

ABSTRAK

PENGEMBANGAN MODUL BENTUK MOLEKUL BERDASARKAN TEORI VSEPR BERBASIS REPRESENTASI KIMIA

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Penelitian ini bertujuan untuk mengembangkan modul bentuk molekul berdasarkan teori VSEPR berbasis representasi kimia, mendeskripsikan karakteristik modul bentuk molekul berdasarkan teori VSEPR berbasis representasi kimia yang dikembangkan, mendeskripsikan tanggapan guru dan siswa terhadap modul berbasis representasi kimia pada materi bentuk molekul berdasarkan teori VSEPR. Penelitian ini menggunakan desain penelitian dan pengembangan menurut Borg and Gall (1983). Subjek pada penelitian ini yaitu modul bentuk molekul berdasarkan teori VSEPR berbasis representasi kimia. Objek uji pada tahap penelitian dan pengumpulan informasi adalah 3 guru mata pelajaran kimia dan 30 siswa kelas X di SMAN 01 Seputih Raman, SMAN Way Jepara dan SMAN 1 Kota Gajah. Objek uji coba lapangan dilakukan pada 3 guru kimia dan 15 siswa IPA kelas X di SMA ASSHIDIQIYAH 09 Putra Buyut. Teknik analisis data dilakukan dengan cara menghitung rata-rata presentase skor tanggapan responden pada angket.

Berdasarkan hasil validasi ahli pada aspek kesesuaian isi dengan kurikulum memiliki rata-rata persentase 94,02%; konstruk 96,06%; dan aspek keterbacaan memiliki rata-rata persentase 92,0%; dengan kriteria tinggi. Selanjutnya dilakukan uji coba lapangan untuk mengetahui tanggapan guru dan siswa terhadap modul yang dikembangkan. Pada uji coba guru ini untuk mengetahui aspek kesesuaian isi dengan kurikulum, konstruksi, keterbacaan dan tanggapan siswa pada aspek keterbacaan dan kemenarikan. Hasil uji lapangan pada aspek kesesuaian isi dengan kurikulum memiliki rata-rata persentase 100%; konstruk 99,58%; dan keterbacaan 95,78%. Hasil tanggapan siswa pada aspek keterbacaan 85,7%; dan kemenarikan 87,66% dengan kriteria sangat tinggi. Berdasarkan hal tersebut, maka modul berbasis representasi kimia pada materi bentuk molekul berdasarkan teori VSEPR valid dan layak digunakan sebagai bahan ajar di sekolah.

Kata Kunci : modul, bentuk molekul berdasarkan teori VSEPR, representasi kimia

ABSTRACT

DEVELOPMENT OF MOLECULE FORM MODULE BASED ON VSEPR THEORY BASED ON CHEMICAL REPRESENTATION

By

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This research aimed to develop a molecular shape module based on chemical representation-based VSEPR theory, to describe the characteristics of a molecular shape module based on the chemical representation-based VSEPR theory developed, and describe teacher and student responses to a chemical representation-based module on molecular shape material based on VSEPR theory. This research used a research and development design according to Borg and Gall (1983). The instrument used in this study was a questionnaire. The data analysis technique was carried out by calculating the average percentage score of respondents' responses to the questionnaire. The subject of this research was the molecular shape module based on the VSEPR theory based on chemical representation. The test objects at the research and information collection stage were 3 chemistry teachers and 30 grade X students at SMAN 01 Seputih Raman, SMAN Way Jepara, and SMAN 1 Kota Gajah. The object of the field test was 3 chemistry teachers and 15 science students in class X at SMA ASSHIDIQIYAH 09 Putra Buyut.

Based on the results of expert validation on the aspect of conformity with the curriculum content has an average percentage of 94.02%; construct 96.06%, and the readability aspect has an average percentage of 92.0%; with high criteria. Furthermore, a field trial was conducted to determine the responses of teachers and students to the developed module. This teacher trial determines the suitability of the content with the curriculum, construction, readability, and student responses to aspects of readability and attractiveness. The results of the field test on the aspect of conformity with the curriculum content have an average percentage of 100%; construct 99.58%; and 95.78% legibility. The results of students' responses to the readability aspect were 85.7%; and 87.66% attractiveness with very high criteria. Based on the data above, the module based on the chemical representation of molecular shape material based on the VSEPR theory is valid and suitable for use as teaching materials in schools.

Keywords: module, molecular shape based on VSEPR theory, chemical representation