

ABSTRAK

Penelitian ini bertujuan untuk mengembangkan Lembar Kerja konteks Sel Surya Tersensitasi Zat Warna (*Dye Sensitized Solar Cell, DSSC*) untuk membangun literasi kimia siswa SMA. Desain penelitian yang dikembangkan menggunakan model 4D (*define, design, develop, dan disseminate*) dengan metode deskriptif dan evaluatif. Tahap pertama adalah pendefinisian (*define*), yaitu menganalisis keberadaan konteks teknologi pada buku dan LKS yang beredar di kota Bandung serta syarat-syarat pengembangan untuk menentukan tujuan pembelajaran berdasarkan PISA 2012 dan Kurikulum 2013. Tahap kedua adalah mendesain (*design*) yaitu merancang produk awal berupa LKS praktikum dan non-praktikum berdasarkan tujuan pembelajaran yang telah dirumuskan. Tahap ketiga adalah pengembangan (*develop*) LKS inkuiri terbimbing berdasarkan hasil validasi para ahli dan uji keterlaksanaan. Pada penelitian ini belum dilakukan tahap keempat yaitu penyebaran (*disseminate*). Instrumen penelitian yang digunakan adalah lembar perumusan tujuan pembelajaran, rancangan optimasi bahan, lembar validasi teks dasar dan isi LKS, lembar observasi keterlaksanaan dan pedoman penilaian jawaban. Hasil penelitian diperolehnya tujuan pembelajaran yang berisi konteks DSSC dan konten ikatan kovalen, sel volta, dan unsur titanium yang dirangkai menggunakan kata kerja operasional yang mengakomodir KI dan KD serta kompetensi PISA 2012 serta LKS praktikum dan non-praktikum untuk membangun literasi kimia siswa SMA. Hasil proses validasi menyatakan valid terhadap produk oleh lima validator dengan perbaikan berdasarkan saran-saran validator, sedangkan hasil uji keterlaksanaan inkuiri terbimbing diperoleh rata-rata persentase keterlaksanaan setiap tahapan inkuiri sebesar 93,75%, termasuk kategori sangat baik dan rata-rata persentase ketepatan jawaban siswa terhadap tugas-tugas dalam LKS sebesar 84,2%, termasuk kategori sangat baik.

Kata kunci : inkuiri terbimbing, literasi kimia, LKS, model 4D, DSSC

ABSTRACT

The aim of this study to produce work sheet *Dye Sensitized Solar Cell* (DSSC) that can be used in building chemical literacy. Research design in this study use 4D model (define, design, develop, and disseminate) with descriptive and evaluative method. The first step is define, this step is analyzing the existence of study books and work sheets that contain renewable technology circulating in Bandung city as well as the terms of the development to determine the purpose of learning based on PISA 2012 and 2013 Curriculum. The second step is design, this step is designing starting product those are practicum work sheet and non practicum worksheet depend on the purpose of learning that has formulated. The third step is develop guided inquiry LKS that has constructed depend on result of the experts and feasibility test. In this study has not done the fourth stage is disseminate. Instruments of this study are Sheet of the formulation of the purpose of learning, design optimize material, sheet of validation text primary and the contents of LKS, sheet of observation feasibility and guidelines assessment answer. The result of this study of procures the purpose of learning that contains the context of DSSC and content voltaic cell, conjugate bonding, and the transition titanium which have developed use a verb operational to accommodate KI and KD as well as PISA 2012 competence and experiment work sheet also non experiment in building chemical literacy high school student. The result of validation process shows that five experts stated valid to product with improvements based on experts suggestions, whereas the result of feasibility guided inquiry test obtained feasibility percentage average every inquiry steps is 93.7% which means very good category and percentage average of the accuracy of answers students in against duties in LKS is 84.2% which means very good category.

Key word: guided inquiry, chemical literacy, LKS, 4D model, DSSC

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PENGEMBANGAN LEMBAR KERJA INKUIRI TERBIMBING KONTEKS SEL SURYA TERSENSITASI ZAT WARNA (DYE SENSITIZED SOLAR CELL, DSSC) UNTUK MEMBANGUN LITERASI KIMIA SISWA SMA

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