

ABSTRAK

INDRA JAYA PURBA. Pengembangan Buku Ajar Fisiologi Hewan Berbasis Keterampilan Berpikir Tingkat Tinggi untuk Mahasiswa Jurusan Biologi Universitas Negeri Medan. Tesis. Medan: Program Pascasarjana Universitas Negeri Medan, April 2022.

Penelitian ini bertujuan untuk mengembangkan buku ajar berbasis keterampilan berpikir tingkat tinggi pada mata kuliah Fisiologi Hewan. Model pengembangan yang digunakan dalam penelitian ini adalah model pengembangan Thiagarajan (4D) yang terdiri dari tahapan pendefinisian (*define*), perancangan (*design*), pengembangan (*development*), dan diseminasi (*disseminate*). Buku ajar yang telah dikembangkan divalidasi oleh tiga ahli, yakni ahli materi, ahli bahasa, dan ahli desain. Buku ajar juga diujikan kepada mahasiswa yang telah lulus mata kuliah Fisiologi Hewan untuk mendapatkan respon mahasiswa terhadap kualitas buku ajar. Hasil validasi ahli materi menunjukkan 86 terkategori “Sangat Baik”, ahli bahasa menunjukkan 88 terkategori “Sangat Baik”, dan ahli desain menunjukkan 87 terkategori “Sangat Baik. Hasil respon mahasiswa terhadap kualitas buku ajar dalam uji kelompok perorangan, kelompok kecil, serta kelompok lapangan terbatas secara berurutan adalah 86, 89, dan 89. Secara keseluruhan respon mahasiswa termasuk dalam kategori “Sangat Baik”. Buku ajar yang telah dikembangkan didesiminasi kepada mahasiswa Jurusan Biologi dan diuji keefektivannya melalui uji *t* dan uji *N-gain*. Hasil *posttest* menunjukkan nilai rata-rata di kelas eksperimen (71,19) lebih tinggi dibandingkan dengan nilai rata-rata di kelas kontrol (55,67) dengan *p-value* (0,000) < α (0,05). Hasil *N-gain* yang diperoleh adalah 0,59 dengan kategori “Baik”. Hasil ini menunjukkan bahwa buku ajar Fisiologi Hewan berbasis keterampilan berpikir tingkat tinggi memiliki efektivitas yang baik dalam meningkatkan keterampilan berpikir tingkat tinggi mahasiswa.

Kata kunci: Buku Ajar, Fisiologi Hewan, Model Pengembangan 4D



ABSTRACT

INDRA JAYA PURBA. Development of Animal Physiology Textbook Based on Higher Order Thinking Skills for Biology Department Student in Medan State University. Postgraduate School of the State University of Medan, 2022.

The aim of this study was to develop a textbook based on higher order thinking skills on Animal Physiology course. The development model used in this study was the Thiagarajan (4D) development model which consisted of define, design, development, and dissemination. The developed textbook was validated based on three criterias, namely material, language, and design. The developed textbook was also tested to students who have taken Animal Physiology course and obtained the students' response to the quality of the textbook. The result of validation by material expert was 86 in the category of "Very Good", language expert was 88 in the category of "Very Good", and design expert was 87 in the category of "Very Good". The result of students' responses to the quality of the textbook according to individually, small group, and limited group were 86, 89, and 89 respectively. The whole students' responses were categorized as "Very Good". The developed textbook was disseminated to Biology Department students and tested the effectivity by t-test and N-gain test. The post-test result showed that the average score in experimental group (71,19) was higher than it was in control group (55,67) with p-value (0,000) < α (0,05). N-gain result was 0,59 that categorized as "Good". The result showed that the effectivity of Animal Physiology textbook based on higher order thinking skills to enhance students' higher order thinking skills was good.