

ABSTRAK

Figertana Hykmah Br Bangun, NIM 4173141025 (2021). Pengembangan Buku Ajar Berbasis Literasi Sains Materi Zat Pengatur Tumbuh dan Produksi Senyawa Metabolit Sekunder.

Buku ajar Kultur Jaringan sulit ditemukan di perpustakaan Universitas Negeri Medan (UNIMED), dan buku ajar yang ada lebih berfokus pada aspek konten daripada aspek proses. Selain itu, belum ada buku ajar berbasis literasi sains pada materi zat pengatur tumbuh dan produksi senyawa metabolit sekunder. Oleh karena itu, penelitian ini bertujuan untuk mengembangkan buku ajar Kultur Jaringan berbasis literasi sains materi zat pengatur tumbuh dan produksi senyawa metabolit sekunder yang layak sehingga dapat digunakan sebagai sumber belajar mahasiswa dalam pembelajaran mata kuliah Kultur Jaringan. Penelitian ini dilaksanakan pada bulan Januari-Juni 2021 di Jurusan Biologi, Fakultas Matematika dan Ilmu Pengetahuan Alam, UNIMED. Jenis penelitian ini adalah *Research & Development* dengan model pengembangan Dick & Carrey yang dilaksanakan hingga tahap merancang dan melakukan evaluasi formatif. Subjek penelitiannya adalah mahasiswa program studi Biologi angkatan 2018 yang sudah mengambil mata kuliah Kultur Jaringan. Objek penelitian ini adalah buku ajar Kultur Jaringan berbasis literasi sains yang dikembangkan. Pengumpulan data melalui angket, observasi dan dokumentasi. Instrumen penelitian menggunakan angket yang terbagi menjadi dua yaitu angket validasi oleh tim ahli (ahli materi, ahli desain pembelajaran, dan ahli desain layout) dan angket respon/tanggapan dosen mata kuliah dan mahasiswa. Hasil penelitian menunjukkan bahwa presentase skor rata-rata penilaian buku ajar Kultur Jaringan yang dikembangkan menurut ahli materi (98%), ahli desain pembelajaran (93%), ahli desain layout (93%), dosen mata kuliah (91%), dan mahasiswa meliputi uji coba perorangan (91%), uji coba kelompok kecil (91%), uji coba kelompok terbatas (92%). Hal tersebut menunjukkan bahwa buku ajar yang digunakan sangat layak digunakan sebagai sumber belajar.

Kata kunci: Pengembangan, buku ajar, kultur jaringan, literasi sains.

ABSTRACT

Figertana Hykmah Br Bangun, NIM 4173141025 (2021). Development of Science Literacy Based Textbooks on Growth Regulatory Substances and Production of Secondary Metabolite Compounds.

Network culture textbooks are hard to find in the Medan State University (UNIMED) library, and the existing textbooks focus more on the content aspect than the process aspect. In addition, there are no scientific literacy-based textbooks on growth regulators and the production of secondary metabolites. Therefore, this study aims to develop a tissue culture textbook based on scientific literacy on growth regulators and the production of appropriate secondary metabolites so that they can be used as a source of student learning in the study of tissue culture courses. This research was conducted in January-June 2021 at the Department of Biology, Faculty of Mathematics and Natural Sciences, UNIMED. This type of research is Research & Development with a Dick & Carrey development model which is carried out to the stage of designing and conducting formative evaluation. The research subjects are students of the 2018 Biology study program who have taken the Tissue Culture course. The object of this research is the scientific literacy-based Network Culture textbook that was developed. Collecting data through questionnaires, observation and documentation. The research instrument used a questionnaire which was divided into two, namely a validation questionnaire by a team of experts (material experts, learning design experts, and layout design experts) and a response questionnaire/response of course lecturers and students. The results showed that the percentage of average scores for the assessment of Network Culture textbooks developed by material experts (98%), learning design experts (93%), layout design experts (93%), course lecturers (91%), and students including individual trials (91%), small group trials (91%), limited group trials (92%). This shows that the textbooks used are very suitable to be used as learning resources.

Keywords: Development, textbooks, tissue culture, scientific literacy.