ABSTRAK

Muhammad Ariq Muttaqin. 2025. **PENGEMBANGAN MEDIA PEMBELAJARAN FISIKA BERBASIS MODEL *SELF ORGANIZED LEARNING ENVIRONMENT* (SOLE) DENGAN APLIKASI UNITY 3D PADA MATERI PERUBAHAN IKLIM**

Penelitian ini dilakukan karena kesulitan peserta didik dalam memahami konsep fisika yang abstrak serta kurangnya penggunaan media pembelajaran interaktif yang dapat memvisualisasikan konsep fisika pada materi perubahan iklim. Untuk mengatasi permasalahan tersebut, peneliti mengembangkan media pembelajaran fisika berbasis model *Self Organized Learning Environment* (SOLE) dengan aplikasi Unity 3D. Penelitian ini bertujuan untuk mengembangkan serta menguji validitas dan kepraktisan media pembelajaran fisika berbasis model *Self Organized Learning Environment* (SOLE) dengan aplikasi Unity 3D pada materi perubahan iklim. Pada penelitian ini digunakan metode *Research and Development* (R&D) dengan model pengembangan ADDIE. Subjek uji coba penelitian ini yaitu kelas X E 6 SMAN 1 Sindangkasih dengan jumlah 42 peserta didik. Untuk mengukur kelayakan media pembelajaran fisika dilakukan validasi meliputi ahli materi, ahli media, dan ahli bahasa. Teknik analisis data yang digunakan dalam mengolah hasil validasi adalah indeks Aiken's V. Hasil validasi menunjukkan indeks Aiken'V sebesar 0,74 (ahli media), 0,72 (ahli materi), dan 0,78 (ahli bahasa), yang seluruhnya termasuk dalam kategori valid. Rata-rata kepraktisan mencapai 81% dengan kategori sangat praktis. Hasil penelitian ini menunjukkan bahwa media pembelajaran fisika berbasis model SOLE dengan aplikasi Unity 3D layak dan praktis digunakan, serta berpotensi meningkatkan pemahaman peserta didik terhadap konsep fisika yang bersifat abstrak.

Kata kunci: Media Pembelajaran, Perubahan Iklim, SOLE, Unity 3D.

ABSTRACT

Muhammad Ariq Muttaqin. 2025. ***DEVELOPMENT OF PHYSICS LEARNING MEDIA BASED ON SELF ORGANIZED LEARNING ENVIRONMENT (SOLE) MODEL WITH UNITY 3D APPLICATION ON CLIMATE CHANGE MATERIAL***

This study was conducted due to students' difficulties in understanding abstract physics concepts and the limited use of interactive learning media that can visualize physics concepts in climate change material. To address these issues, the researcher developed a physics learning medium based on the Self-Organized Learning Environment (SOLE) model using the Unity 3D application. The purpose of this study was to develop and examine the validity and practicality of the physics learning medium based on the SOLE model with the Unity 3D application on climate change material. The research employed a Research and Development (R&D) approach using the ADDIE development model. The trial subjects were 42 students of class X E 6 at SMAN 1 Sindangkasih. The feasibility of the learning medium was assessed through validation by material experts, media experts, and language experts using Aiken's V coefficient. The validation results indicated coefficients of 0.74 (media experts), 0.72 (material experts), and 0.78 (language experts), all categorized as valid. The practicality test obtained an average score of 81%, which was categorized as very practical. The findings indicate that the developed physics learning medium based on the SOLE model using the Unity 3D application is valid and practical, and can serve as an engaging and effective tool to facilitate students' understanding of abstract physics concepts.

Keywords: Learning Media, Climate Change, SOLE, Unity 3D.