ANALISIS MODEL MENTAL SISWA SMA PADA MATERI FUNGI

Skripsi

disusun untuk memenuhi salah satu persyaratan untuk mendapatkan gelar Sarjana Pendidikan (S.Pd)

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Sebuah skripsi yang diajukan untuk memenuhi salah satu syarat memperoleh gelar Sarjana Pendidikan (S.Pd) pada Pendidikan Biologi di Fakultas Pendidikan Matematika dan Ilmu Pengetahuan Alam.

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ABSTRAK

Pembelajaran biologi membutuhkan pengetahuan yang utuh dalam memahaminya, begitu pula dalam materi fungi. Kekurangan pemahaman akan suatu konsep, kesulitan menemukan hubungan antar konsep, hingga kekurangan pemahaman guru merupakan penyebab utama miskonsepsi atau ketidakpahaman pada siswa yang bisa direpresentasikan melalui model mental. Model mental merupakan representasi pemahaman individu terhadap suatu konsep. Penelitian ini bertujuan untuk menganalisis model mental siswa pada materi fungi melalui tes menggambar menulis (DW) dan peta konsep. Penelitian ini menggunakan analisis deskriptif, peneliti menggunakan analisis kualitatif dan interpretasi untuk membantu menjelaskan atau menguraikan hasil kuantitatif. Sementara instrumen yang digunakan pada penelitian ini adalah tes menggambar menulis (DW), peta konsep, wawancara, dan kuesioner. Sejumlah 28 siswa kelas X IPA diberikan tes dan dilakukan analisis terhadap hasilnya. Hasil penelitian menunjukkan tingkat model mental siswa pada materi struktur fungi dominan berada pada level D3 W3 (46,43%), paling banyak untuk materi reproduksi adalah level D3 W2 (17,85%), sebanyak 60,71% peta konsep siswa berada pada level *emergent*, dan 39,29% peta konsep siswa lainnya berada pada level *transitional*. Hasil wawancara dan kuesioner mengungkapkan dan memperjelas jawaban siswa dari tes menggambar menulis dan peta konsep. Sebagian besar jawaban pada wawancara menunjukkan keselerasan dengan hasil yang ditunjukkan pada tes kuantitatif, sementara kuesioner menunjukkan pengalaman belajar serta kesulitan yang siswa temui dalam mempelajari fungi. Kesimpulan dari penelitian ini menunjukkan bahwa model mental siswa pada materi fungi masih belum mendekati model mental ahli.

Kata Kunci: *model mental, fungi, tes menggambar-menulis, peta konsep, wawancara*

ABSTRACT

Learning biology requires complete knowledge in understanding it, as well as in fungi. Lack of understanding of a concept, difficulty in finding relationships between concepts, and lack of teacher understanding are the main causes of misconceptions and lack undarstanding in students which can be represented through mental models. A mental model is a representation of information about concepts. This study aims to analyze students' mental models of fungi through drawing and writing tests (DW) and concept maps. This study uses descriptive analysis, researchers use qualitative analysis and interpretation to help explain or describe the quantitative results. Meanwhile, the instruments used in this study were drawing and writing tests (DW), concept maps, interviews, and questionnaires. A total of 30 students of grade 10 were given a test and an analysis of the results was carried out. The results showed that the level of students' mental models on the fungi structure material was at the level of D3 W3 (46.43%), fungi reproductive material was the level of D3 W2 (17.85%), as many as 60.71% of students' concept maps were at emergent level, and 39.29% of the other students' concept maps were at the transitional level. The results of interviews and questionnaires reveal and clarify students' answers from the drawing and writing tests and concept maps. Most of the answers in the interviews showed agreement with the results shown in the quantitative tests, while the questionnaires indicated the learning experiences and difficulties that students encountered in learning the functions. The conclusion of this study shows that the mental model of students on fungi is still not close to the mental model of experts.

Keywords: mental model, fungi, drawing-writing test, concept map, interview

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