

## ABSTRAK

**Febriani Putri Keren Goni, NIM 4193121040 (2023). *E-modul Fisika Berbasis Inkuiri Terintegrasi SETS (Science, Environment, Technology, and Society) pada Materi Fluida Dinamis di Kelas XI SMA.***

Fluida dinamis merupakan salah satu materi fisika yang penerapannya banyak ditemukan dalam kehidupan sehari-hari. Siswa mengalami kesulitan dalam memahami materi fluida dinamis karena visualisasi bahan ajar yang kurang optimal serta bahan ajar yang dimiliki kurang mendukung proses belajar mandiri. Tingkat kesulitan materi dan kendala dalam belajar mandiri mengakibatkan motivasi dan hasil belajar siswa menjadi rendah. Penelitian ini bertujuan untuk membuat *e-modul* fisika berbasis inkuiri terintegrasi *SETS (Science, Environment, Technology, and Society)* pada materi fluida dinamis kelas XI SMA. Penelitian ini juga bertujuan untuk mengetahui kelayakan, kepraktisan, dan efektivitas produk. Jenis penelitian yang digunakan adalah *Research and Development (R&D)* model Borg & Gall. Penelitian menggunakan pendekatan *mixed method* untuk menganalisis hasil penelitian secara kualitatif dan kuantitatif. Produk dibuat dengan menggunakan aplikasi *online Heyzine*. Berdasarkan hasil uji validasi materi, diperoleh produk valid dengan persentase 98,63%. Hasil uji validasi oleh ahli media diperoleh persentase sebesar 99%, yaitu dikategorikan valid. Hasil uji coba lapangan terbatas diperoleh persentase sebesar 96,08% oleh respon siswa skala kecil, dan 97,59% oleh respon guru fisika, sehingga dinyatakan sangat praktis. Hasil uji coba lapangan besar diperoleh persentase sebesar 96,56%, yaitu dikategorikan sangat praktis. Nilai rata-rata *pre-test* siswa 35,83, dan nilai rata-rata *post-test* siswa sebesar 93,89, sehingga nilai rata-rata *N-gain* yang diperoleh adalah sebesar 0,9 atau 90,48%, yaitu dikategorikan tinggi. Dengan demikian, *e-modul* yang dibuat layak, sangat praktis, dan efektif untuk digunakan dalam meningkatkan hasil belajar siswa pada materi fluida dinamis.

**Kata kunci:** *E-modul*, inkuiri, *SETS*, fluida dinamis

## ABSTRACT

**Febriani Putri Keren Goni, NIM 4193121040 (2023). SETS (Science, Environment, Technology, and Society) Integrated Inquiry Based Physics E-module on Dynamic Fluid Material at Grade Eleven Senior High School.**

Dynamic fluid is material which has many its application in daily. Student have difficulty to understand dynamic fluid material because of the visualization of teaching materials was not optimal yet, and the teaching material they used was not helpful the independent learning process. The material difficulty degree and the problem of independent learning impact motivation and student learning outcomes become low. This research aims to make physics e-modul based on inquiry integrated SETS (Science, Environment, Technology, and Society) on dynamic fluid at grade eleven senior high school. The other aim was to describe the feasibility, practicality, and effectiveness of the product. The type of research used was Research and Development (R&D) model Borg & Gall. This research use mixed method to analyze the research results of qualitative and quantitative analysis. The product was made by using Heyzine online application. Based on material validation test result, obtained a valid product with a percentage of 98,63%. The media validation test result obtained a valid with a percentage of 99%, which is categorized as valid. The limited field trials result obtained percentage about 96,08% by small scale student response, and 97,59% by a physics teacher response, so that stated the product was very practical. The large field trials result obtained percentage about 96,56%, which was categorized very practical. The average of student pre-test is 35,83, and the average of student post-test is 93,89, so that obtained the average of N-gain is 0,9 or 90,48%, which was categorized high. Therefore, the created e-modul was feasible, very practical, and effective to used in order to enhance the student learning outcomes of fluids dynamis material.

**Kata kunci:** E-modul, inquiry, SETS, dynamic fluid