

ABSTRAK

PENGEMBANGAN INSTRUMEN ASESMEN KETERAMPILAN INTERPRETASI REPRESENTASI PADA TOPIK IKATAN KIMIA

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Penelitian ini bertujuan untuk mengembangkan instrumen asesmen keterampilan interpretasi representasi pada topik ikatan kimia, dan mendeskripsikan karakteristik, tanggapan guru serta validitas dan reliabilitas terhadap instrumen asesmen keterampilan interpretasi representasi pada topik ikatan kimia yang dikembangkan. Desain penelitian yang digunakan dalam penelitian ini adalah penelitian pengembangan 4D menurut Thiagarajan sampai pada tahap ketiga dari keempat tahap, yaitu pendefinisian, perancangan, dan pengembangan. Sumber data diperoleh dari 37 siswa kelas XI, tiga guru kimia di SMA Negeri 9 Bandar Lampung, dan tiga validator ahli, kemudian dianalisis menggunakan metode analisis statistik. Karakteristik asesmen yang dikembangkan mengikuti kerangka kerja *Three-Dimensional Learning Assessment Protocol* (3D-LAP), yaitu *Scientific Practices*, *Crosscutting Concepts*, dan *Disciplinary Core Ideas*. Hasil validasi ahli pada aspek kesesuaian isi, aspek konstruksi memiliki kategori sangat tinggi. Hasil tanggapan guru pada aspek kesesuaian isi, aspek konstruksi, dan aspek kepraktisan memiliki kategori sangat tinggi. Hasil uji reliabilitas menunjukkan koefisien *Cronbach's Alpha* sebesar 0,84 yang termasuk kategori tinggi. Dengan demikian, instrumen yang dikembangkan valid, reliabel, dan layak digunakan untuk mengevaluasi keterampilan interpretasi representasi siswa dalam pembelajaran kimia di SMA.

Kata kunci: 3D-LAP, instrumen asesmen, interpretasi representasi, ikatan kimia, model 4D

ABSTRACT

DEVELOPMENT OF AN ASSESSMENT INSTRUMENT FOR REPRESENTATIONAL INTERPRETATION SKILLS ON THE TOPIC OF CHEMICAL BONDING

By

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This study aims to develop an assessment instrument for representational interpretation skills on the topic of chemical bonding, and to describe its characteristics, teacher responses, as well as the validity and reliability of the developed instrument. The research design employed is the 4D development model by Thiagarajan, which was implemented up to the third stage: define, design, and develop. Data were obtained from 37 eleventh-grade students, three chemistry teachers at SMA Negeri 9 Bandar Lampung, and three expert validators, and were analyzed using statistical methods. The characteristics of the developed assessment instrument were based on the Three-Dimensional Learning Assessment Protocol (3D-LAP), which includes Scientific Practices, Crosscutting Concepts, and Disciplinary Core Ideas. Expert validation results for content alignment and construction aspects were rated in the very high category. Teacher responses to content alignment, construction, and practicality aspects also fell into the very high category. The reliability test showed a Cronbach's Alpha coefficient of 0.84, indicating a high level of reliability. Therefore, the developed instrument is valid, reliable, and suitable for evaluating students' representational interpretation skills in high school chemistry learning.

Keywords: 3D-LAP, 4D model, assessment instrument, chemical bonding, representational interpretation