

ABSTRACT

Identification of Student's Understanding of The Material Genetics at SMA Negeri 1 IV Nagari Bayang Utara

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Biology learning should be easily understood by the students because of topics discussed in biology are all living beings, including students. However, in reality there was still a biology material is difficult to understand by the students, one of them is the genetic material. The students of SMA 1 IV Nagari Bayang Utara in academic years 2015-2016. The difficulties in understanding this genetic material is proven from the results of students' learning are very low. Before finding the solution of students' learning difficulties from this material, first should be known that what topics cause the students were difficult to understand this genetic material and the factors that cause the difficulty.

The research aimed to find out what topics were difficult to understand by students in genetic material and the factors that cause the difficulties. This research was a combination research which used the quantitative and qualitative methods. The data were collected through diagnostic tests and interviews. The informant of research was class XII IPA SMA 1 IV Nagari Bayang Utara in academic years 2016-2017. The data of diagnostic tests results were analyzed by finding for the number of students who answered each questions of the test incorrectly, which showed the students' difficulties in understanding the sub topic of questions. The data of Interview results were analyzed through the reduction stage, presentation and conclusion.

The results of research showed that the number of students who answered incorrectly were very much in the sub-topic of genetic material. The results of diagnostic test were not very different in all topics. However, many students answered incorrect, especially in sub topics of DNA replication, protein synthesis, human genetic and mutations in humans. Thus, it can be concluded that almost all of the topics in genetic material were difficult to understand by students. The results of the interview showed that there were seven main factors that cause students have trouble in understanding each topic of the genetic material, namely the material in the sub of topics which considered difficult, a lot of Latin language, the material was difficult to remember, the students did not repeat the lesson at home, the students did not want to ask the teacher, the teacher was too fast in explaining the material, the teacher did not use instructional media.

ABSTRAK

Identifikasi Pemahaman Siswa Terhadap Materi Genetika di SMA 1 IV Nagari Bayang Utara

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Pembelajaran biologi seharusnya mudah dipahami oleh siswa karena topik yang dibahas dalam biologi adalah seluruh makhluk hidup termasuk diri siswa. Namun, dalam kenyataannya masih terdapat materi biologi yang sulit dipahami oleh siswa, salah satunya adalah materi Genetika. Siswa SMA 1 IV Nagari Bayang Utara tahun pelajaran 2015-2016 kesulitan memahami materi Genetika ini terbukti dari rendahnya hasil belajar siswa. Sebelum menemukan solusi dari kesulitan belajar siswa dalam memahami materi ini, terlebih dahulu harus diketahui sub topik apa yang menyebabkan siswa sulit memahami materi Genetika ini serta faktor penyebab kesulitannya.

Penelitian bertujuan untuk mengetahui sub topik apa yang sulit dipahami siswa dalam materi Genetika serta faktor penyebab kesulitannya. Penelitian ini merupakan penelitian kombinasi yang menggunakan metode kuantitatif dan kualitatif. Data dikumpulkan melalui tes diagnostik dan wawancara. Informan penelitiannya adalah siswa kelas XII IPA SMA 1 IV Nagari Bayang Utara tahun pelajaran 2016-2017. Data hasil tes diagnostik dianalisis dengan mencari jumlah siswa yang menjawab salah setiap soal tes, yang menunjukkan siswa kesulitan memahami sub topik pada soal. Data hasil wawancara didapatkan melalui tahap reduksi, penyajian dan kesimpulan.

Hasil penelitian menunjukkan bahwa jumlah siswa yang menjawab salah sangat banyak pada sub-sub topik materi Genetika. Hasil tes diagnostik tidak jauh berbeda pada semua topik. Jumlah siswa banyak menjawab salah terutama pada sub topik replikasi DNA, sintesis protein, meiosis, gametogenesis, genetika manusia, mutasi gen, mutasi kromosom, mutasi alami dan buatan, mtagen dan mutasi pada manusia. Jadi, dapat disimpulkan bahwa hampir semua sub topik pada materi Genetika ini sulit dipahami oleh siswa. Hasil wawancara memperlihatkan bahwa terdapat tujuh faktor utama yang menyebabkan siswa kesulitan memahami setiap sub topik pada materi Genetika, yaitu materi pada sub topik di anggap sulit, banyak bahasa latin, materi susah di ingat, siswa tidak mengulang kembali pelajaran dirumah, siswa tidak mau bertanya kepada guru, guru terlalu cepat dalam menjelaskan materi, tidak ada alat bantu/media dalam memahami materi.