ABSTRAK

IRA KENYOSI BR MANURUNG. Pengembangan Model Pembelajaran Kebugaran Jasmani Berbasis Multimedia Interaktif untuk Meningkatkan Keterampilan 4C pada Siswa SMP. Tesis. Medan: Program Studi Pendidikan Olahraga, Fakultas Ilmu Keolahragaan, Universitas Negeri Medan. Tahun 2025.

Tujuan penelitian ini adalah menghasilkan pengembangan model pembelajaran kebugaran jasmani berbasis multimedia interaktif (Active4C) untuk meningkatkan keterampilan abad ke-21, yaitu *Critical Thinking, Creativity, Collaboration, and Communication* (4C) pada siswa SMP. Penelitian ini dilaksanakan di SMP Negeri 27 Medan dan SMP Negeri 35 Medan. Metode yang digunakan dalam penelitian ini adalah Research and Development (R&D) dari Borg and Gall. Subjek penelitian terdiri dari 10 siswa untuk uji coba terbatas, 10 siswa untuk uji coba utama, 30 siswa untuk uji skala I, dan 60 siswa untuk uji skala II di masing-masing sekolah. Teknik pengumpulan data dilakukan melalui angket untuk analisis kebutuhan, validasi ahli (materi, media, bahasa, dan pembelajaran), serta angket tanggapan siswa. Selain itu, digunakan juga instrumen pretest dan posttest. Teknik analisis data dalam penelitian ini menggunakan analisis deskriptif kuantitatif persentase dan uji paired samples t-test. Hasil validasi oleh ahli materi sebesar 93%, ahli media sebesar 97%, ahli bahasa sebesar 95%, dan ahli pembelajaran sebesar 91%. Berdasarkan kriteria penilaian, seluruh hasil validasi berada pada rentang 80%−100%, sehingga model dinyatakan valid dan sangat efektif digunakan dalam pengujian lapangan tanpa perlu perbaikan. Hasil pengujian lapangan awal oleh siswa sebesar 79,18%, uji coba utama sebesar 86,42%, uji skala I sebesar 90,07%, dan uji skala II sebesar 94,62%. Hasil uji efektivitas menunjukkan peningkatan skor rata-rata pretest sebesar 62,16 menjadi 88,09 pada posttest. Uji paired samples t-test menunjukkan nilai t hitung sebesar 18,27 > t tabel 2,045 dengan signifikansi 0,000 (p < 0,05), sehingga model dinyatakan efektif dalam meningkatkan keterampilan 4C siswa. Kesimpulan penelitian ini adalah model pembelajaran Active4C valid, sangat efektif digunakan, dan mendapat tanggapan positif dari guru dan siswa karena mudah digunakan, menarik, serta membantu pemahaman terhadap materi kebugaran jasmani secara lebih aktif dan menyenangkan.

Kata Kunci : Model, Kebugaran Jasmani, Multimedia, Keterampilan 4C.

ABSTRACT

IRA KENYOSI BR MANURUNG. Development of an Interactive Multimedia-Based Physical Fitness Learning Model to Improve 4C Skills among Junior High School Students. Thesis. Medan: Sports Education Study Program, Faculty of Sports Science, State University of Medan. Year 2025.

The purpose of this research is to develop a physical fitness learning model based on interactive multimedia (Active4C) aimed at improving 21st-century skills, namely: *Critical Thinking, Creativity, Collaboration, and Communication* (4C) among junior high school students. The study was conducted at SMP Negeri 27 Medan and SMP Negeri 35 Medan using the Research and Development (R&D) method by Borg and Gall. The research subjects included 10 students for a limited trial, 10 students for the main trial, 30 students for scale I testing, and 60 students for scale II testing from each school. Data were collected through questionnaires for needs analysis, expert validation (content experts, media experts, language experts, and learning experts), and student response questionnaires, along with pretest and posttest instruments. The data analysis techniques used in this study were descriptive quantitative percentages and a paired samples t-test. The validation results from content experts were 93%, media experts 97%, language experts 95%, and learning experts 91%. According to the assessment criteria, all validation results fell within the 80%−100% range, indicating that the model is valid and highly effective for field testing without requiring revisions. Field testing results showed 79.18% in the initial trial, 86.42% in the main trial, 90.07% in scale I testing, and 94.62% in scale II testing. Effectiveness testing demonstrated an increase in students' average scores from 62.16 (pretest) to 88.09 (posttest). The paired samples t-test yielded a t-value of 18.27, which is greater than the t-table value of 2.045, with a significance level of 0.000 ($p < 0.05$), indicating that the Active4C model is effective in enhancing students' 4C skills. The conclusion of this study is that the Active4C learning model is valid, highly effective, and received positive responses from both teachers and students. It is considered easy to use, engaging, and supportive in enhancing understanding of physical fitness material in a more active and enjoyable manner.

Keywords: Model, Physical Fitness, Multimedia, 4C Skills.