ABSTRAK

NUR ELISA FITRI. Pengembangan Bahan Ajar digital *flipbook* berbasis pendekatan pembelajaran *Contextual Teaching and Learning* untuk meningkatkan kemampuan pemecahan masalah matematis siswa SMP IT Bina Insan Batang Kuis. Tesis. Medan: Program Studi Pendidikan Matematika Pascasarjana Universitas Negeri Medan. 2024.

Penelitian ini bertujuan untuk mengetahui bagaimana kevalidan, kepraktisan dan kefektifan bahan ajar berbasis pendekatan *Contextual and Teaching Learning* yang dikembangkan untuk meningkatkan kemampuan pemecahan masalah matematis siswa. Penelitian ini termasuk dalam penelitian pengembangan (*Development Research)*. Penelitian ini akan dilaksanakan di SMP IT Bina Insan Batang Kuis yang beralamat JL. Nusa Indah Gg. Melati No.47, Tanjung Sari, Kec. *Batang Kuis*, Kab. Deli Serdang Prov. Sumatera Utara pada siswa kelas VIII Semester II Tahun Pelajaran 2023/2024. Hasil penelitian menunjukkan bahwa: 1) Perangkat yang dikembangkan valid dengan (a) hasil validasi rata-rata RPP sebesar 4,59, bahan ajar sebesar 4,71, Lembar Kerja Peserta Didik sebesar 4,74, seluruh soal kemampuan pemecahan masalah matematis siswa kategori valid. 2) Perangkat yang dikembangkan dikategorikan praktis dengan hasil Skor uji coba I dengan rata- rata 3,03 (kategori "Sedang") Sedangkan pada uji coba II Rata-rata adalah 4,24 dengan kategori "Tinggi"; 3) perangkat yang dikembangkan dikategorikan efektif karena (1) Pada uji coba II sebesar 88,5% dengan jumlah siswa sebanyak 23 orang dinyatakan tuntas dan 11,5% yang tidak tuntas sebanyak 3 siswa (2) Ketercapaian tujuan pembelajaran pada soal nomor 1 diperoleh sebesar 92,15% pada tujuan pembelajaran 1 dan 2, ketercapaian tujuan pembelajaran soal nomor 2 diperoleh sebesar 86,00% pada tujuan pembelajaran 3, ketercapaian tujuan pembelajaran soal nomor 3 diperoleh sebesar 78,00% pada tujuan pembelajaran 4 dan ketercapaian tujuan pembelajaran soal nomor 4 diperoleh sebesar 76,22% pada tujuan pembelajaran 5. Respon siswa terhadap Bahan Ajar menggunakan model CTL yang dikembangkan efektif karena memperoleh rata-rata respon siswa positif dengan nilai 90,2% pada uji coba II.. 4) adanya peningkatan kemampuan penalaran matematis siswa dengan hasil skor pada uji coba I dengan jumlah siswa yang memperoleh $g < 0{,}3$ atau kategori rendah dengan nilai 0,295. Pada uji coba II $0{,}30 \leq g < 0{,}70$ atau kategori sedang s rata rata gain 0,471 atau berada pada kategori "Sedang" $(0{,}30 \leq g < 0{,}70)$.

Kata Kunci: Bahan ajar**,** Model Pembelajaran, *Contextual and Teaching Learning,* Kemampuan pemecahan masalah matematis siswa

ABSTRACT

NUR ELISA FITRI. Development of digital flipbook teaching materials based on the Contextual Teaching and Learning learning approach to improve the mathematical problem solving abilities of IT Bina Insan Batang Kuis Middle School students. Thesis. Medan: Medan State University Postgraduate Mathematics Education Study Program. 2024.

This research aims to determine the validity, practicality and effectiveness of teaching materials based on the Contextual and Teaching Learning approach which was developed to improve students' mathematical problem solving abilities. This research is included in development research. This research will be carried out at SMP IT Bina Insan Batang Kuis which is located at JL. Nusa Indah Gg. Melati No.47, Tanjung Sari, Kec. Batang Kuis, Kab. Deli Serdang Prov. North Sumatra for class VIII students in Semester II 2023/2024 academic year. The results of the research show that: 1) The tools developed are valid with (a) average validation results for RPP of 4.59, teaching materials of 4.71, Student Worksheets of 4.74, all questions on students' mathematical problem solving ability categories valid. 2) The device developed was categorized as practical with the results of trial I scoring an average of 3.03 (the "Medium" category), while in trial II the average was 4.24 with the "High" category; 3) the device developed is categorized as effective because (1) In trial II it was 88.5% with a total of 23 students who were declared complete and 11.5% were not completed as many as 3 students (2) Achievement of learning objectives in question number 1 was obtained amounted to 92.15% on learning objectives 1 and 2, achievement of learning objective question number 2 was obtained by 86.00% on learning objective 3, achievement of learning objective question number 3 was obtained by 78.00% on learning objective 4 and achievement of learning objective question number 4 was obtained at 76.22% on learning objective 5. Student responses to teaching materials using the CTL model which were developed were effective because they obtained an average positive student response with a score of 90.2% in trial II. 4) there was an increase in reasoning abilities student mathematics with the score results in trial I with the number of students who obtained $g<0.3$ or the low category with a value of 0.295. In trial II $0.30 \leq g < 0.70$ or the medium category, the average gain was 0.471 or in the "Medium" category ($0.30 \leq g < 0.70$).

Keywords: Teaching materials, learning models, contextual and teaching learning, students' mathematical problem solving abilities