

EFEKTIVITAS MODEL *INQUIRY BASED LEARNING* BERBANTUAN MEDIA MILLEALAB TERHADAP KEMAMPUAN BERPIKIR KRITIS SISWA SMA

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ABSTRAK

Penelitian ini bertujuan untuk mendeskripsikan profil kemampuan berpikir kritis siswa sebelum dan sesudah pembelajaran *Inquiry Based Learning* berbantuan media MilleaLab serta menganalisis perbedaan kemampuan berpikir kritis siswa yang dibelajarkan menggunakan model *Inquiry Based Learning* berbantuan media MilleaLab dengan model pembelajaran konvensional. Penelitian ini merupakan penelitian eksperimen semu (*quasi experiment*) dengan rancangan *pretest-posttest control group design*. Populasi penelitian adalah seluruh siswa kelas XI SMA Negeri 1 Nusa Penida yang memperoleh pembelajaran fisika sebanyak 144 siswa. Sampel penelitian berjumlah 56 siswa yang terdiri atas 28 siswa kelompok eksperimen yang diterapkan model *Inquiry Based Learning* berbantuan media MilleaLab dan 28 siswa kelompok kontrol yang diberikan pembelajaran konvensional. Data kemampuan berpikir kritis dikumpulkan melalui instrumen tes kemampuan berpikir kritis yang mencakup indikator merumuskan masalah, memberikan argumen, melakukan deduksi, melakukan induksi, melakukan evaluasi, memutuskan dan melaksanakan. Data dianalisis menggunakan analisis *N-Gain*, Indeks Efektivitas dan uji proporsi dua populasi dengan bantuan *Microsoft Excel 365* pada taraf signifikansi $\alpha = 0,05$. Hasil analisis menunjukkan bahwa $Z_{hitung} = 4,526$ dengan $Z_{0,05} = 1,645$. Hasil penelitian menunjukkan bahwa kemampuan berpikir kritis awal siswa pada kedua kelompok berada pada kategori rendah, dengan rata-rata *pre-test* kelompok eksperimen sebesar 41,07 (SD = 7,91) dan kelompok kontrol sebesar 43,71 (SD = 11,06); kemampuan berpikir kritis siswa setelah diberikan perlakuan mengalami peningkatan, dengan rata-rata *post-test* kelompok eksperimen sebesar 80,67 (SD = 7,70) yang berada pada kategori tinggi, sedangkan kelompok kontrol mencapai 58,64 (SD = 10,90) yang berada pada kategori sedang. Dengan demikian model *Inquiry Based Learning* berbantuan media MilleaLab efektif dalam meningkatkan kemampuan berpikir kritis siswa SMA. Berdasarkan hasil tersebut, model *Inquiry Based Learning* berbantuan media MilleaLab dapat dijadikan sebagai alternatif pembelajaran untuk meningkatkan kemampuan berpikir kritis siswa.

Kata kunci: *Inquiry Based Learning*, MilleaLab, kemampuan berpikir kritis pembelajaran fisika.

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ABSTRACT

This study aims to describe the profile of students' critical thinking skills before and after Inquiry-Based Learning facilitated by the MilleaLab media, as well as to analyze the differences in critical thinking skills between students taught using the Inquiry-Based Learning model facilitated by the MilleaLab media and those taught using the conventional learning model. This study is a quasi-experimental study with a pretest-posttest control group design. The study population consisted of all 144 eleventh-grade students at Nusa Penida State High School 1 who were taking physics. The sample comprised 56 students, consisting of 28 students in the experimental group, who were taught using the Inquiry-Based Learning model supported by the MilleaLab media, and 28 students in the control group, who received conventional instruction. Data on critical thinking skills were collected using a critical thinking skills test that included indicators for problem formulation, argumentation, deduction, induction, evaluation, decision-making, and implementation. The data were analyzed using N-Gain analysis, the Effectiveness Index, and a two-population proportion test with the aid of Microsoft Excel 365 at a significance level of $\alpha = 0.05$. The analysis results showed that $Z_{\text{calculated}} = 4,526$ with $Z_{0,05} = 1,645$. The research results indicated that the students' initial critical thinking skills in both groups were in the low category, with the experimental group's pre-test mean of 41.07 (SD = 7.91) and the control group's mean of 43.71 (SD = 11.06); students' critical thinking skills improved after the intervention, with the experimental group's post-test mean of 80.67 (SD = 7.70) falling into the high category, while the control group's mean of 58.64 (SD = 10.90) fell into the moderate category. Thus, the Inquiry-Based Learning model supported by the MilleaLab media is effective in improving high school students' critical thinking skills. Based on these results, the Inquiry-Based Learning model supported by MilleaLab media can be used as an alternative learning method to improve students' critical thinking skills.

Keywords: *Inquiry-Based Learning, MilleaLab, critical thinking skills in physics education.*