

## ABSTRAK

Elsa Febrina Tarigan: **Pengembangan E-Modul Inovatif Berbasis KKNI (Kerangka Kualifikasi Nasional Indonesia) Pembelajaran Kimia Non Logam Pada Materi Oksigen dan Sulfur.** Tesis. Medan: Program Studi Pendidikan Kimia, Pascasarjana Universitas Negeri Medan, 2022.

Pembelajaran saat ini memerlukan suatu inovasi bahan ajar yang inovatif untuk mencapai tujuan pembelajaran. Penelitian ini bertujuan untuk mengetahui (1) analisis kebutuhan e-modul inovatif berbasis KKNI pada pembelajaran kimia non logam pada materi oksigen dan sulfur, (2) kelayakan e-modul berdasarkan BSNP, (3) ada peningkatan hasil belajar mahasiswa, (4) hasil belajar mahasiswa memenuhi standar kompetensi minimal, serta (5) respon mahasiswa. Jenis penelitian ini adalah penelitian pengembangan yang meliputi: tahap (1) Analisis kebutuhan meliputi analisis kurikulum, bahan ajar dan media pembelajaran, tahap (2) Pengembangan e-modul inovatif berbasis KKNI untuk pembelajaran kimia anorganik pada materi oksigen dan sulfur menggunakan software *flip pdf professional* yang dapat diakses melalui link e-modul, tahap (3) Standarisasi *e-modul* inovatif berbasis KKNI sesuai BSNP dan kelayakan oleh validator ahli materi dan media, tahap (4) Implementasi pada mahasiswa Prodi Kimia, (5) Evaluasi seluruh kegiatan meliputi analisis data instrumen standarisasi *e-modul*, instrumen tes, pretest, posttest dan angket respon mahasiswa. Sampel dalam penelitian ini mahasiswa Prodi Kimia UNIMED angkatan 2020 berjumlah 31 orang. Instrumen penelitian berupa lembar penilaian BSNP, soal tes objektif yang telah valid dan angket respon mahasiswa. Hasil penelitian diperoleh bahwa *e-modul* inovatif berbasis KKNI hasil pengembangan layak digunakan berdasarkan Badan Standar Nasional Pendidikan (BSNP) dengan perolehan rata-rata keseluruhan sebesar 3,56. Peningkatan hasil belajar mahasiswa setelah menggunakan *e-modul* inovatif berbasis KKNI telah mencapai kriteria N-gain tinggi dengan perolehan nilai sebesar 0,74. Hasil belajar mahasiswa memenuhi standar kompetensi minimal, dan Respon mahasiswa terhadap *e-modul* inovatif berbasis KKNI dikategorikan baik sekali dengan rata-rata 89,04%.

**Kata Kunci:** E-modul, Bahan Ajar Inovatif, KKNI, Pembelajaran Anorganik.



## ABSTRACT

**Elsa Febrina Tarigan:** Development of an Innovative E-Module for Learning Non-Metal Chemistry on Oxygen and Sulfur Materials Based on the KKNI (Indonesian National Qualification Framework). Thesis. Medan: Chemical Education Study Program, Postgraduate Program, State University of Medan, 2022.

Learning today requires innovative teaching materials and approaches to achieve learning objectives. This study aims to determine (1) the need for innovative e-modules based on KKNI in non-metal chemistry learning on oxygen and sulfur materials; (2) the feasibility of e-modules based on BSNP; (3) whether there is an increase in student learning outcomes; (4) whether learning outcomes meet the minimum competency standards; and (5) student responses. This type of research is called development research, which includes: Stage 1: Needs analysis includes an analysis of the curriculum, teaching materials, and learning media. Stage (2) Development of innovative e-modules based on KKNI for inorganic chemistry learning on oxygen and sulfur materials using *flip pdf professional* software, which can be accessed via the e-module link, stage 3: Standardization of an innovative e-module based on KKNI and validated by material and media experts. (4) Chemistry Study Program students' implementation; (5) Evaluation of all activities, including data analysis; e-module standardization instrument, test instrument, pretest, posttest, and student response questionnaires. The sample in this study was composed of 31 students from the UNIMED Chemistry Study Program class of 2020. The research instruments were in the form of a BSNP assessment sheet, valid objective test questions, and student response questionnaires. The results showed that the innovative e-module based on the KKNI developed appropriate to be used based on the National Education Standards Agency (BSNP) with an overall average gain of 3.56. The improvement of student learning outcomes after using innovative e-modules based on KKNI has reached the high N-gain criteria with a score of 0.74. Student learning outcomes meet the minimum competency standards, and student responses to innovative e-modules based on KKNI are categorized as very good, with an average of 89.04%.

**Keywords:** *e-Module, Innovative Teaching Materials, KKNI, Inorganic Learning.*