

## ABSTRAK

**Nadila Cempaka Hany, NIM 4202431016 (2024). Pengembangan e-Modul Kimia Berbasis Project Based Learning Menggunakan Aplikasi Flipbook Untuk Meningkatkan Hasil Belajar Dan Melatih Kolaborasi Pada Materi Asam Basa.**

Penelitian ini bertujuan: (1) mengetahui validitas e-modul berbasis PjBL, (2) mengetahui praktikalitas e-modul berbasis PjBL, (3) mengetahui efektivitas e-modul berbasis PjBL, dan (4) mengetahui apakah terdapat korelasi yang signifikan antara kolaborasi dan hasil belajar. Penelitian ini dilakukan di SMA Negeri 1 Stabat dengan sampel yang di teliti adalah kelas XI MIA 2. Instrumen yang digunakan instrumen non-tes berupa angket BSNP dan instrumen tes sebanyak 20 soal yang valid dengan reliabilitas 0,89. Teknik analisis data dilakukan dengan: uji kelayakan e-modul sesuai BSNP, uji keterampilan kolaborasi, dan uji korelasi antara keterampilan kolaborasi dengan hasil belajar. Hasil yang diperoleh dalam penelitian ini adalah: (1) *E-modul* berbasis PjBL dikatakan “valid” setelah di validasi oleh 1 orang dosen kimia dengan rata-rata penilaian materi sebesar 89% dan rata-rata penilaian media sebesar 95% yang dapat dikategorikan “sangat layak”; (2) *E-modul* berbasis PjBL dikatakan “praktis” setelah mendapatkan respon guru kimia dengan rata-rata persentase 97% yang dapat dikategorikan “sangat layak” dan respon peserta didik dengan rata-rata penilaian sebesar 87%; (3) *E-modul* berbasis PjBL dikatakan “efektif” dengan hasil nilai posttest sebesar 82,17 yang mengalami peningkatan dari 47,33. Maka diperoleh skor N-Gain sebesar 0,66 (65,72%) berada pada kriteria sedang; (4) Terdapat korelasi yang positif dan signifikan antara keterampilan kolaborasi dengan hasil belajar peserta didik dimana  $r_{hitung}$  sebesar 0,593 dan  $r_{tabel}$  sebesar 0,361.

**Kata Kunci:** Pengembangan, e-Modul, Berbasis PjBL, Korelasi, Asam Basa



## **ABSTRACT**

**Nadila Cempaka Hany, NIM 4202431016 (2024). Development of a Chemistry e-Module Based on Project Based Learning Using the Flipbook Application to Improve Learning Outcomes and Train Collaboration on Acid-Base Material.** This research aims to: (1) determine the validity of PjBL-based e-modules, (2) determine the practicality of PjBL-based e-modules, (3) determine the effectiveness of PjBL-based e-modules, and (4) determine whether there is a significant correlation between collaboration and learning outcomes. This research was conducted at SMA Negeri 1 Stabat with the sample studied being class Data analysis techniques were carried out by: e-module feasibility test according to BSNP, collaboration skills test, and correlation test between collaboration skills and learning outcomes. The results obtained in this research are: (1) The PjBL-based E-module is said to be "valid" after being validated by 1 chemistry lecturer with an average material assessment of 89% and an average media assessment of 95% which can be categorized as "very worthy"; (2) PjBL-based e-modules are said to be "practical" after receiving chemistry teacher responses with an average percentage of 97% which can be categorized as "very feasible" and student responses with an average rating of 87%; (3) The PjBL-based e-module is said to be "effective" with a posttest score of 82.17 which has increased from 47.33. So the N-Gain score was obtained at 0.66 (65.72%) which is in the medium criteria; (4) There is a positive and significant correlation between collaboration skills and student learning outcomes where rcount is 0.593 and rtable is 0.361.

**Keywords:** Development, e-Module, PjBL Based, Correlation, Acid Base

