

ABSTRAK

SABILA CLARA PUTRI: Pengembangan Media Pembelajaran Fisika Bermuatan *Game Education* Pada Materi Sumber Energi untuk Siswa SMA/MA. **Program Studi Pendidikan Fisika FKIP Universitas Malikussaleh, 2026.**

Penelitian ini bertujuan untuk mengembangkan media pembelajaran interaktif fisika bermuatan *game education* pada materi sumber energi yang layak, praktis, dan efektif digunakan dalam pembelajaran. Penelitian ini merupakan penelitian pengembangan dengan model *Educational Design Research* (EDR) yang terdiri atas tahap: (1) Analisis dan Eksplorasi (*Analysis and Exploration*); (2) Desain dan Konstruksi (*Design and Construction*); dan (3) Evaluasi dan Refleksi (*Evaluation and Reflection*).

Uji coba produk dilakukan di MAN Kota Lhokseumawe pada siswa kelas X dengan melibatkan kelas eksperimen dan kelas kontrol. Teknik pengumpulan data menggunakan wawancara, observasi, angket, dan tes. Analisis data dilakukan melalui validasi ahli materi dan ahli media, angket respons guru dan siswa, uji *Independent Sample t-test*, serta ketuntasan belajar klasikal.

Hasil penelitian menunjukkan bahwa media pembelajaran yang dikembangkan memperoleh persentase validasi ahli materi sebesar 93,19% dan ahli media sebesar 84,55% dengan kategori sangat layak. Kepraktisan media berdasarkan respons siswa kelompok besar memperoleh persentase 85,14% dengan kategori sangat praktis. Keefektifan media ditunjukkan oleh rata-rata posttest kelas eksperimen sebesar 83,75 yang lebih tinggi dibandingkan kelas kontrol sebesar 68,75, dengan nilai signifikansi $0,001 < 0,05$. Selain itu, ketuntasan belajar klasikal kelas eksperimen mencapai 91,67% dengan kategori sangat efektif. Dengan demikian, media pembelajaran interaktif fisika bermuatan *game education* pada materi sumber energi dinyatakan sangat layak, sangat praktis, dan sangat efektif digunakan sebagai media pembelajaran fisika untuk siswa SMA/MA.

Kata kunci: *Game education*, media pembelajaran interaktif, sumber energi, pengembangan, fisika.

ABSTRACT

SABILA CLARA PUTRI: Development of Physics Learning Media Integrated with *Game Education* on Energy Sources Material for Senior High School/Islamic Senior High School Students. **Physics Education Study Program, FKIP, Malikussaleh University, 2026.**

This study aims to develop interactive physics learning media integrated with *game education* on energy sources material that is feasible, practical, and effective for use in learning. This research is a development study using the *Educational Design Research* (EDR) model, which consists of three stages: (1) Analysis and Exploration; (2) Design and Construction; and (3) Evaluation and Reflection.

The product trial was conducted at MAN Kota Lhokseumawe involving tenth-grade students in an experimental class and a control class. The data collection techniques used were interviews, observation, questionnaires, and tests. The data were analyzed through material expert and media expert validation, teacher and student response questionnaires, the Independent Sample t-test, and classical learning mastery.

The results showed that the developed learning media obtained a material expert validation percentage of 93.19% and a media expert validation percentage of 84.55%, both categorized as highly feasible. The practicality of the media, based on students' responses in the large-group trial, obtained a percentage of 85.14%, categorized as highly practical. The effectiveness of the media was indicated by the average posttest score of the experimental class, which was 83.75, higher than that of the control class, which was 68.75, with a significance value of $0.001 < 0.05$. In addition, the classical learning mastery of the experimental class reached 91.67%, categorized as highly effective. Therefore, the interactive physics learning media integrated with *game education* on energy sources material is declared highly feasible, highly practical, and highly effective for use as physics learning media for senior high school/Islamic senior high school students.

Keywords: *Game education*, interactive learning media, energy sources, development, physics.