

Penerapan *E-Module* Berbasis *Problem-Based Learning* untuk Meningkatkan Literasi Sains dan Mengurangi Miskonsepsi pada Materi Ekologi Siswa Kelas X MIA 6 SMAN 1 Karanganom Tahun Pelajaran 2014/2015

Applying E-Module Based on Problem Based Learning to Increase Scientific Literacy and Decrease Student's Misconception in Ecology at Grade X MIA 6 of SMA N 1 Karanganom Academic Year 2014/2015

Citra Devi Imaningtyas^{1*}, Puguh Karyanto¹, Nurmiyati¹, Lilik Asriani²

¹ Pendidikan Biologi FKIP Universitas Sebelas Maret Surakarta

² SMA Negeri 1 Karanganom

*E-mail: citradeviimaningtyas@gmail.com

Abstract: This research aims to increase scientific literacy and decrease student's misconception at grade X MIA 6 of SMAN 1 Karanganom by applying e-module based on the concept of Problem-Based Learning (PBL). The type of the research was a classroom action research which consisted of two cycles. Each cycles applied: planning the learning activity, implementing the plan, observing the students' activity and finally complimenting the whole activities in one cycle. The research subject was graders X MIA 6 of SMAN 1 Karanganom, which were 11 boys and 23 girls. The data validation used triangulation method. The data of the research were obtained by formulating the test, observation and interview. The obtained data were analyzed using the descriptive technique. The results of the research showed the implementation of e-module based on the concept of Problem-Based Learning (PBL) decrease the students' misconception on the ecology subject with the explanation: the population concept decreased 21%, the community concept run into reduction 22%, the ecosystem concept went down 21% and the ecology concept in 'Science, environment, technology, and society' context reduced 26%. The analysed result also indicated that the scientific literacy has increased 20.6%. The result of the research evidenced the implementation of e-module based on the concept of Problem-Based Learning could increase the scientific literation and decrease the students' misconception on the ecology subject.

Keywords: *E-module* with based *Problem-Based Learning*, misconception, scientific literacy

Keterangan: Naskah diterbitkan dalam Jurnal Bioedukasi Pendidikan Biologi FKIP UNS

Penanya 1:

Sri Utami (SMK 1 Semen Kediri)

Pertanyaan:

Jika sudah mempunyai buku, modul untuk apa?

Jawab:

Sekarang, guru dilarang mengedarkan buku ajar (siswa dilarang diwajibkan membeli buku tertentu), oleh karena itu modul yang akan digunakan ini sudah divalidasi. Isi modul yaitu pendahuluan, demo video dan materi. Pendahuluan berisi pengantar, kompetensi inti, kompetensi dasar, indikator dan tujuan pembelajaran. Bagian demo video berisi

panduan penggunaan e-modul. Bagian materi berisi video permasalahan, petunjuk, pemecahan masalah, membuat hipotesis, menganalisis hasil, mempresentasikan dan mengevaluasi. Selain itu terdapat materi dan video yang relevan dengan permasalahan.

Penanya 2:

Valent Sari Danisa (UNS)

Pertanyaan:

Mengetahui siswa sudah miskonsepsi bagaimana?



Jawab:

Untuk mengetahui sudah miskonsepsi, dengan soal uji konsep pada prasiklus. Sehingga diketahui kemampuan dasar peserta didik.

Penanya 3:

Tuti Garnasih (UPI)

Pertanyaan:

E-Module yang digunakan seperti apa? Berbasis internet atau apa?

Jawab:

E-Module merupakan macromedia flash yang menampilkan gambar dan video.