

PENGEMBANGAN BAHAN AJAR KIMIA PADA MATERI LAJU REAKSI
MENGUNAKAN METODE 4S TMD (*Four Steps Teaching Material
Development*) DENGAN PENDEKATAN SETS (*Science, Environment,
Technology, and Society*) UNTUK MEMBANGUN LITERASI SAINS SISWA

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SAINS SISWA**

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UNTUK MEMBANGUN LITERASI SAINS SISWA**

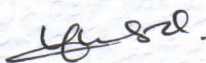
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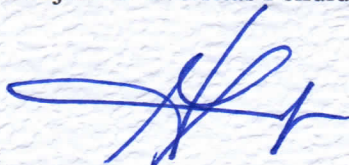
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ABSTRAK

Penelitian ini bertujuan untuk mengembangkan bahan ajar berbasis SETS (*Science, Environment, Technology and Society*) pada pokok bahasan laju reaksi untuk meningkatkan literasi sains siswa. Metode penelitian yang digunakan adalah *Development Research*, yang meliputi tiga tahap yaitu *design*, *development*, dan *evaluation*. Pada tahap *design* dilakukan analisis permasalahan, identifikasi materi kimia sulit, dan penentuan jenis bahan ajar yang dikembangkan. Selanjutnya, pada tahap *development* dikembangkan bahan ajar melalui metode 4S TMD, yang meliputi proses seleksi, strukturisasi, karakterisasi, dan reduksi didaktik. Terakhir, pada tahap *evaluation* dilakukan analisis kesesuaian SETS pada bahan ajar, uji keterpahaman, dan uji kelayakan. Pada tahap *design* didapati bahan ajar yang sulit dipahami oleh siswa, literasi sains siswa yang rendah dan materi laju reaksi yang sulit. Pada tahap *development* dikembangkan KD 3.7, 3.6, dan 4.7, nilai terkait konsep, uraian konsep, peta konsep, struktur makro dan multiple representasi kemudian karakterisasi teks hingga reduksi didaktik. Hasil evaluasi terhadap bahan ajar yang dikembangkan mendapatkan hasil pada persentase kelayakan bahan ajar sebesar 97,42% yang berarti sangat layak, dan hasil evaluasi juga memberikan kesimpulan bahwa bahan ajar yang dikembangkan memiliki karakteristik bersifat *self instructional*, yang ditunjukkan melalui Persentase keterpahaman bahan ajar sebesar 85,66 % .

ABSTRACT

This study aims to develop SETS (Science, Environment, Technology and Society) -based teaching materials on the subject of reaction rates to improve students' scientific literacy. The research method used is Development Research, which includes three stages, namely design, development, and evaluation. In the design phase, problem analysis is carried out, identification of difficult chemical material, and determination of the type of teaching material developed. Furthermore, in the development phase learning materials are developed through the 4S TMD method, which includes the process of selection, structuring, characterization, and didactic reduction. Finally, in the evaluation phase SETS conformity analysis is carried out on teaching materials, understanding tests, and feasibility tests. At the design stage found teaching materials that are difficult to understand by students, student science literacy is low and material reaction rates are difficult. In the development stage, KD 3.7, 3.6, and 4.7 are developed, values related to concepts, conceptual descriptions, concept maps, macro structures and multiple representations, then characterization of texts to didactic reduction. The results of the evaluation of the instructional materials developed get results on the percentage of the feasibility of teaching materials of 97.42% which means very feasible, and the evaluation results also provide conclusions that the instructional materials developed have self-instructional characteristics, which are indicated by the comprehension percentage of 85 , 66%.

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