# PENGARUH MODEL PBL BERBASIS *UNPLUGGED CODING* TERHADAP *COMPUTATIONAL THINKING* DAN BERPIKIR KRITIS IPA DI SEKOLAH DASAR

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## ABSTRAK

Urgensi penelitian ini bersumber dari permasalahan pelajaran IPA di sekolah dasar yaitu rendahnya kemampuan siswa dalam menyelesaikan permasalahan. Tujuan dari penelitian ini mengetahui pengaruh model PBL berbasis *unplugged coding* terhadap kemampuan *computational thinking* dan berpikir kritis pada mata pelajaran IPA siswa kelas V. Pendekatan kuantitatif diterapkan melalui desain *Nonequivalent pretest-posttest control group design* yang melibatkan 46 siswa. Pengumpulan data menggunakan tes uraian dengan teknik analisis yaitu uji *Manova* dan uji lanjut *Least Significant Difference (LSD).* Berdasarkan hasil uji hipotesis menggunakan *Manova* diperoleh nilai $F_{hitung}$ pada hipotesis 1 sebesar 27.651 dan hipotesis 2 sebesar 9.955 yang keduanya lebih besar dari $F_{tabel}$ yakni sebesar 4.06 pada taraf signifikansi 5%. Nilai signifikansi masing-masing sebesar 0,001 dan 0,003 (Sig. < 0,05). Sedangkan uji hipotesis 3 menggunakan *Manova* diperoleh $F_{hitung}$ sebesar 15.554 sedangkan $F_{tabel}$ 4.06 dengan nilai signifikansi 0.001. Nilai signifikansi lebih kecil dari taraf signifikansi (Sig. < 0,05). Pada uji lanjut menggunakan uji LSD diperoleh nilai sig. 0.001 dan 0.003. Nilai signifikansi lebih kecil dari 0,05. Degan demikian, disimpulkan penggunaan model PBL berbasis *unplugged coding* efektif dalam meningkatkan kemampuan *computational thinking* dan berpikir kritis siswa pada mata pelajaran IPA kelas V di sekolah dasar.

**Kata-Kata Kunci: Model PBL, *Unplugged Coding, Computational Thinking,* Berpikir Kritis**

# THE EFFECT OF UNPLUGGED CODING-BASED PBL MODEL ON COMPUTATIONAL THINKING AND SCIENCE CRITICAL THINKING IN ELEMENTARY SCHOOLS

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## ABSTRACT

*A problem encountered in science learning in elementary schools is students' low problem-solving skills. The purpose of this study was to determine the of the unplugged coding-based PBL learning model on computational and critical thinking skills in fifth-grade science students. This quantitative study used a nonequivalent pretest-posttest control group design. The sample size was 46 students. The data collection method uses essay tests on computational thinking and critical thinking. The data analysis techniques used are the MANOVA test and follow-up tests using the Least Significant Difference (LSD) test. Based on the results of the Manova hypothesis test, the F-value for hypothesis 1 was 27.651 and for hypothesis 2 was 9.955, both of which were greater than the F-value of 4.06 at a 5% significance level. Hypothesis test 3 using MANOVA obtained a calculated F of 15.554 while the table F was 4.06 with a significance value of 0.001. The significance value is smaller than the significance level (Sig. < 0.05). In the follow-up test using the LSD test, the significance values obtained were 0.001 and 0.003. The significance values are smaller than the significance level (Sig. < 0.05). It can be concluded that the use of the PBL model based on unplugged coding is effective in improving students' computational thinking and critical thinking skills in 5th-grade science subjects in elementary schools.*

***Keywords: PBL Model, Unplugged Coding, Computational Thinking, Critical Thinking***