ABSTRAK

PENGEMBANGAN E-LKPD BERBASIS DISCOVERY LEARNING PADA MATERI SISTEM PERIODIK UNSUR BERBANTUAN FLIPHTML5

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Materi sistem periodik unsur dalam kimia tergolong abstrak karena mencakup konsep konfigurasi elektron, struktur atom, dan kecenderungan sifat unsur, sehingga memerlukan bahan ajar pembelajaran yang membantu visualisasi. Penelitian ini bertujuan untuk: (1) mengembangkan e-LKPD berbasis *discovery learning* menggunakan platform FlipHTML5 pada materi sistem periodik unsur, dan (2) mengetahui validitas, kepraktisan, dan keefektifan e-LKPD tersebut. Penelitian ini menggunakan metode *Research and Development* (R&D) dengan model pengembangan 4-D yang dimodifikasi menjadi 3-D, yaitu tahap *Define*, *Design*, dan *Develop*. Instrumen yang digunakan mencakup lembar validasi, butir soal, dan angket respon peserta didik. Uji coba dilakukan pada 12 peserta didik kelas XF SMA Negeri 1 Ngaglik Yogyakarta. Hasil penelitian menunjukkan bahwa: (1) e-LKPD yang dikembangkan memenuhi kriteria sangat valid dengan rata-rata persentase sebesar 83,3%, (2) sangat efektif dengan rata-rata persentase sebesar 87,9%, dan (3) sangat praktis dengan rata-rata persentase sebesar 82,7%. Dengan demikian, e-LKPD berbasis *discovery learning* berbantuan FlipHTML5 dinyatakan layak digunakan dalam pembelajaran kimia pada materi sistem periodik unsur.

Kata kunci: *discovery learning*, e-LKPD, FlipHTML5, sistem periodik unsur.

ABSTRACT

DEVELOPMENT OF DISCOVERY LEARNING-BASED E-LKPD ON PERIODIC TABLE OF ELEMENTS MATERIAL ASSISTED BY FLIPHTML5

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The periodic table of elements is a chemistry topic that is considered abstract, as it involves concepts such as electron configuration, atomic structure, and the periodic trends of elements. Therefore, it requires instructional materials that can support conceptual visualization. This study aims to: (1) develop an electronic student's worksheet (e-LKPD) based on the discovery learning model using the FlipHTML5 platform on the topic of the periodic table of elements, and (2) determine its validity, practicality, and effectiveness. The research employs a Research and Development (R&D) method using a modified 4-D development model, adapted into a 3-D model consisting of Define, Design, and Develop stages. The instruments used include validation sheets, test items, and student response questionnaires. A limited trial was conducted on 12 students of class XF at SMA Negeri 1 Ngaglik, Yogyakarta. The results showed that: (1) the developed e-LKPD fulfilled the criteria for high validity with an average percentage of 83.3%, (2) is highly effective with an average percentage of 87.9%, and (3) is highly practical with an average percentage of 82.7%. Therefore, the discovery learning-based e-LKPD assisted by FlipHTML5 is considered feasible for use in chemistry learning, particularly on the topic of the periodic table of elements.

***Keywords**: discovery learning, e-LKPD, FlipHTML5, periodic table of elements.*