

ABSTRAK

CHAIRANY RIZKA. Pengembangan buku ajar berbasis riset isolasi, amplifikasi dan visualisasi DNA pada mata kuliah bioteknologi. Program Pascasarjana Universitas Negeri Medan 2018.

Penelitian ini bertujuan untuk mengembangkan buku Isolasi, Amplifikasi dan Isolasi DNA berbasis riset di Universitas Negeri Medan. Penelitian ini dilakukan di Jurusan Biologi Universitas Negeri Medan pada bulan Maret sampai dengan Juni 2017, dengan model pengembangan Borg & Gall yang telah dimodifikasi terdiri dari 10 tahapan yaitu : penelitian pendahuluan dan pengumpulan informasi, perencanaan, pengembangan produk awal, riset, pengembangan buku, validasi ahli, revisi awal, uji coba perorangan, revisi uji coba perorangan, uji kelompok kecil, revisi kelompok kecil, uji coba lapangan terbatas, revisi uji lapangan terbatas, dan produk. Produk yang dihasilkan berupa buku yang digunakan mahasiswa sebagai suplemen pembelajaran bioteknologi pada materi isolasi, amplifikasi dan visualisasi DNA. Produk dinilai layak oleh tim validasi. Hasil penilaian tim ahli materi menunjukkan rata-rata 84% terkategori sangat baik, tim ahli bahasa menunjukkan rata-rata 77% terkategori baik dan tim ahli desain terkategori 85% terkategori sangat baik. Berdasarkan uji perorangan didapat nilai rata-rata nilai 88% terkategori sangat baik, uji kelompok kecil didapat rata-rata nilai 82% terkategori sangat baik, dan uji lapangan terbatas didapat rata-rata nilai 85% terkategori sangat baik.

ABSTRACT

CHAIRANY RIZKA. Development of research based book on isolation, amplification, and visualization material for biotechnology course. Postgraduate Program State University of Medan 2018.

The purpose of this study was to develop the DNA isolation, amplification, and visualization textbook in State University of Medan. This research conducted in Biology program of UNIMED in March-June 2017. The research method used was modified Borg and Gall Research and Development method that consist of 10 stages, are : Preliminary research and information collecting, planning, primary product development, research, book development, expert validation, preliminary revision, individual test, individual test revision, small group test, small group test revision, limited field test, limited field revision, product. The product made was a textbook used by students as learning supplement in Biotechnology course in DNA isolation, amplification and visualisation subject. The result showed that the validity of textbook from content experts was very feasible with average score 88%, whereas the average scores of every variables like quality of learning material has 95% (very feasible), learning delivery system has 79% (feasible), the quality of learning strategy has 82% (very feasible), and the quality of learning material has 79% . The textbook assessed to be feasible from language/context expert with average percentage scores obtained was 79% and very feasible from design expert with average percentage score obtained was 86%. Student's response to the primary field testing in individual test was 89% (very feasible) and small group test was 92% (very feasible). Student's response to the operational field testing was 85% (very feasible).