PENGEMBANGAN MIKROVIDEO ANIMASI BERORIENTASI NEUROFEEDBACK PADA MATA PELAJARAN IPAS KELAS IV SD N 4 BANYUNING

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ABSTRAK

Tujuan penelitian ini adalah untuk (1) mendeskripsikan proses pengembangan *Mikrovideo* animasi berorientasi *Neurofeedback* pada materi pelajaran IPAS Kelas IV SD Negeri 4 Banyuning, (2) mengetahui validitas pengembangan *Mikrovideo* animasi berorientasi *Neurofeedback*, dan (3) mengetahui keefektifan penggunaannya dalam meningkatkan hasil belajar siswa. Penelitian ini merupakan penelitian pengembangan (Research and Development) yang menggunakan model ADDIE (*Analysis, Design, Development, Implementation, Evaluation*) sebagai langkah sistematis dalam merancang dan mengembangkan produk pembelajaran. Subjek uji coba terdiri atas ahli isi, ahli desain, ahli media, siswa dalam uji coba perorangan, dan kelompok kecil. Data dikumpulkan melalui observasi, angket validasi, dan tes hasil belajar, kemudian dianalisis secara deskriptif kuantitatif. Hasil penelitian menunjukkan bahwa (1) proses pengembangan Mikrovideo animasi berorientasi Neurofeedback mengikuti tahapan model ADDIE secara menyeluruh, menghasilkan media pembelajaran yang sesuai dengan karakteristik siswa dan materi IPAS; (2) Mikrovideo animasi dinyatakan valid dengan skor hasil review: ahli isi pembelajaran sebesar 98% (sangat baik), ahli desain pembelajaran sebesar 98% (sangat baik), ahli media pembelajaran sebesar 95% (sangat baik), uji coba perorangan sebesar 100%, uji coba kelompok kecil sebesar 100%, dan uji coba lapangan sebesar 100%, semuanya dalam kategori sangat baik; (3) Mikrovideo animasi berorientasi Neurofeedback terbukti efektif meningkatkan hasil belajar siswa pada mata pelajaran IPAS Kelas IV SD Negeri 4 Banyuning.

Kata Kunci: Pengembangan, *Mikrovideo*, Animasi, *Neurofeedback*, IPAS

DEVELOPMENT OF NEUROFEEDBACK-ORIENTED ANIMATION MICROVIDEOS IN THE SCIENCE SUBJECT OF GRADE IV OF SD N 4 BANYUNING

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ABSTRACT

The purpose of this study was to (1) describe the process of developing Neurofeedback-oriented animated microvideos on the subject matter of Science for Grade IV of SD Negeri 4 Banyuning, (2) determine the validity of the development of Neurofeedback-oriented animated microvideos, and (3) determine the effectiveness of their use in improving student learning outcomes. This study is a development research (Research and Development) that uses the ADDIE model (Analysis, Design, Development, Implementation, Evaluation) as a systematic step in designing and developing learning products. The trial subjects consisted of content experts, design experts, media experts, students in individual trials, and small groups. Data were collected through observation, validation questionnaires, and learning outcome tests, then analyzed descriptively quantitatively. The results of the study show that (1) the process of developing Neurofeedback-oriented animated microvideos follows the stages of the ADDIE model as a whole, producing learning media that are appropriate to the characteristics of students and Science material; (2) The animated microvideo was declared valid with a review score of: 98% (very good) from learning content experts, 98% (very good) from learning design experts, 95% (very good) from learning media experts, 100% from individual trials, 100% from small group trials, and 100% from field trials, all in the very good category; (3) The Neurofeedback-oriented animated microvideo was proven to be effective in improving student learning outcomes in the subject of Natural Sciences, Grade IV, SD Negeri 4 Banyuning.

Keywords: *Development, Microvideo, Animation, Neurofeedback, IPAS*