

## ABSTRAK

**PENGEMBANGAN E-MODUL AJAR KURIKULUM MERDEKA  
BERBASIS *DISCOVERY LEARNING* PADA TOPIK HAKIKAT ILMU  
KIMIA, KERJA ILMIAH, DAN K3**

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Modul ajar Kurikulum Merdeka merupakan perangkat pembelajaran yang dirancang guru dengan tujuan untuk merencanakan pelaksanaan proses kegiatan pembelajaran agar berjalan efektif dan efisien. Penyusunan modul ajar kimia Kurikulum Merdeka dianggap sulit oleh guru karena kurangnya sumber dalam pembuatan modul ajar dan kurang familiar terhadap komponen seperti Profil Pelajar Pancasila. Penelitian ini bertujuan untuk: (1) menghasilkan produk berupa e-modul ajar kimia Kurikulum Merdeka berbasis *Discovery Learning* pada materi hakikat ilmu kimia, kerja ilmiah, dan K3 dan (2) mengetahui kelayakan dari pengembangan produk berupa e-modul ajar kimia Kurikulum Merdeka berbasis *Discovery Learning* pada materi hakikat ilmu kimia, kerja ilmiah, dan K3. Metode yang digunakan dalam penelitian ini adalah metode *Research and Development* (R & D) dengan model pengembangan 4D yang dimodifikasi menjadi 3D yaitu *Define*, *Design*, dan *Develop*. Subjek pada penelitian ini yaitu 6 orang guru kimia dari beberapa sekolah di Yogyakarta dan Kalimantan Timur. Instrumen penelitian yang digunakan dalam pengumpulan data yaitu lembar validasi, lembar wawancara, butir soal, dan angket respon guru. Data penelitian dianalisis secara kualitatif dan kuantitatif. Hasil penelitian menunjukkan: (1) model pengembangan 3D telah sesuai untuk mengembangkan produk karena memiliki langkah yang sistematis dan (2) produk memenuhi kriteria sangat valid dari segi materi dan media dengan rata-rata persentase yaitu 91% dan 93,75%. memenuhi kriteria sangat efektif dengan rata-rata nilai yaitu 90, dan produk memenuhi kriteria sangat praktis dengan rata-rata persentase sebesar 88%. Produk e-modul ajar kimia Kurikulum Merdeka berbasis *Discovery Learning* dapat menunjang pembelajaran topik materi hakikat ilmu kimia, kerja ilmiah, dan K3 di SMA.

**Kata Kunci:** E-modul ajar, Kurikulum Merdeka.

**ABSTRACT****DEVELOP OF E-MODULES FOR TEACHING CHEMISTRY INDEPENDENT CURRICULUM BASED ON DISCOVERY LEARNING ON THE TOPIC OF THE NATURE OF CHEMISTRY, SCIENTIFIC WORK, AND K3**

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*The Independent Curriculum teaching module is a learning tool designed by teachers with the aim of planning the implementation of the learning activity process so that it runs effectively and efficiently. The preparation of the Chemistry Teaching Module of the Independent Curriculum is considered difficult by teachers due to the lack of resources in making teaching modules and lack of familiarity with components such as the Pancasila Student Profile. This research aims to: (1) produce a product in the form of an e-module for teaching chemistry of the Independent Curriculum based on Discovery Learning on the essence of chemistry, scientific work, and K3 and (2) to determine the feasibility of product development in the form of an e-module for teaching chemistry of the Independent Curriculum based on Discovery Learning on the essence of chemistry, scientific work, and K3. The method used in this study is the Research and Development (R&D) method with a 4D development model modified into 3D, namely Define, Design, and Develop. The subjects in this study are 6 chemistry teachers from several schools in Yogyakarta and East Kalimantan. The research instruments used in data collection are validation sheets, interview sheets, question items, and teacher response questionnaires. The research data was analyzed qualitatively and quantitatively. The results of the study showed: (1) the 3D development model is suitable for developing products because it has systematic steps and (2) the product meets the criteria of being very valid in terms of materials and media with an average percentage of 91% and 93.75%. met the criteria very effectively with an average score of 90, and the product met the criteria very practical with an average percentage of 88%. The Discovery Learning-based Independent Curriculum chemistry teaching e-module product can support the learning of the topics of chemistry essential material, scientific work, and K3 in high school.*

**Keyword:** *E-module teaching, Independent Curriculum.*