

**Penerapan E-Module Berbasis Problem-Based Learning untuk Meningkatkan Kemampuan Berpikir Kreatif dan Mengurangi Miskonsepsi Pada Materi Ekologi Siswa Kelas X MIPA 3 SMA Negeri 6 Surakarta Tahun Pelajaran 2014/2015**

**The Application of E-Module Based on Problem-Based Learning to Improve Creative Thinking Ability and Reduce Misconception on Ecology in the Students of X MIPA 3 SMA Negeri 6 Surakarta in the Academic of 2014/2015**

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**Abstract:** This research aimed to improve creative thinking ability and to reduce misconception on ecology in the students of X MIPA 3 of SMA Negeri 6 Surakarta in the academic of 2014/2015 through the application of e-module based on Problem-Based Learning. This research was a Classroom Action Research conducted in two cycles. Each cycle consisted of four stages: planning, acting, observing, and reflecting. The subject of research was the X MIPA 3 graders of SMA Negeri 6 Surakarta in the academic of 2014/2015 consisting of 9 boys and 21 girls. Techniques of collecting data used were essay test to measure creative thinking ability, open ended reasoning of two-tier diagnostic test to measure misconception, observation and interview as the proponent data. The data were analyzed using descriptive qualitative technique consists of three components: data reduction, data presentation, and taking the conclusion. Data validation of this research was triangulation method. Target of the research is an increase 20% on creative thinking aspects and decrease misconception 20% on ecology concepts at the end of the cycle. The result of research showed that there was an increase in each aspect of creative thinking ability: 24.68% of fluency, 34.17% of flexibility, 50% of originality, and 21.67% of elaboration. On the other side, the result of research also showed that there was a decrease in misconception in the important concepts of ecology including: 43.42% of population, 32.78% of community, 20.6% of food chain and web, and 47.92% of the ecology concept in science, environment, technology and community (salingtemas). The conclusion of this research described that the application of e-module based on Problem-Based Learning is able to improve the ability of creative thinking and reduce the students' misconception in ecology.

**Keywords:** e-module based on Problem-Based Learning, misconception, creative thinking

**Keterangan:** Naskah diterbitkan dalam Indonesian Journal of Biology Education (IjoBE) Pendidikan Biologi FKIP UNS

**Penanya 1:**  
Mira Andriani  
(Universitas Pendidikan Indonesia)

**Pertanyaan:**  
Apakah video yang digunakan oleh Sdri.Nuning sama dengan video yang digunakan Sdri.Nina?

**Jawaban:**  
Video yang digunakan sama dengan video Sdri.Nina karena ikut penelitian dosen dan E-module yang digunakan juga sama. Video yang digunakan yaitu mengenai ekologi sawah secara asli



**Penanya 2:**

Nurul Azizah  
(Universitas Lambung mangkurat, Prodi Magister  
Pendidikan Biologi)

**Pertanyaan:**

PBL membutuhkan waktu yang lama, bagaimana cara mengatasi waktu yang lama tersebut agar materi terselesaikan?

**Jawaban:**

Cara mengatasi waktu yang lama, pada siklus I dilakukan dengan penyelidikan di luar jam pelajaran, siswa terjun langsung ke lapangan. Sedangkan pada siklus II dengan studi literature, pemaparan video yang didukung dengan hasil riset pada e-module.

**Penanya 3:**

Andari Puji Astuti, M.Pd  
(Universitas Muhammadiyah Semarang)

**Pertanyaan:**

Bagaimana waktu pembelajaran dalam penerapan e-module berbasis Problem-Based Learning?

**Jawaban:**

Waktu Pembelajaran 3 JP dengan pemberian tes kemampuan berpikir kreatif. Dan tes untuk mendeteksi miskonsepsi siswa, dilakukan diluar jam tersebut.

**Saran:**

Pada makalah harus ditambahkan keterangan bahwa dalam pelaksanaan PBL membutuhkan waktu yang lama (kelemahannya) agar peneliti kedepan yang akan meneliti bias mempersiapkan waktunya.