

PENGEMBANGAN E-MODUL INTERAKTIF BERBASIS ARTICULATE STORYLINE 3 DENGAN PENDEKATAN KONTEKSTUAL PADA TOPIK INTERAKSI ANTAR PARTIKEL

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Bahan ajar merupakan salah satu komponen yang dapat menunjang keberhasilan belajar peserta didik. Bahan ajar yang digunakan saat pembelajaran kimia di SMA Negeri 2 Ngaglik masih konvensional menggunakan buku cetak, diktat, dan LKPD. Guru kimia belum pernah mengembangkan modul dan e-modul interaktif. Topik interaksi antar partikel merupakan salah satu topik yang dianggap sulit dan bersifat abstrak, sehingga diperlukan bahan ajar yang dapat memvisualisasikan konsep teoretis dengan baik dan kontekstual. Penelitian ini bertujuan untuk: (1) menghasilkan produk berupa e-modul interaktif berbasis Articulate Storyline 3 dengan pendekatan kontekstual yang dikembangkan dengan model 4D yang dimodifikasi menjadi 3D dan (2) mengetahui kriteria valid, efektif, dan praktis produk yang dikembangkan. Penelitian ini merupakan *Research and Development* (R & D) dengan model pengembangan 3D yang terdiri atas tahap *Define*, *Design*, dan *Develop* (Thiagarajan, Semmel, dan Semmel, 1974:6–9). Instrumen yang digunakan dalam penelitian yaitu lembar wawancara, lembar validasi, butir soal *pretest* dan *posttest*, butir soal forum diskusi, tes formatif Kegiatan Belajar 1, Kegiatan Belajar 2, dan Kegiatan Belajar 3, serta angket respon peserta didik terhadap penggunaan produk. Sebanyak 10 orang peserta didik kelas X MIPA 4 SMA Negeri 2 Ngaglik yang terlibat sebagai sampel penelitian dipilih melalui teknik *purposive sampling*. Data penelitian dianalisis menggunakan statistik Aiken dan deskriptif. Hasil penelitian menunjukkan bahwa: (1) model pengembangan 3D telah sesuai untuk mengembangkan produk karena langkahnya sistematis dan rinci dan (2) produk telah memenuhi kriteria sangat valid dengan rata-rata persentase sebesar 86%, memenuhi kriteria sangat efektif dengan rata-rata nilai *posttest* sebesar 76,6, dan produk dikategorikan sangat praktis dengan rata-rata persentase respon peserta didik terhadap produk sebesar 90%. Selain itu, didukung pula dengan perolehan rata-rata nilai forum diskusi yang disajikan dalam produk sebesar 83,33 (kelompok merah) dan 91,60 (kelompok kuning). Rata-rata nilai tes formatif Kegiatan Belajar 1, 2, dan 3 berturut-turut adalah 83, 83, dan 88. Produk dapat menunjang pembelajaran topik interaksi antar partikel di SMA.

Kata Kunci: E-modul berbasis Articulate Storyline 3, pendekatan kontekstual, interaksi antar partikel

ABSTRACT**DEVELOPMENT OF INTERACTIVE E-MODULE BASED
ON ARTICULATE STORYLINE 3 WITH CONTEXTUAL
APPROACH ON THE TOPIC OF INTERPARTICLE
FORCES**

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Teaching material is one of component that can support students' learning success. The teaching materials used when learning chemistry at SMA Negeri 2 Ngaglik are still conventional using printed books, dictate book, and students' worksheet. Chemistry teachers have never developed interactive module and e-module. Interparticle forces is one of the topics that is considered difficult and abstract, so teaching materials are needed that can visualize theoretical concepts well and contextually. This research aims to: (1) create a product in the form of interactive e-module based on Articulate Storyline 3 with contextual approach with modified 4D development model into 3D and (2) determine valid, effective, and practical criteria for the product being developed. This study is Research and Development (R & D) with 3D development model consisting of Define, Design, and Develop stages (Thiagarajan, Semmel, and Semmel, 1974:6–9). The instruments used were interview sheet, validation sheets, pretest and posttest questions, discussion forum questions, formative tests for 1st learning activity 1, 2nd learning activity,, and 3rd learning activity,, as well as students' response questionnaire to the using of product. A total of 10 students of class X MIPA 4 SMA Negeri 2 Ngaglik who were involved as research samples were selected through purposive sampling technique. The research data were analyzed using Aiken statistics and descriptive. The results showed that: (1) 3D development model was suitable for developing product because the steps were systematic and detailed and (2) product has fulfilled very valid criteria with average percentage of 86%, very effective with average posttest of 76.6, and very practical with average percentage of students' response to the product of 90%. In addition, it was also supported by the acquisition of discussion forum presented in the product which had average score of 83.33 (red group) and 91.60 (yellow group). The average scores of formative tests for Learning Activities 1, 2, and 3 were respectively 83, 83, and 88. Product can support learning interparticle forces at senior high school.

Keywords: *E-module based on Articulate Storyline 3, contextual approach, interparticle forces*