PROFIL MODEL MENTAL MAHASISWA BARU TENTANG LARUTAN ELEKTROLIT DAN NONELEKTROLIT

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ABSTRAK

Penelitian ini bertujuan untuk mendeskripsikan dan menjelaskan pemahaman mahasiswa baru Jurusan Kimia Undiksha pada tahun ajaran 2020/2021 tentang tiga level kimia dan model mentalnya tentang larutan elektrolit dan nonelektrolit. Penelitian ini menggunakan metode kuantitatif dengan analisis menggunakan statistik deskriptif dan melibatkan 45 orang mahasiswa sebagai sumber data. Pengumpulan data dilakukan dengan tes objektif pilihan ganda tiga tingkat, masing-masing tingkat secara berurutan untuk mengukur pemahaman level makroskopis, submikroskopis, dan simbolik. Hasil penelitian menunjukkan tingkat pemahaman mahasiswa tentang level makroskopis kimia adalah 26,22%, level submikroskopis 21,33%, dan level simbolik 22,22%. Hanya 6,67% model mental mahasiswa tergolong model konseptual, dan 93,33% sisanya diklasifikasikan sebagai model mental alternatif, yang mencakup 40,44% model mental benar sebagian dan 52,89% mengalami miskonsepsi khusus. Data tersebut menunjukkan pemahaman mahasiswa baru terhadap tiga level kimia tergolong sangat rendah dan sebagian besar model mentalnya tergolong model mental alternatif.

Kata-kata kunci: tiga level kimia, model mental, larutan elektrolit dan nonelektrolit.

MENTAL MODEL PROFILE OF NEW STUDENT ABOUT ELECTROLITE AND NON-ELECTROLITE SOLUTIONS

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ABSTRACT

This study aims to describe and explain the understanding of the new students of the Undiksha Chemistry Department in the 2020/2021 academic year about the three chemical levels and their mental models of electrolyte and non-electrolyte solutions. This research uses quantitative methods with analysis using descriptive statistics and involves 45 students as the data source. The data was collected by means of a three-level multiple choice objective test, each level sequentially to measure the understanding of the macroscopic, submicroscopic, and symbolic levels. The results showed that the level of macroscopic understanding of the students was 26.22%, the submicroscopic level was 21.33%, and the symbolic level was 22.22%. Only 6.67% of the mental model profiles are considered conceptual models, and 93.33% are classified as alternative mental models, which include 40.44% as partially correct mental models and 52.89% as special misconceptions. The data shows that new students understanding of the three levels of chemistry is very low and most of their mental models are classified as alternative mental models.

Key words: three levels of chemistry, mental model, and electrolyte and non-electrolyte solutions.