

ABSTRAK

Penelitian ini bertujuan untuk mengembangkan dan menguji kelayakan serta menganalisis efektivitas aplikasi pembelajaran interaktif berbasis Scratch 3.0 berbantuan Interactive Flat Panel (IFP) Digital dalam meningkatkan minat belajar siswa pada pembelajaran IPA SMP. Penelitian menggunakan pendekatan Research and Development (R&D) dengan model ADDIE (analysis, design, development, implementation, evaluation). Data dikumpulkan melalui validasi ahli materi dan ahli media, angket respon siswa, serta angket minat belajar pada kelas eksperimen dan kelas konvensional. Teknik analisis data meliputi analisis deskriptif kuantitatif untuk kelayakan produk dan uji inferensial menggunakan Mann–Whitney U Test untuk menguji perbedaan minat belajar. Hasil penelitian menunjukkan bahwa aplikasi dinyatakan layak berdasarkan validasi ahli dengan kategori sangat baik serta memperoleh respon siswa dengan kategori sangat baik (88,35%). Selain itu, terdapat perbedaan signifikan antara kelas eksperimen dan kelas konvensional ($p < 0,05$) dengan selisih mean sebesar 10,786, serta peningkatan minat belajar sebesar 23% pada kelas eksperimen. Dengan demikian, aplikasi pembelajaran interaktif berbasis Scratch 3.0 berbantuan IFP Digital efektif dalam meningkatkan minat belajar siswa.

Kata kunci: Scratch 3.0, Interactive Flat Panel, minat belajar, media pembelajaran interaktif, penelitian R&D

ABSTRACT

This study aims to develop, validate, and analyze the effectiveness of an interactive learning application based on Scratch 3.0 assisted by Interactive Flat Panel (IFP) Digital in improving students' learning interest in science education. This research employs a Research and Development (R&D) approach using the ADDIE model (analysis, design, development, implementation, evaluation). Data were collected through expert validation, student response questionnaires, and learning interest questionnaires from experimental and conventional classes. Data analysis techniques included descriptive quantitative analysis and Mann–Whitney U Test. The results indicate that the developed application is highly feasible based on expert validation and received very positive student responses (88.35%). Furthermore, a significant difference was found between the experimental and conventional classes ($p < 0.05$) with a mean difference of 10.786 and a 23% increase in students' learning interest. Thus, the Scratch 3.0-based interactive application supported by IFP Digital is effective in enhancing students' learning interest.

Kata kunci: *Scratch 3.0, Interactive Flat Panel, learning interest, interactive learning media, Research and Development (R&D)*