

## ABSTRAK

**Novelyani, NIM. 4163131018 (2020). Pengembangan Bahan Ajar Berbasis Proyek Dengan Multimedia *Adobe Flash* Di SMA Negeri 2 Lintongnihuta Pada Materi Asam Dan Basa.**

Penelitian ini bertujuan untuk mengetahui kelayakan bahan ajar kimia berbasis proyek pada materi asam basa dan peningkatan hasil belajar siswa pada materi asam basa menggunakan bahan ajar berbasis proyek dan multimedia *adobe flash*. Populasi penelitian ini adalah bahan ajar kimia yang beredar di Medan, dosen kimia Unimed, guru kimia dan siswa kelas XI IPA SMA Negeri 2 Lintongnihuta. Adapun sampel yang digunakan meliputi 2 guru kimia dan 3 dosen yang ahli dibidangnya; sampel bahan ajar dari tiga penerbit berbeda; 34 siswa kelas XI MIPA 1 (eksperimen ) dan 34 siswa kelas XI MIPA 2 (pengulangan) yang dibelajarkan dengan menggunakan modul hasil pengembangan. Dalam penelitian ini menggunakan Desain *Pretest-Posttest* satu kelompok (*one group pretest-posttest design*). Data diolah secara deskriptif, diperoleh nilai rata-rata validasi modul yang dikembangkan yaitu kelayakan isi 3,62; penyajian 3,67; bahasa 3,72; dan kegrafikan 3,72; dengan rerata 3,68; artinya modul hasil pengembangan sudah valid berdasarkan kriteria standar BSNP. Rerata persentasi peningkatan hasil belajar siswa kelas eksperimen yaitu 68% dan kelas pengulangan yaitu 65%. Uji hipotesis dengan uji t pihak kanan pada taraf  $\alpha = 0,05$  diperoleh  $t_{hitung} > t_{tabel}$  ( $7,99 > 1,697$  (eksperimen) dan  $6,65 > 1,697$  (pengulangan)). Hasil penelitian menunjukkan bahwa modul kimia yang terintegrasi pembelajaran berbasis proyek dengan multimedia *adobe flash* yang dikembangkan sudah baik dan sesuai standar kriteria BSNP serta meningkatnya hasil belajar siswa dengan modul yang dikembangkan tersebut.

**Kata Kunci** : Bahan Ajar, Hasil Belajar, Asam dan Basa, *Project Based Learning*, Standar BSNP

## ABSTRACT

**Novelyani, NIM. 4163131018 (2020). Development of Project-Based Teaching Materials with Adobe Flash Multimedia in Lintongnihuta 2 Public High School on Acid and Base Materials.**

This study aims to determine the feasibility of project-based chemical teaching materials on acid-base material and increase student learning outcomes on acid-base material using project-based teaching materials and Adobe Flash multimedia. The population of this study is chemical teaching materials circulating in Medan, Unimed chemistry lecturers, chemistry teachers and students of class XI IPA of Lintongnihuta 2 Public High School. The sample used includes 2 chemistry teachers and 3 lecturers who are experts in their fields; sample of teaching materials from three different publishers; 34 students of class XI MIPA 1 (experimental) and 34 students of class XI MIPA 2 (repetition) who were taught using the results of the development module. In this study using one group pretest-posttest design. Data were processed descriptively, obtained an average value of the validation of the modules developed, namely the content eligibility of 3.62; presentation 3.67; language 3,72; and graphic 3.72; with an average of 3.68; it means that the development module is already valid based on BSNP standard criteria. The mean percentage of improvement in student learning outcomes in the experimental class was 68% and the repetition class was 65%. Hypothesis testing with the right-side t test at the level  $\alpha = 0.05$  obtained  $t_{(7.99)} > 1.697$  (experimental) and  $t_{(6.65)} > 1.697$  (repetition)). The results showed that the chemistry module integrated project-based learning with adobe flash multimedia that was developed was good and in accordance with BSNP criteria standards and increased student learning outcomes with the developed module.

**Keywords:** Teaching Materials, Learning Outcomes, Acids and Bases, Project Based Learning, BSNP Standards

