

ABSTRAK

JOKO HARIAJI. Pengaruh Model Pembelajaran *Project Based Learning* dengan Pendekatan STEAM Berbantuan Media 4D *Frame+BS* dan Motivasi Belajar untuk meningkatkan Kemampuan Berpikir Kritis. Tesis. Medan: Program Studi Pendidikan Matematika Pascasarjana Universitas Negeri Medan, 2024.

Penelitian ini membahas tentang pengaruh proyek kelas STEAM dan motivasi belajar terhadap kemampuan berpikir kritis peserta didik dalam konsep persamaan dan fungsi kuadrat. penelitian ini melibatkan dua kelas sebagai kelas kontrol dan kelas eksperimen di sebuah sekolah di Peureulak, di mana peserta didik ditugaskan untuk mendesain struktur jembatan menggunakan media 4D *Frame+BS*. Kemampuan berpikir kritis dan motivasi belajar peserta didik dinilai dengan menggunakan tes uraian dan angket tertutup, kemudian data dianalisis dengan menggunakan uji ANOVA dua arah. Hasil penelitian menunjukkan bahwa proyek STEAM, bersama dengan peningkatan motivasi belajar, menyebabkan peningkatan keterampilan berpikir kritis peserta didik. Penelitian ini menyoroti potensi pembelajaran berbasis proyek di kelas STEAM untuk mengatasi kesenjangan dalam motivasi belajar di bidang ini. Namun, penelitian lebih lanjut diperlukan di bidang ini karena penelitian saat ini tentang topik ini masih terbatas.

Kata Kunci: Kritis, Media, Model, Motivasi, Proyek.

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ABSTRACT

JOKO HARIAJI. The Effect of Project Based Learning Model with STEAM Approach Assisted by 4D Frame+BS Media and Learning Motivation to Improve Critical Thinking Skills. Thesis. Medan: Postgraduate Mathematics Education Study Program, State University of Medan, 2024.

This research discusses the effect of STEAM class projects and learning motivation on students' critical thinking skills in the concept of quadratic equations and functions. The study involved two classes as control and experimental classes in a school in Peureulak, where students were assigned to design a bridge structure using 4D Frame+BS media. Students' critical thinking skills and learning motivation were assessed using a descriptive test and a closed-ended questionnaire, then the data were analysed using a two-way ANOVA test. The results showed that the STEAM project, together with increased learning motivation, resulted in improved students' critical thinking skills. This study highlights the potential of project-based learning in STEAM classes to address the gap in learning motivation in this area. However, further research is needed in this area as current research on this topic is limited.

Keywords: Critical, Media, Model, Motivation, Project.

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