

**Pengembangan Ensiklopedia Genetika Sebagai Sumber
Belajar Biologi pada Materi Substansi Genetika
untuk Siswa SMA Kelas XII di SMA
Negeri 2 Percut Sei Tuan**

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ABSTRAK

Penelitian ini bertujuan untuk mengetahui: (1) Tingkat kelayakan ensiklopedia substansi genetika; (2) penilaian guru biologi SMAN 2 percut sei tuan; (3) Tanggapan siswa terhadap ensiklopedia substansi genetika pada siswa SMA kelas XII. Jenis penelitian ini adalah penelitian pengembangan dengan model pengembangan produk 4-D yang dimodifikasi sesuai kebutuhan. Model ini meliputi 4 tahapan, yaitu (1) pendahuluan (define); (2) design (perancangan); (3) develop (pengembangan); (4) dissesminate (penyebaran). Subjek uji coba terdiri dari tim ahli materi, ahli media, 1 guru biologi SMAN 2 percut sei tuan, 3 siswa SMAN 2 percut sei tuan pada uji coba perorangan, 9 siswa SMAN 2 percut sei tuan pada uji coba kelompok kecil dan 27 siswa SMAN 2 Percut Sei Tuan pada uji coba kelompok lapangan terbatas. Data tentang kualitas produk pengembangan ini dikumpulkan dengan angket. Data dianalisis dengan teknik deskriptif kuantitatif dan kualitatif. Hasil penelitian menunjukkan bahwa: (1) validasi tim ahli materi berada pada kriteria “sangat layak” (83%); (2) validasi tim ahli media berada pada kriteria “sangat layak” (81,25%); (3) penilaian guru bidang studi biologi berada pada kriteria “ sangat layak (membantu)” (96,25%); (4) uji coba perorangan berada pada kriteria “ sangat baik” (89,33%); uji coba kelompok kecil berada pada kriteria “sangat baik” (89,61%); uji coba kelompok lapangan terbatas berada pada kriteria “sangat baik” (92,46%), sehingga dapat disimpulkan bahwa produk penelitian pengembangan ensiklopedia substansi genetika yang dikembangkan ini layak untuk digunakan sebagai sumber belajar tambahan siswa kelas XII IPA atau sebagai penunjang pembelajaran substansi genetika di SMA.

Kata kunci: Pengembangan, Ensiklopedia, Substansi Genetika

**Development of the Genetics Encyclopedia as a Learning Resource
for Biology in Genetic Substance Material for Grade
XII Senior High School Students in the
SMA Negeri 2 Percut Sei Tuan**

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ABSTRACT

This study aims to determine: (1) the level of suitable encyclopedia of genetic substances; (2) the assessment of the biology teacher of SMAN 2 Sei Tuan; (3) Students' responses to the encyclopedia of genetic substance for grade XII of Senior High School students. This type of research is a development research with a 4-D product development model that is modified as needed. This model includes 4 stages, they are: (1) define; (2) design; (3) develop; (4) disseminate. The subject for try out consists of the material expert, media expert, one biology teacher of SMAN 2 Percut Sei Tuan, 3 students of SMAN 2 for individual try out, 9 students of SMAN 2 for the small group try out and 25 students of SMAN 2 Percut Sei Tuan in a limited field group try out. The Data of the quality of product development was collected by questionnaire. Data were analyzed with quantitative and qualitative descriptive techniques. The result of the research shows that : (1) the validation of the material expert team is on the criteria of "very feasible" (83%); (2) the validation of the media expert team is on the criteria of "very feasible " (81.25%); (3) the assessment of biology teacher is on the criteria of "very feasible" (96.25%); (4) individual try out is on the criteria "very good" (89.33%); small group try out is on the criteria of "very good"(89.61%); Limited field group try out is on the criteria of "very good" (92.46%), so it can be concluded that the research product development of encyclopedia of genetic substance developed was suitable to be used as an source of additional learning for grade XII of Science Program or as a support for genetic substance learning in senior high school.

Keywords: Development, Encyclopedia, Genetic Substance