

ABSTRAK

**PENGEMBANGAN LEMBAR KERJA PESERTA DIDIK (LKPD)
INTERAKTIF BERBANTUAN *AUGMENTED REALITY* (AR)
PADA MATERI BENTUK MOLEKUL KELAS X SMA**

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Bahan ajar merupakan salah satu komponen dalam pembelajaran yang dapat menunjang keberhasilan belajar peserta didik. Pembelajaran kimia di SMA Negeri 1 Kalasan masih menggunakan bahan ajar yang konvensional berupa buku cetak kimia kelas X, modul, dan LKPD dari Kemendikbud dan guru. Guru belum pernah mengembangkan dan menggunakan LKPD interaktif. Bentuk molekul merupakan salah satu topik yang dianggap sulit, abstrak, dan menantang, sehingga diperlukan bahan ajar yang dapat memvisualisasikan konsep dengan baik, salah satunya melalui pemanfaatan teknologi *Augmented Reality* (AR) dalam LKPD. Penelitian ini bertujuan untuk: (1) menghasilkan produk yang telah memenuhi kriteria kelayakan pengembangan dan (2) mengetahui respon peserta didik terhadap produk selama uji coba. Penelitian ini merupakan *Research and Development* (R&D) yang mengacu pada model pengembangan 3D yaitu *Define*, *Design*, dan *Develop*. Instrumen yang digunakan dalam penelitian ini adalah lembar wawancara, angket survei, lembar validasi, butir soal dalam produk, dan angket respon peserta didik terhadap produk. Sebanyak 10 peserta didik kelas X MIPA dipilih melalui teknik *purposive sampling* sebagai sampel penelitian. Data penelitian yang diperoleh dianalisis menggunakan statistik Aiken's V dan deskriptif. Hasil penelitian menunjukkan bahwa: (1) produk telah memenuhi kriteria sangat layak dan sangat valid dengan rata-rata persentase sebesar 87%, sangat efektif dengan perolehan rata-rata nilai sebesar 99 yang didukung pula dengan perolehan rata-rata persentase ketuntasan pengerjaan soal sebesar 97%, sangat praktis dengan rata-rata persentase sebesar 93% dan (2) respon peserta didik terhadap produk sangat baik. Rata-rata persentase respon peserta didik per butir aspek dalam angket sebesar 92,81% dan sebanyak 70% peserta didik menyatakan produk menarik dan mudah dipahami.

Kata Kunci: LKPD interaktif, *Augmented Reality* (AR), Bentuk Molekul

ABSTRACT**DEVELOPMENT OF AUGMENTED REALITY-ASSISTED
INTERACTIVE STUDENT'S WORKSHEET ON THE
TOPIC OF MOLECULAR SHAPE OF 10th GRADE
IN HIGH SCHOOL**

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Teaching materials are one of the components in learning that can support the success of students' learning. Chemistry learning at SMA Negeri 1 Kalasan still uses conventional teaching materials from the Ministry of Education and Culture and teachers. Teachers have never developed and used interactive LKPD. Molecular shape is one of the topics that is considered difficult, abstract, and challenging, so teaching materials are needed that can visualize the concept well, one of them through using Augmented Reality technology. This research aims to: (1) produce products that meet the development feasibility criteria; and (2) know the response of students to the product during the trial. This study is Research and Development (R&D) that refers to the 3D development model, namely Define, Design, and Develop. The instruments used in this study were interview sheet, survey questionnaire, validation sheets, items in the product, and questionnaire for students' response to the product. A number of 10 students of X MIPA class were selected through purposive sampling technique as research samples. The research data obtained were analyzed using Aiken's V and descriptive statistics. The results showed that: (1) product has fulfilled the criteria of being very feasible and very valid with average percentage of 87%, very effective with average score of 99 that also supported by the acquisition of average percentage of completeness of working on questions of 97%, very practical with average percentage of 93%; and (2) the students' response to the product is very good. The average percentage of student's responses per aspect item in the questionnaire was 92.81% and about 70% students stated that product is interesting and easy to understand.

Keywords: *Interactive student's worksheet, Augmented Reality (AR), Molecular Shape*