

**PENGEMBANGAN BUKU AJAR BIOLOGI EKOSISTEM BERBASIS  
PENDEKATAN SAINTIFIK UNTUK SISWA KELAS X  
SMA NEGERI 9 MEDAN T.A 2019/2020**

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**Abstrak**

Penelitian ini bertujuan untuk mengetahui tingkat kelayakan buku ajar biologi ekosistem berbasis pendekatan saintifik. Jenis penelitian yang digunakan adalah penelitian pengembangan (*R&D*) dengan model pengembangan produk 4-D. model ini meliputi 4 tahap, yaitu: (1) *define*; (2) *design*; (3) *develop*; (4) *disseminate*. Penelitian ini dibatasi hingga tahap pengembangan (*development*); yaitu hanya sampai tahap uji coba produk pada kelompok lapangan terbatas. Penelitian ini dimulai sejak bulan Juni-September 2019 di SMA Negeri 9 Medan. Subjek dalam penelitian ini siswa yaitu siswa kelas X IPA 1, sedangkan objek penelitian berupa buku ajar biologi ekosistem berbasis pendekatan saintifik yang akan dikembangkan. Buku yang dikembangkan divalidasi oleh ahli materi, ahli pembelajaran dan ahli desain grafis, guru dan uji lapangan. Uji lapangan dilakukan sebanyak tiga kali, yaitu uji coba perorangan sebanyak tiga orang siswa, uji coba kelompok kecil sebanyak sembilan orang siswa, dan uji coba kelompok terbatas sebanyak 18 orang siswa. Data tentang kualitas produk pengembangan ini dikumpulkan dengan angket. Data di analisis dengan teknik kualitatif dan kuantitatif. Hasil penelitian menunjukkan bahwa rata-rata persentase penilaian oleh ahli materi sebesar 86% dengan kriteria “layak”; ahli pembelajaran sebesar 86% dengan kriteria “layak”; ahli desain grafis sebesar 89% dengan kriteria “sangat layak”; penilaian guru bidang studi biologi sebesar 89% dengan kriteria “sangat layak”; uji coba perorangan sebesar 86,66% dengan kriteria “baik”; uji coba kelompok kecil sebesar 87,77% dengan kriteria “baik”; uji coba kelompok terbatas sebesar 86,66% dengan kriteria “baik”. Dapat disimpulkan bahwa produk penelitian pengembangan buku ajar biologi ini layak digunakan sebagai bahan ajar siswa kelas X IPA.

**Kata Kunci:** Pengembangan, Buku Ajar, Pendekatan Saintifik, dan Ekosistem

**THE DEVELOPMENT OF ECOSYSTEM BIOLOGY TEXTBOOK  
BASED SCIENTIFIC APPROACH FOR CLASS X  
SMA NEGERI 09 MEDAN T.A 2019/2020**

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**Abstract**

This research aims to know the level feasibility of the ecosystem biology textbook based scientific approach. The type of the research in *Research Development (R&D)* with 4-D product development model. This model includes 4 stages, (1) define; (2) design; (3) develop; (4) disseminate. This research is limited to develop stage, to the step of testing the product on a limited group. This research is began since Juny to September 2019 in SMA Negeri 9 Medan. The subject of the research is student of X IPA 1 class, the object of this research is ecosystem biology textbook based scientific approach. The biology textbook that been developed is validated by the material expert, educational expert, graphic design expert, two teacher and field test. The field trials are performed as many as three times, that is individual trials as many as three student, small group trials as many as nine student, and limited field group trialas many as 30 students. The data of the quality of this development product is collected by questionnaire. The data is analyzed by the descriptive technique of quantity and quality. The result of this research shows that the percentage mean of assessment by material expert is 86% with the “proper” category; by educational expert is 86% with “proper” category; by graphic design expert is 89% with “very proper” category; by the biology teacher is 89% with “very proper” category; by the individual trials is 86,66% with :good” category; by small group trial is 87,77% with “good” category; and by limited group trial is 86,66% with “good” category. This research can be concluded that the development research product of biology textbookis proper to use as the teaching material for student class X IPA.

**Key Word: Development, Textbook, Scientific Approach, and Ecosystem.**