ABSTRAK

Anggie Arisa Putri Harahap, NIM 4161141005 (2016). Pengembangan Video Tutorial Bioteknologi Sebagai Sumber Belajar Mahasiswa di Universitas Negeri Medan

Penelitian ini bertujuan untuk melihat kelayakan dan keefektifan berdasarkan penilaian para ahli, diantaranya: ahli media, ahli materi, dan ahli Desain Instruksional serta respon dosen matakuliah bioteknologi dan mahasiswa Biologi Universitas Negeri Medan terhadap video yang telah dikembangkan. Sampel penelitian ini mahasiswa S-1 yang sudah mengambil matakuliah bioteknologi dengan penilaian perorangan 3 orang, kelompok kecil 7 orang, kelompok besar atau terbatas 20 orang. Dan mahsiswa yang sedang mengambil matakuliah bioteknologi sebanyak 31 orang untuk melihat keefektifan video. Penelitian video tutorial bioteknologi pada materi teknologi enzim termasuk jenis penelitian pengembangan *Research and Development* (R&D), Pengembangan video pembelajaran ini mengacu pada model pengembangan Thiagarajan atau model pengembangan 4-D. Dimana model 4-D terdiri atas empat tahap, yakni *define* (pendefinisian), *design* (perancangan), *development* (pengembangan), dan *disseminate* (penyebaran). Hasil Penelitian menunjukkan bahwa penilaian pada ahli materi dikategorikan sangat layak, penilaian terhadap ahli media pada video sangat layak, penilaian terhadap ahli desain instruksional pada video sangat layak, penilaian dosen matakuliah bioteknologi dengan kategori layak, respon mahasiswa pada video tutorial dengan kategori sangat layak, keefektifan video tutorial dikatakan cukup efektif jika dilihat dari hasil perhitungan N-gain. Keseluruhan Video Tutorial Bioteknologi yang dikembangkan sudah sangat layak dan cukup efektif untuk dijadikan sebagai sumber belajar mahasiswa.

Kata Kunci : Media Pembelajaran, Video Tutorial, *Research and Development* (R&D), 4-D

ABSTRACT

Anggie Arisa Putri Harahap, NIM 4161141005 (2016). Development of Biotechnology Video Tutorials as Learning Resources for Students at the State University of Medan

This study aims to see the feasibility and effectiveness based on the measurement of experts, including: media experts, material experts, and Instructional Design experts as well as the responsibilities of lecturers in biotechnology subjects and Biology students at the State University of Medan who have developed videos. The sample of undergraduate students who have taken research biotechnology courses with individual results is 3 people, small groups 7 people, large groups or limited to 20 people. And students who are taking biotechnology courses as many as 31 people to see the effectiveness of the video. Biotechnology research video tutorials on technology materials including the type of research and development Research and Development (R&D). The development of this learning video refers to the Thiagarajan development model or the 4-D development model. Where the 4-D model consists of four stages, namely defining (defining), designing (designing), developing (developing), and spreading (spreading). The results showed that the assessment of the material expert was categorized as very feasible, the measurement of the media expert on the video was very feasible, the sample of the instructional design expert on the video was very feasible, the assessment of the biotechnology subject lecturer was in the proper category, the student response to the video tutorial was in the proper category, the effectiveness of the video tutorial is said to be quite effective when viewed from the results of the N-gain calculation. The entire Biotechnology Video Tutorial developed is very feasible and effective enough to be used as a learning resource for students.

Keywords: Learning Media, Video Tutorials, Research and Development (R&D), 4-D