

ABSTRAK

Khairunnisa' Nabilah, NIM 4183311001 (2022). Pengembangan Bahan Ajar Digital Interaktif Berbasis Model Masalah untuk Meningkatkan Kemampuan Pemecahan Masalah Matematis pada Materi Bangun Ruang Sisi Datar Siswa SMP Swasta IT Al-Hijrah 2 Deli Serdang Kelas VIII.

Penelitian ini bertujuan untuk menghasilkan bahan ajar digital interaktif berbasis masalah yang valid, praktis, dan efektif, sehingga dapat digunakan untuk meningkatkan kemampuan pemecahan masalah matematis siswa. Instrumen penelitian yang digunakan adalah lembar validasi angket respon siswa dan guru terhadap bahan ajar, lembar validasi bahan ajar digital interaktif oleh ahli materi dan ahli media, dan tes kemampuan pemecahan masalah matematis. Setelah seluruh instrumen, RPP, dan bahan ajar digital interaktif dinyatakan valid oleh validator, kemudian dilakukan uji coba keterbacaan dan uji lapangan. Hasil penelitian menunjukkan bahwa: (1) Perangkat pembelajaran berbasis masalah memenuhi kriteria kevalidan dengan nilai rata-rata validasi RPP adalah 3,78 dan rata-rata validasi bahan ajar digital interaktif sebesar 3,63 untuk ahli materi dan 3,93 untuk ahli media dengan kategori sangat layak, (2) Bahan ajar digital interaktif berbasis masalah yang dikembangkan telah memenuhi kriteria kepraktisan sebesar 96,87% dengan kategori sangat praktis, (3) Bahan ajar digital interaktif berbasis masalah yang dikembangkan memenuhi kriteria efektif, yaitu: (a) Ketuntasan belajar siswa secara klasikal pada uji lapangan sebesar 92,3%, (b) Nilai rata-rata ketercapaian indikator tujuan pembelajaran sebesar 89,52, (c) Waktu pembelajaran sama dengan pembelajaran biasa dan nilai respon siswa sebesar 88,86%, dan (d) Terjadi peningkatan nilai kemampuan pemecahan masalah matematis siswa dengan rata-rata sebesar 66,88. Melalui uji Gain menunjukkan bahwa kemampuan pemecahan masalah matematis siswa mengalami peningkatan sebesar 0,84 termasuk dalam kategori tinggi.

Kata Kunci: Bahan ajar digital interaktif, berbasis model masalah, kemampuan pemecahan masalah matematis.



ABSTRACT

Khairunnisa' Nabilah, NIM 4183311001 (2022). Development of Problem Model-Based Interactive Digital Teaching Materials to improve Mathematical Problem-Solving Ability on Flat Sided Building material for Class VIII IT Al-Hijrah 2 Deli Serdang Private Middle School Students.

This research aims to produce problem-based interactive digital teaching materials that are valid, practical, and effective, so that they can be used to improve students' mathematical problem-solving skills. The research instruments used were validation sheets for student and teacher response questionnaires to teaching materials, validation sheets for interactive digital teaching materials by material experts and media experts, and mathematical problem-solving ability tests. After all instruments, lesson plans, and interactive digital teaching materials were declared valid by the validators, then readability trials and field tests were conducted. The results showed that: (1) Problem-based learning devices meet the criteria of validity with the average value of RPP validation is 3.78 and the average validation of interactive digital teaching materials is 3.63 for material experts and 3.93 for media experts with very feasible categories; (2) The developed problem-based interactive digital teaching materials have met the practicality criteria of 96.87% with a very practical category; (3) The developed problem-based interactive digital teaching materials meet the effective criteria, that is: (a) Classical student learning completeness in the field test was 92.3%; (b) The average value of the achievement of learning objectives indicators was 89.52, (c) Learning time was the same as regular learning and student response value of 88.86%, and (d) There was an increase in students' mathematical problem-solving ability on average of 66.88. The Gain test showed that students' mathematical problem-solving ability increased by 0.84, including in the high category.

Keywords: interactive digital teaching materials, problem model based, mathematical problem-solving ability.

