

ABSTRAK

Stevany, NIM 4193141025 (2023). Pengembangan Sumber Belajar *Booklet* Keanekaragaman *Pteridophyta* di Kawasan Geosite Batu Basiha Konsep *Plantae* Biologi SMA.

Penelitian ini dilakukan sebagai uji kelayakan sumber belajar *Booklet* Keanekaragaman *Pteridophyta* untuk meningkatkan hasil belajar siswa berdasarkan tanggapan ahli materi, ahli media pembelajaran, ahli desain grafis, guru bidang studi, dan peserta didik. Penelitian ini merupakan penelitian pengembangan berjenis *research and development* (R&D). Model penelitian yang digunakan pada penelitian ini adalah model 4-D oleh Thiagarajan yang meliputi tahap pendefinisian (*define*), tahap perancangan (*design*), tahap pengembangan (*develop*), dan tahap penyebaran (*disseminate*). Subjek pada penelitian ini adalah 1 dosen ahli materi, 1 dosen ahli media pembelajaran, 1 dosen ahli desain grafis, 1 guru biologi, dan peserta didik kelas X MIPA 5 SMA Negeri 2 Balige. Objek pada penelitian ini adalah *booklet* keanekaragaman *Pteridophyta*. Hasil penelitian menunjukkan bahwa *booklet* keanekaragaman *Pteridophyta* yang dikembangkan layak digunakan sebagai sumber belajar bagi siswa karena memenuhi kriteria kelayakan dengan persentase 84,4% dari ahli materi yang termasuk dalam kriteria layak, skor persentase 92,31% dari ahli media pembelajaran yang termasuk dalam kriteria sangat layak, skor persentase 96% dari ahli desain grafis yang termasuk dalam kriteria sangat layak, persentase 98% dari guru biologi yang termasuk dalam kriteria sangat layak, persentase 84% dari uji perorangan yang termasuk dalam kriteria sangat layak, persentase 91,1% dari uji coba kelompok kecil yang termasuk dalam kriteria sangat layak, dan persentase 89,3% dari uji kelompok terbatas yang termasuk dalam kriteria sangat layak. Syarat sebelum dilakukan uji t adalah uji normalitas dan uji homogenitas. Uji normalitas menggunakan SPSS 22 menunjukkan nilai probabilitas *pretest* $0,2 > 0,05$ dan nilai probabilitas *posttest* $0,102 > 0,05$. Hasil uji homogenitasnya varians dari sampel yang diteliti adalah sama (homogen) dengan nilai probabilitas $0,971 > 0,05$. Hasil uji t menyatakan bahwa terdapat perbedaan yang signifikan antara nilai *pretest* dan *posttest* ($t_{hitung} = 33,171$; $P = 0,000 < 0,01$). Rata rata nilai *pretest* $23,89 \pm 9,228$ ($\bar{X} \pm SD$) signifikan lebih rendah dibanding rata rata nilai *posttest* $75,26 \pm 8,705$ ($\bar{X} \pm SD$). Hasil uji *N-gain* yang dianalisis dari *pretest* dan *posttest* dan diperoleh hasil rata rata skor *N-gain* sebesar 0,68 yang masuk ke dalam kategori sedang. Kesimpulan dari penelitian ini adalah *booklet* keanekaragaman *Pteridophyta* dinyatakan efektif digunakan sebagai sumber belajar pendamping buku paket dalam pembelajaran materi *Pteridophyta* di kelas X MIPA 5 SMA Negeri 2 Balige yang diketahui dari adanya peningkatan hasil belajar di kelas X MIPA 5 berdasarkan uji t dan *N-Gain*.

Kata Kunci: Pengembangan, Sumber Belajar, *Booklet*, *Pteridophyta*, Geosite Batu Basiha

ABSTRACT

Stevany, NIM 4193141025, Development of Pteridophyte Diversity Booklet Learning Resources in the Batu Basiha Geosite Area Plantae Biology Concept for High School.

This research was conducted as a feasibility test for the Pteridophyte Diversity Booklet learning resource to improve student learning outcomes based on responses from material experts, learning media experts, graphic design experts, subject teachers and students. This research is research and development (R&D) type research. The research model used in this research is the 4-D model by Thiagarajan which includes the definition stage, design stage, development stage and disseminate stage. The subjects in this research were 1 material expert lecturer, 1 learning media expert lecturer, 1 graphic design expert lecturer, 1 biology teacher, and class X MIPA 5 students at SMA Negeri 2 Balige. The object of this research is the Pteridophyta diversity booklet. The results of the research show that the pteridophyte diversity booklet developed is suitable for use as a learning resource for students because it meets the eligibility criteria with a percentage of 84.4% of material experts who are included in the appropriate criteria, a percentage score of 92.31% of learning media experts who are included in the very criteria. worthy, a percentage score of 96% of graphic design experts which is included in the very worthy criteria, a percentage of 98% of biology teachers which is included in the very worthy criteria, a percentage of 84% of individual tests which are included in the very worthy criteria, a percentage of 91.1% of the tests small group trials included in the very feasible criteria, and a percentage of 89.3% of limited group trials included in the very feasible criteria. The requirements before carrying out the t test are a normality test and a homogeneity test. The normality test using SPSS 22 shows a *pretest* probability value of $0.2 > 0.05$ and a *posttest* probability value of $0.102 > 0.05$. The homogeneity test results showed that the variances of the samples studied were the same (homogeneous) with a probability value of $0.971 > 0.05$. The results of the t test stated that there was a significant difference between the *pretest* and *posttest* scores ($t = 33.171$; $P = 0.000 < 0.01$). The average *pretest* score of 23.89 ± 9.228 ($\bar{X}_1 \pm SD$) was significantly lower than the average *posttest* score of 75.26 ± 8.705 ($\bar{X}_2 \pm SD$). The N-gain test results were analyzed from the *pretest* and *posttest* and obtained an average N-gain score of 0.68 which is in the medium category. The conclusion of this research is that the pteridophyte diversity booklet is declared effective as a learning resource to accompany the textbook in learning pteridophyta material in class X MIPA 5 SMA Negeri 2 Balige which is known from the increase in learning outcomes in class.

Keywords: Development, Learning Resources, Booklet, Pteridophyta, Batu Basiha Geosite