# ABSTRAK

**EIKA ABIGAIL MUNTHE.** Pengembangan E-Modul Berbasis Discovery Learning Pada Materi Protein, Tesis, Medan: Program Studi Pendidikan Kimia, Pascasarjana Universitas Negeri Medan, 2019.

Penelitian ini bertujuan untuk mengetahui kelayakan buku biomolekul universitas berdasarkan kriteria kelayakan Standar Nasional Perguruan Tinggi (SNPT), kelayakan e-modul berbasis *discovery learnig* pada materi protein yang telah dikembangkan berdasarkan kriteria kelayakan SNPT, perbedaan peningkatan hasil belajar mahasiswa yang dibelajarkan menggunakan e-modul berbasis *discovery learning* dengan mahasiswa yang dibelajarkan menggunakan buku biomolekul universitas, serta respon mahasiswa terhadap penggunaan e-modul berbasis *discovery* learning. Penelitian ini menggunakan penelitian pengembangan yang telah mengacu pada model ADDIE (*Analysis, Design, Development, Implementation* and *Evaluation*). Uji coba terbatas dilakukan melalui pengamatan terhadap hasil belajar dan respon mahasiswa. Penelitian dilakukan di Program Studi Pendidikan Kimia, Jurusan Kimia, Universitas Negeri Medan. Teknik pengumpul data menggunakan angket SNPT, lembar instrumen tes dan angket respon mahasiswa. Hasil penelitian menunjukkan bahwa: (1) buku biomolekul universitas pegangan mahasiswa sudah layak, tetapi masih membutuhkan perbaikan pada beberapa kriteria aspek kelayakan; (2) e-modul berbasis *discovery learning* pada materi protein yang telah dikembangkan telah memenuhi kriteria kelayakan SNPT; (3) terdapat perbedaan peningkatan hasil belajar yang signifikan antara mahasiswa yang menggunakan e-modul berbasis *discovery learning* dengan mahasiswa yang menggunakan buku biomolekul universitas dengan nilai Sig. (2.tailed) < α (0,000 < 0,05); (4) respon mahasiswa terhadap e-modul berbasis *discovery learning* pada materi protein dikategorikan baik.

**Kata kunci**: e-modul, *discovery learning*, kelayakan SNPT, peningkatan hasil belajar mahasiswa, protein, respon mahasiswa.

# ABSTRACT

**EIKA ABIGAIL MUNTHE.** Discovery Learning Based E-Module on Protein Material Development, Medan: Magister of Chemistry Education: Postgraduate Program, Universitas Negeri Medan, 2019.

This study aims to determine the feasibility of university biomolecule books based on the eligibility criteria of National Higher Education Standards (SNPT), the feasibility of discovery-learning based e-modules on protein material that has been developed based on the SNPT eligibility criteria, differences in student learning outcomes improvement that are taught using e-modules based discovery learning with students who are taught using university biomolecule books, and student responses to the use of discovery learning-based e-modules. This study uses development research that has referred to the ADDIE model (*Analysis, Design, Development, Implementation* and *Evaluation*). Limited trials are carried out through observations of learning outcomes and student responses. The research was conducted at the Chemistry Education Study Program, Department of Chemistry, Universitas Negeri Medan. Data collection techniques using the SNPT questionnaire, test instrument sheets and student response questionnaire. The results showed that: (1) The university biomolecules student handbook is feasible, but it still needs improvement on several eligibility aspects criteria; (2) discovery learning-based e-modules on protein material that have been developed have met the SNPT eligibility criteria; (3) there is a significant difference in the increase in learning outcomes between students who use discovery learning based e-modules and students who use university biomolecule books with Sig. (2.tailed) $< \alpha$ (0,000 < 0.05); (4) students' responses to discovery learning based e-modules on protein material are categorized as good.

**Keywords**: discovery learning, e-module, improvement of student learning outcomes, protein, SNPT eligibility, student response.