

ABSTRACT

Adela Mulyana, 2019. "Development of Problem Solving Learning Modules on the Respiration System and Excretion System for High School Class XI Students". Thesis. Postgraduate Program in Padang State University.

Based on the results of the author's observation at SMAN 2 Painan, it was found that the teaching materials used at school were textbooks borrowed from the library during learning and returned after learning. Based on the results of the analysis of the textbooks, several deficiencies were found including written textbooks according to the 2013 Curriculum but the contents of the book material were not in accordance with the demands of the 2013 Curriculum itself. One example of the material in the respiratory system and excretion system has not yet linked the structure and function of the organ to its processes and abnormalities. Based on this, development research is carried out which aims to produce problem solving learning modules about the respiratory system and excretion systems that are valid, practical, effective and in accordance with the 2013 curriculum.

This development research uses the Plomp model which consists of 3 stages, namely initial investigation, prototype making and assessment. The research subjects were students of class XI of SMAN 2 Painan. Validation was carried out by biology education experts, educational technology and Indonesian language experts. The practicality of the module is seen from the results of filling the practical sheet by students and teachers. Effectiveness is seen from the competence of students both in terms of knowledge, attitudes and skills.

The results showed that the problem solving based learning module scored 84.64% with a very valid category. The practical value of the teacher's response is 91.04% with a very practical category and the response value of students is 81.69% with a very practical category. This learning module has also been effective from three aspects of student assessment. In this case the aspect of assessment of the experimental class students increased more than the control class. Based on this, it can be concluded that problem solving based learning modules about the respiratory system and excretion system for students of class XI SMA can be declared valid, practical and effective.

ABSTRAK

Adela Mulyana, 2019. “Pengembangan Modul Pembelajaran Berbasis *Problem Solving* tentang Sistem Respirasi dan Sistem Ekskresi untuk Peserta Didik Kelas Xi SMA”. Tesis. Program Pascasarjana Universitas Negeri Padang.

Berdasarkan hasil observasi penulis di SMAN 2 Painan, ditemukan bahwa bahan ajar yang digunakan disekolah adalah buku teks yang dipinjam dari perpustakaan selama pembelajaran dan dikembalikan setelah pembelajaran. Berdasarkan hasil analisis terhadap buku teks tersebut ditemukan beberapa kekurangan diantaranya pada buku teks tertulis sesuai Kurikulum 2013 tetapi pada isi materi bukunya belum sesuai dengan tuntutan Kurikulum 2013 itu sendiri. Salah satu contohnya pada materi sistem respirasi dan sistem ekskresi belum mengaitkan antara struktur dan fungsi organ dengan proses dan kelainannya. Berdasarkan hal tersebut, dilakukan penelitian pengembangan yang bertujuan untuk menghasilkan modul pembelajaran *problem solving* tentang sistem respirasi dan sistem ekskresi yang valid, praktis, efektif dan sesuai dengan kurikulum 2013.

Penelitian pengembangan ini menggunakan model Plomp yang terdiri dari 3 tahap, yaitu investigasi awal, pembuatan prototipe dan penilaian. Subjek penelitian adalah peserta didik kelas XI SMAN 2 Painan. Validasi dilakukan oleh pakar pendidikan biologi, teknologi pendidikan dan pakar bahasa Indonesia. Kepraktisan modul dilihat dari hasil pengisian lembar praktikalitas oleh peserta didik dan guru. Keefektifan dilihat dari kompetensi peserta didik baik dari aspek pengetahuan, sikap dan keterampilannya.

Hasil penelitian menunjukkan bahwa modul pembelajaran berbasis *problem solving* memperoleh nilai 84,64% dengan kategori sangat valid. Nilai praktikalitas respon guru adalah 91,04% dengan kategori sangat praktis dan nilai respon peserta didik adalah 81,69% dengan kategori sangat praktis. Modul pembelajaran ini juga telah efektif dari tiga aspek penilaian peserta didik. Dalam hal ini aspek penilaian peserta didik kelas eksperimen lebih meningkat dari pada kelas kontrol. Berdasarkan hal tersebut, dapat disimpulkan bahwa modul pembelajaran berbasis *problem solving* tentang sistem respirasi dan sistem ekskresi untuk peserta didik kelas XI SMA dapat dinyatakan valid, praktis dan efektif.