

**PENGEMBANGAN BUKU PENGAYAAN GURU KIMIA SMA/MA
UNTUK MEMBELAJARKAN KETERAMPILAN PROSES SAINS SISWA
MELALUI DEMONSTRASI KIMIA BERBASIS *PREDICT-OBSERVE-
EXPLAIN* (POE) MATERI LAJU REAKSI, LARUTAN ASAM BASA, DAN
SISTEM KOLOID**

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ABSTRAK

Penelitian ini bertujuan untuk: (1) menentukan komponen struktur buku pengayaan guru kimia SMA/MA untuk membelajarkan keterampilan proses sains siswa melalui demonstrasi kimia berbasis *Predict-Observe-Explain* (POE) materi laju reaksi, larutan asam basa, dan sistem koloid, (2) mengetahui kualitas buku pengayaan tersebut berdasarkan komponen penilaian materi atau isi, penyajian, keterbacaan (bahasa dan gambar), dan grafika.

Sejalan dengan tujuan tersebut, penelitian dilakukan dengan menggunakan metode campuran (*mixed method research*) dengan desain *exploratory mixed method design*, model *instrument development model*. Prosedur penelitian yang dilakukan terdiri dari empat tahap, yaitu kualitatif, pengembangan, kuantitatif, dan interpretasi. Instrumen penelitian yang digunakan adalah kuisisioner terbuka untuk memperoleh data masukan produk dan kuisisioner *checklist* untuk memperoleh data skor penilaian produk dari 42 indikator penilaian.

Hasil analisis dan pembahasan menunjukkan bahwa buku pengayaan guru yang telah dikembangkan memiliki komponen struktur, yaitu (1) bagian umum, (2) bagian awal buku, (3) bagian untuk siswa yang terdiri dari Lembar Kerja Siswa (LKS), (4) bagian penjelasan untuk guru, dan (5) Lampiran. Buku pengayaan guru yang dikembangkan merupakan buku yang diperuntukkan bagi guru kimia SMA/MA, sebagai panduan bagi guru dalam membelajarkan kimia laju reaksi, larutan asam basa, dan sistem koloid dengan teknik *Predict-Observe-Explain* (POE). Kualitas buku pengayaan termasuk kategori sangat baik dengan skor rata-rata 170,6.

Kata kunci: buku pengayaan guru, demonstrasi kimia, *Predict-Observe-Explain* (POE), *mix-method research*

**DEVELOPMENT OF SELF-ENRICHMENT BOOK FOR CHEMISTRY
TEACHERS OF SMA/MA IN LEARNING SCIENCE PROCESS SKILLS
THROUGH CHEMISTRY DEMONSTRATIONS USING PREDICT-
OBSERVE-EXPLAIN (POE) TECHNIQUE ON MATERIALS OF
REACTION RATES, ACID BASE SOLUTIONS, AND COLLOIDAL
SYSTEMS**

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ABSTRACT

This study is aimed to: (1) determine the component of structure of self-enrichment book for chemistry teachers of SMA/MA in learning science process skills through chemistry demonstrations using Predict-Observe-Explain (POE) technique on materials of reaction rates, acid base solutions, and colloidal systems, (2) determine the quality of the book based on the materials or contents assessment component, the material presented, the legibility (language and images), as well as the graphics component.

The method used in this research is mixed method research with exploratory mixed method design, instrument development model. The procedure of this research consists of four stages: qualitative, development, quantitative, and interpretation. The instruments used in this research are open questionnaire to obtain input data and checklist questionnaire to obtain data on assessment score of 42 assesment indicators.

The analysis result shows that the self-enrichment for teachers has five structure components as followed: (1) general part, (2) introduction part, (3) students' worksheet, (4) explanation part for teachers, (5) appendices. The self-enrichment book is used for teachers as a guidance book in teaching reaction rates, acid base solutions, and colloidal systems using Predict-Observe-Explain (POE) technique. The quality of the book is in excellent category with an average score of 170.6.

Key words: self-enrichment book for teacher, chemistry demonstrations, Predict-Observe-Explain (POE), mix-method research