ABSTRAK

Cantik Azzaroiha (2025), Pengaruh Model Pembelajaran Berbasis Proyek Terintegrasi Pendekatan STEAM Berbantuan *Scaffolding* Adaptif terhadap Keterampilan Berpikir Kritis, Keterampilan Berpikir Kreatif, dan Prestasi Akademik Peserta Didik SMP

Tesis ini telah disetujui dan diperiksa oleh Pembimbing I: Prof. Dr. I Wayan Redhana, M.Si dan Pembimbing II: Prof. Dr. Ketut Suma, M.S.

Kata Kunci: PjBL-STEAM; *Scaffolding* Adaptif; Keterampilan Berpikir Kritis; Keterampilan Berpikir Kreatif; Prestasi Akademik

Penelitian ini merupakan penelitian kuantitatif dengan desain *nonequivalent Pretest-posttest control group design* yang bertujuan mendeskripsikan dan menjelaskan: (1) perbedaan secara simultan keterampilan berpikir kritis, keterampilan berpikir kreatif, dan prestasi akademik peserta didik yang belajar menggunakan model pembelajaran proyek terintegrasi STEAM berbantuan *scaffolding* adaptif dan model PBL, (2) perbedaan keterampilan berpikir kritis peserta didik yang belajar menggunakan model pembelajaran proyek terintegrasi STEAM berbantuan *scaffolding* adaptif dan model PBL, (3) perbedaan keterampilan berpikir kreatif peserta didik yang belajar menggunakan model pembelajaran proyek terintegrasi STEAM berbantuan *scaffolding* adaptif dan model PBL, dan (4) perbedaan prestasi akademik peserta didik yang belajar menggunakan model pembelajaran proyek terintegrasi STEAM berbantuan *scaffolding* adaptif dan model PBL. Teknik pengambilan sampel yang digunakan adalah *cluster random sampling* dengan jumlah sampel sebanyak 80 peserta didik kelas VIII dari dua kelas di MTs Guntur Nusantara. Instrumen yang digunakan berupa tes keterampilan berpikir kritis, tes keterampilan berpikir kreatif, dan tes prestasi akademik. Data dianalisis menggunakan *Multivariate Analysis of Covariance* (MANCOVA). Uji hipotesis dilakukan pada taraf signifikansi 5% setelah melalui uji asumsi yang meliputi uji normalitas, uji homogenitas varian, uji homogenitas varian kovarian, uji linieritas, uji multikolinieritas, dan uji homogenitas kemiringan garis regresi. Berdasarkan hasil analisis data, diperoleh temuan bahwa: (1) terdapat perbedaan secara simultan keterampilan berpikir kritis, keterampilan berpikir kreatif, dan prestasi akademik antara peserta didik yang menggunakan model pembelajaran pada kelas kontrol dan eksperimen, (2) terdapat perbedaan keterampilan berpikir kritis antara kelompok pada kelas kontrol dan eksperimen, (3) terdapat perbedaan keterampilan berpikir kreatif antara kelompok pada kelas kontrol dan eksperimen, dan (4) terdapat perbedaan prestasi akademik antara kelompok yang menggunakan model pembelajaran proyek terintegrasi STEAM berbantuan *scaffolding* adaptif dan model PBL.

ABSTRACT

Cantik Azzaroiha (2025), The Effect of Project-Based Learning Integrated with the STEAM Approach Assisted by Adaptive *Scaffolding* on Critical Thinking Skills, Creative Thinking Skills, and Academic Achievement of Junior High School Students

This thesis has been approved and reviewed by Advisor I: Prof. Dr. I Wayan Redhana, M.Si and Advisor II: Prof. Dr. Ketut Suma, M.S.

Keywords: PjBL-STEAM; Adaptive *Scaffolding*; Critical Thinking Skills; Creative Thinking Skills; Academic Achievement

This research is a quantitative study using a nonequivalent *Pretest*-posttest control group design. The objectives of the study were to describe and explain: (1) the simultaneous differences in critical thinking skills, creative thinking skills, and academic achievement between students taught using project-based STEAM learning assisted by adaptive *scaffolding* and the PBL model, (2) the difference in critical thinking skills between students taught using project-based STEAM learning with adaptive *scaffolding* and those taught using the PBL model, (3) the difference in creative thinking skills between the two groups, and (4) the difference in academic achievement between the two groups. The sampling technique used was cluster random sampling with a total of 80 students from two Grade VIII classes at MTs Guntur Nusantara. The instruments used in this research were critical thinking tests, creative thinking tests, and academic achievement tests. Data were analyzed using Multivariate Analysis of Covariance (MANCOVA). Hypothesis testing was conducted at a 5% significance level after fulfilling several assumption tests, including normality test, homogeneity of variance test, homogeneity of covariance test, linearity test, multicollinearity test, and homogeneity of regression slopes test. Based on the data analysis, the results showed that: (1) there were simultaneous differences in critical thinking skills, creative thinking skills, and academic achievement between students taught using the project-based STEAM model with adaptive *scaffolding* and those taught using the PBL model, (2) there was a significant difference in critical thinking skills between the two groups, (3) there was a significant difference in creative thinking skills between the two groups, and (4) there was a significant difference in academic achievement between the two groups.