ABSTRAK

Putriamelia Sari DLY, NIM 4173111065 (2022). Pengambangan Bahan Ajar Digital Berbasis Saintifik pada Materi Himpunan Kelas VII MTs Negeri Sibolga.

Penelitian ini bertujuan untuk memperoleh bahan ajar digital berbasis saintifik yang valid, praktis, dan efektif, sehingga dapat meningkatkan kemampuan pemahaman konsep siswa pada materi himpunan. Instrumen penelitian yang digunakan yaitu lembar validasi bahan ajar digital, lembar validasi angket respon siswa dan guru terhadap bahan ajar digital, lembar validasi RPP, tes kemampuan pemahaman konsep, dan lembar validasi instrumen tes. Setelah instrumen, RPP, dan bahan ajar digital dinyatakan valid oleh validator ahli media dan materi, selanjutnya dilakukan uji keterbacaan dan uji coba lapangan. Hasil penelitian menunjukkan bahwa: (1) Bahan ajar digital berbasis saintifik yang dikembangkan telah memenuhi kriteria kevalidan berdasarkan penilaian dari validator dengan persentase rata-rata validasi bahan ajar digital untuk materi adalah 80,05% dengan kategori cukup valid, sedangkan persentase rata-rata bahan ajar digital untuk ahli media yaitu 96,04% dengan kategori sangat layak; (2) Bahan ajar digital yang dikembangkan telah memenuhi kriteria kepraktisan yaitu: a) hasil angket respon siswa terhadap bahan ajar digital menunjukkan persentase kepraktisan sebesar 77,44% dengan kategori sangat praktis, b) hasil angket respon guru terhadap bahan ajar digital menunjukkan persentase sebesar 89,71% dengan kategori sangat praktis; (3) Bahan ajar digital berbasis saintifik yang telah dikembangkan memenuhi kriteria keefektifan yaitu: a) ketuntasan belajar siswa secara klasikal sebesar 87,5%, b) lebih dari 65% siswa yang mengikuti pembelajaran telah mencapai 75% tujuan pembelajaran pada tiap indikator, c) meningkatnya kemampuan pemahaman konsep siswa setelah menggunakan bahan ajar digital yang dilihat melalui nilai rata-rata siswa meningkat dari nilai *pretest* sebesar 58,52 menjadi 82,38 pada *posttest*, dan hasil analisis N-Gain menunjukkan kemampuan pemahaman konsep siswamengalami peningkatan sebesar 0,731 dengan kategori tinggi.

Kata Kunci: Bahan ajar digital, pendekatan saintifik, kemampuan pemahaman konsep matematis, himpunan.

ABSTRACT

Putriamelia Sari DLY, NIM 4173111065 (2002) Development of Scientific-Based Digital Teaching Materials for Class VII Association Materials at MTs Negeri Sibolga

This study aims to obtain scientifically-based digital teaching materials that are valid, practical, and effective, so as to improve students' conceptual understanding skills in the set of materials. The research instruments used are digital teaching material validation sheets, student and teacher response questionnaire validation sheets for digital teaching materials, RPP validation sheet, concept understanding ability test, and instrument validation sheet after instrument test. RPP and digital teaching materials were declared valid by validators of media and lazy experts, then readability test and field trials were carried out. The results showed that (1) the scientifically based digital teaching materials developed had met the criteria of validity based on the advice of the validator with an average percentage validation of digital teaching materials for materials is 80,05% with a fairly valid category, while the average percentage of digital teaching materials for media experts is 96,04% with a very feasible category; (2) digital teaching materials developed have met the practical criteria, namely a) the results of the questionnaire on student responses to digital teaching materials show a percentage of practicality of 77,44% with a very practical category, b) the results of the teacher's response questionnaire to digital teaching materials show a percentage of 89,71% with a very practical category; (3) teching materials Scientific-based digital technology that has been developed meetd the effectiveness criteria, namely, a) complete learning students classically are 87,5%, b) more than 65% of students who take part in learning have achieved 75% of the learning objectives on the indicator trap, c) increased students conceptual understanding skills after using digital teaching materials seen through the average score of students increased from the pretest value of 58,52 to 82,38 in the posttest, and the results of the N-Gain analysis showed that the students' conceptual understanding ability increased by 0,731 in the high category.

Keywords: digital teching materials, scientific approach, ability to understand mathematical concepts, set.