

ABSTRAK

DESYARDINA. 8186174013 : Pengembangan Buku Ilmiah Populer *Lichenes* di Perguruan Tinggi Kawasan Sumatra Utara dalam Pembelajaran Biologi di Universitas Negeri Medan, Juli 2022.

Penelitian ini bertujuan menghasilkan produk buku ilmiah populer *lichenes* di perguruan tinggi Kawasan Sumatra Utara dalam pembelajaran Biologi di Universitas Negeri Medan yang layak ditujukan kepada mahasiswa S1 jurusan Biologi. Jenis penelitian ini adalah penelitian dan pengembangan (R&D), dengan model pengembangan produk menggunakan model pengembangan ADDIE yang terdiri dari analisis, desain, pengembangan, implementasi dan evaluasi. Buku ilmiah populer *lichenes* yang dikembangkan divalidasi berdasarkan ahli materi yang memperoleh nilai rata-rata sebesar 82,46% dengan kategori sangat layak. Selanjutnya divalidasi oleh ahli bahasa dengan perolehan nilai rata-rata sebesar 83,33% kategori sangat layak. Untuk validasi oleh ahli desain grafis memperoleh hasil rata-rata sebesar 93,59% kategori sangat layak. Hasil uji coba produk untuk buku ilmiah populer *lichenes* terdiri dari mahasiswa dan dosen. Uji coba produk mahasiswa diperoleh dari tiga aspek yakni, uji coba perorangan memperoleh nilai rata-rata sebesar 93% dengan kategori sangat layak, uji coba kelompok kecil memperoleh nilai rata-rata sebesar 90% dengan kategori sangat layak dan uji coba kelompok memperoleh nilai rata-rata sebesar 87% dengan kategori sangat layak. Sedangkan uji coba produk pada dosen mata kuliah Taksonomi Organisme Tingkat Rendah memperoleh nilai rata-rata sebesar 92% dengan kategori sangat layak. Buku ilmiah populer *lichenes* dinyatakan sangat layak disebarkan dan diuji efektifitas penggunaannya kepada 29 mahasiswa jurusan Biologi Universitas Negeri Medan diperoleh hasil rata-rata nilai N-Gain sebesar 0,659 dengan kategori sedang, dan skor persen 65,90% dalam kategori cukup efektif. Selanjutnya hasil t test diperoleh : $t_{hitung} > t_{Tabel} = 14,33 > 1,701$, sehingga dapat disimpulkan bahwa terdapat perbedaan data *pretest* (sebelum membaca buku yang dikembangkan) dan *posttest* (setelah membaca buku yang dikembangkan) berbeda secara signifikan, maka dipastikan pada mahasiswa buku ilmiah populer *lichenes* di Perguruan Tinggi Kawasan Sumatra Utara dapat meningkatkan kemampuan kognitif mahasiswa, dengan $\alpha = 0,05$.

Kata kunci: Penelitian Pengembangan, Buku Ilmiah Populer, *Lichenes*.

ABSTRACT

DESYARDINA. 8186174013: Development of *Lichenes* Popular Scientific Books at Universities in North Sumatra Region in Biology Learning at Medan State University, July 2022.

This study aims to produce a popular scientific book product lichenes at universities in the North Sumatra Region in learning Biology at the State University of Medan which is suitable for undergraduate students majoring in Biology. This type of research is research and development (R&D), with a product development model using the ADDIE development model consisting of analysis, design, development, implementation and evaluation. The popular scientific book *lichenes* developed was validated based on material experts who obtained an average score of 82.46% with a very decent category. Furthermore, it was validated by linguists with an average score of 83.33% in the very feasible category. For validation by graphic design experts, the average result is 93.59% in the very feasible category. The results of product trials for popular scientific books *lichenes* consist of students and lecturers. Student product trials were obtained from three aspects, namely, individual trials obtained an average score of 93% with a very feasible category, small group trials obtained an average value of 90% with a very feasible category and group trials obtained an average value. an average of 87% with a very decent category. Meanwhile, the product trial on the Lecturer of the Low Level Organism Taxonomy course obtained an average score of 92% with a very decent category. The popular scientific book *Lichenes* was declared very worthy of distribution and tested its effectiveness on 29 students majoring in Biology, State University of Medan, the average result was obtained. N-Gain value of 0.659 in the medium category, and a percent score of 65, 90% in the category of moderately effective. Furthermore, the results of the t test are obtained: $t_{count} > t_{Table} = 14.33 > 1.701$, so it can be concluded that there is a difference in the *pretest* data (before reading the developed book) and *posttest* (after reading the developed book) significantly different, it is certain that the students of scientific books The popularity of lichenes in Universities in the North Sumatra Region can improve students' cognitive abilities, with $\alpha = 0.05$.

Keywords: Research and Development, Populer Scientific Books, Lichenes