

**PENGEMBANGAN BAHAN AJAR BERBASIS *CHEMO-
ENTERPRENEURSHIP* DENGAN METODE 4S-TMD PADA POKOK
BAHASAN ASAM-BASA DI KELAS XI SMA**

**Dewi Yuliana Sihite
1503186**

ABSTRAK

Penelitian ini bertujuan untuk mengembangkan bahan ajar berbasis *Chemo-Entrepreneurship* (CEP) pada pokok bahasan asam-basa. Metode penelitian yang digunakan adalah *Development Research* (DR) yang terdiri dari tiga tahap yaitu *design*, *development*, dan *evaluation*. Pada tahap *design* dilakukan analisis permasalahan dan identifikasi materi kimia yang sulit. Selanjutnya, pada tahap *development* dikembangkan bahan ajar dengan metode *Four Step Teaching Material* (4S-TMD), meliputi proses seleksi, strukturisasi, karakterisasi, dan reduksi didaktik. Pada tahap *evaluation* dilakukan uji keterpahaman dan uji kelayakan. Hasil tahap *design* diperoleh (1) analisis KD 3.10 dan KD 4.10 yang berkaitan dengan materi asam-basa; (2) analisis *text book* dan *journal*; dan (3) desain kerangka bahan ajar asam-basa berbasis CEP. Tahap *development* dilakukan proses seleksi diperoleh (1) dua KD yaitu KD 3.10 dikembangkan menjadi dua puluh tiga indikator dan KD 4.10 dikembangkan tujuh indikator; (2) pemilihan penjelasan konsep yang merujuk kepada berbagai sumber bacaan; dan (3) hasil analisis berupa tiga puluh satu konsep CEP yang dapat diintegrasikan ke dalam topik asam-basa. Hasil dari tahap seleksi diperoleh kumpulan materi asam-basa. Tahap strukturisasi menghasilkan peta konsep, struktur makro, dan multipel representasi pada topik asam-basa. Hasil dari tahap strukturisasi diperoleh draf bahan ajar. Pada tahap karakterisasi diperoleh lima teks sulit yang selanjutnya dilakukan tahapan keempat yaitu reduksi didaktik. Reduksi didaktik yang dilakukan melalui empat cara, yaitu penggunaan gambar dan contoh, pengabaian, partikularisasi, dan kembali ke tahapan kualitatif. Hasil evaluasi terhadap pengembangan bahan ajar disimpulkan bahwa bahan ajar berbasis CEP (1) disusun untuk mengoptimalkan potensi dan menumbuhkan jiwa *entrepreneur* peserta didik; (2) persentase keterpahaman bahan ajar sebesar 80,770% yang dikategorikan tinggi sehingga disimpulkan bahan ajar bersifat *self instructional*; dan (3) persentase hasil kelayakan bahan ajar berbasis CEP sebesar 94.234%, yang berarti bahan ajar yang telah dikembangkan dikategorikan sangat layak.

Kata kunci: *Bahan ajar, Chemo-Entrepreneurship, asam-basa, 4S-TMD*

DEVELOPMENT OF *CHEMO-ENTREPRENEURSHIP*-BASED TEACHING MATERIAL ON ACID-BASE THOROUGH 4S-TMD METHOD

Dewi Yuliana Sihite

1503186

ABSTRACT

This study aims to develop CEP-based teaching material on acid-base. The research method was development research, which consist of design, development, and evaluation. Design stage is done analyzing problems and identification difficult concepts chemistry. Furthermore, in development step was developed teaching materials through four step teaching materials (4S-TMD) method, which consist of selection, structuring, characterization, and didactic reduction process. In evaluation stage, comprehension and feasibility test were conducted on teaching material. The design stage results are obtained (1) analyzing two KD (3.10 and 4.10) relating acid-base materials; (2) analyzing text books and journals; and (3) designing frameworks of CEP-based acid-base materials. Development stage is done by the selection process (1) obtained by two KD that is KD 3.10 developed into twenty three Indikators and KD 4.10 developed seven indikators; (2) obtained thirteen concept labels; and (3) the results of the analysis are thirty-one CEP concepts that can be integrated into acid-base topik. The result of selection concept is obtained by collection acid-base materials. The structuring stage is done concept maps, macro structures, and multiple representations on acid-base topics. The results of characterization stage is found five difficult texts which then is done didactic reduction. Didactic reduction was done in to through four ways i.e., using images and examples, abandonment, particularization, and return to the qualitative stage. The result of the evaluation stage on the developed teaching materials came to the conclusion that the teaching material developed have characteristics follows (1) is arranged for optimizing potential students and for improving entrepreneurship of students; (2) percentage of comprehension teaching material at 80,770% with categorized high equal which concluded self instructional; and (3) the percentage of CEP-based feasibility result of 94.234%, which means that developed material has been categorized extremely feasible.

Keyword: *Teaching Material, Chemo-Entrepreneurship, acid-base, 4S-TMD*