

PENGARUH PENERAPAN MODEL PEMBELAJARAN *PREDICTION, OBSERVATION, EXPLANATION, ELABORATION, WRITE, EVALUATION* BERBANTUAN MEDIA EKSPLORATIF TERHADAP KEMAMPUAN BERPIKIR KRITIS SISWA SMK

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ABSTRAK

Penelitian ini bertujuan untuk mengeksplorasi pengaruh penerapan model pembelajaran *Prediction, Observation, Explanation, Elaboration, Write, Evaluation* (POE2WE) berbantuan media eksploratif terhadap kemampuan berpikir kritis siswa SMK. Pembelajaran matematika di SMK umumnya masih menggunakan model konvensional, sehingga siswa kurang terbiasa melakukan analisis, evaluasi, dan pengambilan keputusan secara logis. Untuk mengatasi hal tersebut, pendekatan kuantitatif dengan metode eksperimen semu (*quasi-experiment*) diterapkan melalui desain *post-test only control group*. Populasi mencakup seluruh siswa kelas XI SMK Pariwisata Triatma Jaya Singaraja tahun ajaran 2025/2026, berjumlah 203 siswa. Sampel dipilih menggunakan teknik *cluster random sampling*, menghasilkan kelas XI K2 sebagai kelas eksperimen yang dibelajarkan dengan model POE2WE berbantuan media eksploratif, dan kelas XI K3 sebagai kelas kontrol dengan pembelajaran konvensional. Instrumen yang digunakan berupa tes kemampuan berpikir kritis yang menilai beberapa indikator, yaitu identifikasi masalah, penentuan fakta, penyusunan alternatif solusi, analisis, dan penyusunan argumen. Data dianalisis menggunakan uji-t satu ekor (*one-tailed independent samples t-test*) dengan taraf signifikansi 5%. Hasil analisis menunjukkan nilai signifikansi 0,001 ($< 0,05$), dengan rata-rata post-test kelas eksperimen sebesar 72,5 dan kelas kontrol 49,6. Hasil tersebut mengindikasikan bahwa penerapan model POE2WE berbantuan media eksploratif GeoGebra mampu meningkatkan kemampuan berpikir kritis siswa secara signifikan dibandingkan pembelajaran konvensional. Temuan ini memberikan implikasi bahwa penggunaan model POE2WE yang dipadukan dengan media eksploratif tidak hanya mendukung pemahaman konsep matematika secara lebih mendalam, tetapi juga mendorong siswa untuk berpikir kritis dan analitis dalam memecahkan masalah, sehingga dapat menjadi alternatif strategi pembelajaran yang efektif di SMK.

Kata kunci: POE2WE, Media Eksploratif, Kemampuan Berpikir Kritis Matematis

THE EFFECT OF IMPLEMENTING THE PREDICTION, OBSERVATION, EXPLANATION, ELABORATION, WRITE, AND EVALUATION LEARNING MODEL ASSISTED BY EXPLORATORY MEDIA ON VOCATIONAL HIGH SCHOOL STUDENTS' CRITICAL THINKING SKILLS

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ABSTRACT

This study aimed to examine the effect of implementing the Prediction, Observation, Explanation, Elaboration, Write, and Evaluation (POE2WE) learning model supported by exploratory media on vocational high school students' critical thinking skills. Mathematics learning in vocational high schools is generally still dominated by conventional teaching methods, resulting in limited opportunities for students to engage in analysis, evaluation, and logical decision-making. To address this issue, a quantitative approach using a quasi-experimental method with a post-test only control group design was employed. The population consisted of all eleventh-grade students of SMK Pariwisata Triatma Jaya Singaraja in the 2025/2026 academic year, totaling 203 students. The sample was selected using cluster random sampling, with class XI K2 assigned as the experimental group taught using the POE2WE model supported by exploratory media, and class XI K3 as the control group receiving conventional instruction. The research instrument was a critical thinking skills test measuring several indicators, including problem identification, fact determination, formulation of alternative solutions, analysis, and argument construction. The data were analyzed using a one-tailed independent samples t-test at a 5% significance level. The results showed a significance value of 0.001 (< 0.05), with the mean post-test score of the experimental group at 72.5 and the control group at 49.6. These findings indicate that the implementation of the POE2WE learning model supported by exploratory GeoGebra media significantly improves students' critical thinking skills compared to conventional learning. This study implies that integrating the POE2WE model with exploratory media not only enhances students' conceptual understanding of mathematics but also fosters critical and analytical thinking in problem-solving, making it an effective alternative instructional strategy in vocational high schools.

Keywords: POE2WE, Exploratory Media, Mathematical Critical Thinking Skills