

## ABSTRAK

### PENGEMBANGAN BLOG PEMBELAJARAN PERUBAHAN IKLIM BERORIENTASI STEM BERBANTUAN *FLIPPED CLASSROOM* UNTUK MENINGKATKAN KEMAMPUAN REPRESENTASI DAN ARGUMENTASI PESERTA DIDIK

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Penelitian ini bertujuan untuk mengembangkan blog pembelajaran perubahan iklim berorientasi STEM yang efektif dalam meningkatkan kemampuan representasi dan argumentasi peserta didik. Desain penelitian yang digunakan adalah model *Research and Development 4D (Four-D Models)*. Sampel penelitian terdiri dari peserta didik kelas VII A dan VII B yang terbagi menjadi kelas kontrol dan eksperimen. Teknik pengambilan sampel menggunakan *purposive sampling*. Instrumen yang digunakan adalah instrument tes dan angket. Analisis data berdasarkan data *n-gain*, *effect size* dan persentase deskriptif tanggapan pendidik dan peserta didik. Hasil penelitian menunjukkan bahwa blog pembelajaran berorientasi STEM hasil pengembangan dinyatakan: (1) dapat meningkatkan kemampuan representasi dan argumentasi peserta didik dengan kriteria sedang (0,4) dan memberikan pengaruh besar (0,8).; (2) blog pembelajaran berorientasi STEM menarik (93,2%), bermanfaat (94,4%), dan mudah dipahami dari segi bahasa (93,7%) berdasarkan hasil tanggapan siswa dan guru terhadap penggunaan blog pembelajaran perubahan iklim berorientasi STEM. Berdasarkan hasil penelitian dan pengembangan, dapat dinyatakan bahwa blog pembelajaran perubahan iklim berorientasi STEM efektif digunakan menjadi media pembelajaran dalam mempelajari materi perubahan iklim.

**Kata Kunci:** argumentasi, blog pembelajaran, perubahan iklim, representasi, STEM

## **ABSTRACT**

### **DEVELOPMENT OF STEM-ORIENTED CLIMATE CHANGE LEARNING BLOG ASSISTED FLIPPED CLASSROOM TO IMPROVE THE ABILITY OF REPRESENTATION AND STUDENT ARGUMENTATION**

**By**

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This study aims to develop a STEM-oriented climate change learning blog that is effective in increasing students' representation and argumentation abilities. The research design used is the 4D Research and Development model (Four-D Models). The research sample consisted of students in class VII A and VII B which were divided into control and experimental classes. The sampling technique used purposive sampling. The instruments used are test instruments and questionnaires. Data analysis based on n-gain data, effect size and descriptive percentage of teacher and student responses. The results of the study show that STEM-oriented learning blogs as a result of the development are stated: (1) can improve students' representation and argumentation abilities with moderate criteria (0.4) and have a large influence (0.8); (2) STEM-oriented learning blogs are interesting (93.2%), useful (94.4%), and easy to understand in terms of language (93.7%) based on the results of student and teacher responses to the use of STEM-oriented climate change learning blogs. Based on the results of research and development, it can be stated that STEM-oriented climate change learning blogs are effectively used as learning media in studying climate change material.

**Keyword:** argumentation, learning blog, climate change, representation, STEM