

ABSTRAK

PENGEMBANGAN MODUL PRAKTIKUM MAKROMOLEKUL BERBASIS *POP UP* UNTUK MENDUKUNG KETERAMPILAN OBSERVASI PESERTA DIDIK

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Pembelajaran kimia yang bermakna merupakan proses melibatkan peserta didik untuk belajar mengkolaborasikan konsep-konsep kimia dengan proses kerja ilmiah dalam bentuk kegiatan praktikum. Pembelajaran kimia di SMA Negeri 1 Kalasan belum merealisasikan kegiatan praktikum pada seluruh materi kimia yang diajarkan termasuk materi makromolekul. Dalam praktikum yang pernah dilakukan, guru hanya memberikan lembar prosedur kerja yang belum disertai gambar, sehingga peserta didik belum sepenuhnya mandiri melakukan observasi terhadap prosedur kerja dan hasil praktikum. Penelitian ini bertujuan untuk: (1) menghasilkan produk berupa modul praktikum makromolekul berbasis *pop up* yang sesuai dengan model EDIPT (Ling, 2015: 27); (2) mengetahui validitas, efektivitas, dan kepraktisan produk; dan (3) mengetahui keterampilan observasi peserta didik selama penggunaan produk. Penelitian ini merupakan *Research and Development* (R&D) yang mengacu pada model pengembangan EDIPT. Sampel penelitian ini adalah 10 peserta didik kelas XII MIPA SMA Negeri 1 Kalasan yang dipilih secara *random sampling*. Instrumen yang digunakan antara lain lembar wawancara, lembar validasi produk dan instrumen, soal *posttest*, lembar observasi, dan angket respon peserta didik. Analisis data menggunakan SPSS 26, statistik Aiken's V, dan deskriptif. Hasil penelitian menunjukkan: (1) produk cocok dikembangkan dengan model EDIPT karena tahapannya yang sistematis; (2) produk sangat valid dengan rata-rata persentase 91,5%, sangat efektif dengan rata-rata persentase 94,9%, dan sangat praktis dengan rata-rata persentase 92,7%; dan (3) rata-rata keterampilan observasi peserta didik sebesar 94,9% yang termasuk kriteria sangat baik. Produk dapat digunakan untuk mendukung keterampilan observasi peserta didik pada praktikum makromolekul di SMA.

Kata Kunci: Modul berbasis *pop up*, praktikum kimia, keterampilan observasi

ABSTRACT

DEVELOPMENT OF POP UP-BASED MACROMOLECULE PRACTICUM MODULE TO SUPPORT STUDENT'S OBSERVATION SKILL

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Meaningful chemistry learning is the process of engaging students to learn to collaborate chemical concepts with scientific work processes in the form of practicum activities. Chemistry learning at SMA Negeri 1 Kalasan has not realized practicum activities on all chemical materials taught including macromolecule. In the practicum that has been carried out, the teacher only provide procedure worksheets that have not been accompanied by images, so that students are not fully independent in observing work procedures and practicum results. This research aims to: (1) create product in the form of pop up-based macromolecule practicums module; (2) know the validity, effectiveness, and practicality of product; and (3) know the observation skill of students during the use of product. This study is Research and Development (R&D) which refers to EDIPT development model (Ling, 2015: 27). The sample of this research was 10 students of grade 12 at SMA Negeri 1 Kalasan who were selected by simple random sampling. The instruments used include interview sheet, product and instrument validation sheets, posttest questions, observation sheet, and student's response questionnaire. Data were analyzed by using SPSS 26, Aiken's V statistic, and descriptively. The results showed that: (1) product is suitable to be developed with EDIPT model because of its systematic stages; (2) product is very valid with average percentage of 91.5%, very effective with average percentage of 94.9%, and very practical with average percentage of 92.7%; and (3) the average observation skill of students are 94.9% which includes very good criteria. The product can be used to support students' observation skill in macromolecule practicums at senior high school.

Keyword : Pop up-based module, chemical practicum, observation skill