

THE PROFILE OF STUDENTS CRITICAL THINKING SKILLS IN STEM BASED LEARNING BY USING E-MODULE IN ENVIRONMENTAL POLLUTION TOPIC

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ABSTRACT

The research aims to analyze the profile of students' critical thinking skills in STEM-based learning by using e-module in environmental pollution topic. The subtopic used in this research is water pollution, air pollution, soil pollution and the effect of pollution to the environment. The electronic textbook provided by the government has not fully cover the critical thinking and STEM component, in this research the researcher used STEM based e-module that has been develop by the other researcher that provide an interactive feature for learning process and cover the STEM component. Descriptive method used in this research. The researcher used purposive sampling technique, the samples is 7-grade students consist of 21 students. Students' critical thinking skills measured by essay questions, the validity are 0.75 categorized high and the reliability are 0.86 and it categorized as very high. Based on the data analysis the average of critical thinking skills categorized as critical with value 1.70. The elements that categorized as critical is element questions at issue, purpose, concept, implication, and consequences, while the elements of information, a point of view, interpretation and inference categorized as enough critical. In addition, students have positive impressions to e-module it showed from the questionnaire result with value 3.3, and the teacher's impressions gain 3.6 values it means have positive impressions.

Keywords: *Students Critical Thinking Skills, STEM Based Learning, E-Module*

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PROFIL KEMAMPUAN BERPIKIR KRITIS SISWA DALAM PEMBELAJARAN BERBASIS STEM DENGAN MENGGUNAKAN E-MODULE DALAM TOPIC PENCEMARAN LINGKUNGAN

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ABSTRACT

Penelitian ini bertujuan untuk menganalisis profil keterampilan berpikir kritis siswa pada pembelajaran berbasis STEM dengan menggunakan e-module pada topic polusi lingkungan. Sub topic dalam penelitian ini adalah polusi air, polusi udara, polusi tanah dan effect dari polusi terhadap ekosistem. Buku electronic yang disediakan pemerintah belum sepenuhnya mengcover kemampuan berfikir kritis dan komponen STEM. Dalam penelitian ini penulis menggunakan STEM based e-module yang telah dikembangkan oleh peneliti lain yang sudah menyediakan interaktif fitur dan telah mengcover STEM component. Metode deskriptif digunakan dalam penelitian ini dengan populasi siswa kelas 7 di salah satu SMP Negeri di Kabupaten Ciamis. Sampel penelitian dipilih dengan cara purposive sampling, samples yang digunakan dalam penelitian ini berisi 21 siswa kelas 7. Keterampilan berpikir kritis siswa ditentukan melalui soal test essay dengan validitas 0.75 dan reliabilitas 0.86. Berdasarkan analisis data menunjukkan bahwa rata-rata keterampilan kritis siswa termasuk kedalam kategori *critical* dengan nilai 0.70. Lebih lanjut keterampilan berpikir kritis pada elemen questions at issue, purpose, concept, implication and consequence dikategorikan critical, sedangkan element information, point of view, interpretation and inference di kategorikan cukup critical. Selain itu data hasil penelitian menunjukkan siswa mempunyai positive impression terhadap e-module, dan guru pun mempunyai positive impression terhadap STEM e-modul.

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Kata kunci: *keterampilan berpikir kritis siswa, pembelajaran berbasis STEM, e-module*

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