

## ABSTRAK

**Mega Lestari.** Pengembangan Bahan Ajar Inovatif dan Interaktif Melalui Pendekatan Saintifik pada Pembelajaran Reaksi Redoks dan Elektrokimia

Penelitian ini bertujuan untuk memperoleh bahan ajar inovatif dan interaktif yang terintegrasi pendekatan saintifik dan melibatkan teknologi informasi berbasis web. Beberapa pendekatan saintifik yang digunakan adalah *Problem Based Learning*, *Project Based Learning* dan *Inquiry Learning*. Bentuk penelitian yang dilakukan adalah penelitian deskriptif. Jenis penelitian termasuk penelitian dan pengembangan (*research and development*). Subjek penelitian adalah bahan ajar pokok bahasan reaksi redoks dan elektrokimia. Adapun, sampel yang digunakan pada penelitian ini terdiri dari 20 orang mahasiswa jurusan kimia program studi pendidikan kimia Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Negeri Medan dan 2 orang dosen pengampu mata kuliah kimia dasar di Universitas Negeri Medan. Pemilihan sampel dalam penelitian menggunakan teknik *purposive sampling*. Hasil analisis bahan ajar kimia dasar adalah bahwa bahan ajar tersebut cukup valid, namun perlu untuk dikembangkan dari berbagai aspek. Bahan ajar yang telah dikembangkan divalidasi oleh validator ahli. Penilaian dilakukan berdasarkan angket standar BSNP (Badan Standar Nasional Pendidikan). Berdasarkan data hasil penelitian diperoleh rata-rata pendapat dari 22 responden yang terdiri dari 2 orang dosen dan 20 orang mahasiswa terhadap kualitas bahan ajar yang dikembangkan 3,22 yang tergolong dalam kriteria sangat valid artinya bahan ajar hasil pengembangan sangat layak untuk dipergunakan dalam pembelajaran. Penjabaran dari keseluruhan rata-rata responden terhadap kualitas bahan ajar yang dikembangkan adalah rata-rata hasil penilaian dosen pengampu Kimia Umum yaitu sebesar 3,40 dan rata-rata hasil penilaian mahasiswa pendidikan Kimia yaitu sebesar 3,04

Kata Kunci: *Penelitian dan Pengembangan (R&D), Reaksi Redoks dan Elektrokimia, Pendekatan Saintifik*

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## ABSTRACT

**Mega Lestari.** Innovative and Interactive Development of Teaching Materials Through Scientific Approach on Teaching Redox Reaction and Electrochemistry

This study aims to obtain innovative and interactive teaching materials integrated scientific approach and involves a web-based information technology. Some of scientific approach that used in this research are problem based learning, project based learning and inquiry learning. Kind of the research is descriptive research. This type of research, including research and development (research and development). Subjects were subject redox reaction and electrochemistry teaching materials. Meanwhile, the sample used in this study consisted of 20 students majoring in chemistry education courses of the Faculty of Mathematics and Natural Sciences, State University of Medan and 2 lecturers basic courses at the State University of Medan. Selection of the sample using purposive sampling technique. The results of chemical analysis of teaching materials common is that the teaching materials are quite valid, but need to be developed from various aspects. Teaching materials that have been developed validated by expert validator. Assessment is done based on a standard questionnaire BSNP (National Education Standards Agency). Based on research data obtained an average of 22 respondents think that consists of 2 lecturers and 20 students on the quality of teaching materials developed 3.22 belonging to the criteria of a very valid means of the development of teaching materials is very feasible for use in learning. Elaboration of the overall average respondent to the quality of teaching materials developed are the average results of the assessment of General Chemistry lecturers in the amount of 3.40 and an average student assessment results Chemistry education that is equal to 3.04

Keywords: *Research and Development (R&D), Redox Reaction and Electrochemistry, Scientific Approach*