

## ABSTRAK

PENGEMBANGAN MULTIMEDIA INTERAKTIF PADA MATERI  
NANOTEKNOLOGI SMA

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2023

Minimnya sumber belajar dan media pembelajaran pada materi nanoteknologi yang merupakan materi baru dalam kurikulum merdeka SMA menjadi salah satu tantangan tersendiri bagi guru. Penelitian ini bertujuan untuk: (1) menghasilkan multimedia interaktif yang memenuhi kriteria kelayakan dan (2) mengetahui respon peserta didik terhadap multimedia interaktif. Jenis penelitian ini adalah *Research and Development (R&D)* dengan menggunakan model pengembangan ADDIE. Instrumen yang digunakan dalam penelitian ini yaitu lembar wawancara, lembar validasi produk dan instrumen penelitian, soal latihan, soal forum diskusi, soal evaluasi dalam produk, serta angket respon peserta didik terhadap penggunaan produk. Sebanyak 10 orang peserta didik kelas X SMA Pangudi Luhur Sedayu menjadi sampel dalam uji coba terbatas. Hasil penelitian menunjukkan bahwa: (1) produk memenuhi kriteria kelayakan dengan rata-rata persentase 88,7% memenuhi kriteria sangat layak, memenuhi kriteria sangat valid dengan rata-rata 88,7%, memenuhi kriteria sangat efektif dengan rata-rata 87, memenuhi kriteria sangat praktis dengan rata-rata 89%; (2) persentase rata-rata aspek *operability* sebesar 88%, aspek *learnability* 91%, aspek *undersability* 85%, dan aspek *attractiveness* 92% serta respon peserta didik terhadap produk sangat baik dan mendapatkan komentar yang baik. Multimedia interaktif yang dikembangkan dapat digunakan untuk mendukung proses pembelajaran nanoteknologi di SMA.

**Kata kunci:** multimedia interaktif, nanoteknologi

**ABSTRACT****THE DEVELOPMENT OF INTERACTIVE MULTIMEDIA ON THE  
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2023

*As a new topic in the Merdeka curriculum, nanotechnology has several shortcomings, such as the need for learning material and media; Therefore, it remains a challenge to the teachers. This research aims to develop interactive multimedia with good eligibility and determine the students' responses to interactive multimedia. This research was research and development (R &D) with the ADDIE development research model. Interview sheets, product and research instruments validation sheets, practice questions, discussion forum questions, product evaluation questions, and student response questionnaires were used as research instruments. Ten students in grade X SMA Pangudi Luhur Sedayu were used as samples in the limited trial. The results showed that: (1) the product has the eligibility criteria with an average percentage of 88,7%; average validity, effectiveness, and practicability were 88,7%, 87, and 89%, respectively; (2) the average percentage of the operability aspect is 88%, the learnability aspect is 91%, the undersability aspect is 85%, and the attractiveness aspect is 92% and the student's responses to the product was very good with good comments. The developed interactive multimedia can support the nanotechnology learning process in senior high schools.*

**Keywords:** *interactive multimedia, nanotechnology*