approach on Students' Mathematical Concept Understanding Assisted by Educaplay Media. Mathematics Education Study Program, Faculty of Teacher Training and Education, Malikussaleh University, 2026.*

This research was motivated by the persistently low level of students' mathematical concept understanding, the suboptimal implementation of the deep learning approach, and the lack of utilization of interactive learning media in mathematics instruction. The study aims to determine the effect of the deep learning approach assisted by Educaplay media on students' mathematical concept understanding regarding the topic of quadratic equations at SMK Negeri 1 Gandapura. A quantitative approach was employed using a quasi-experimental method with a Posttest-Only Control Group Design. The study was conducted during the even semester of the 2025/2026 academic year. The population consisted of all Grade X students at SMK Negeri 1 Gandapura; the sample was selected using purposive sampling, with class X BSN-1 serving as the experimental class (25 students) and class X BSN-2 as the control class (21 students). Data were collected via a mathematical concept understanding test and observation sheets for teacher and student activities. The test instrument consisted of essay questions that had passed validity, reliability, difficulty level, and discrimination power tests. Instrument analysis showed that out of 10 items, 9 were valid, with a reliability coefficient of 0.774 (categorized as high). Data analysis involved descriptive statistics, normality testing, and hypothesis testing using the non-parametric Mann-Whitney U test, as the data were not normally distributed. The results indicate a significant effect of the deep learning approach assisted by Educaplay media on students' mathematical concept understanding. This is evidenced by an Asymp. Sig. (2-tailed) value of 0.001 (less than 0.05), leading to the rejection of H_0 and the acceptance of H_a . Thus, the deep learning approach assisted by Educaplay media significantly influences students' mathematical concept understanding. It is recommended that teachers implement this approach in mathematics instruction, that schools support the provision of technology-based facilities, and that future researchers expand the study to include other topics, interactive media, or additional mathematical abilities.

Keywords: deep learning, Educaplay, mathematical conceptual understanding, quadratic equations.