ABSTRAK

MONADIA LIIMAN. Pengembangan Perangkat Pembelajaran Matematika Berbasis Pendekatan *Contextual Teaching and Learning* untuk Meningkatkan Kemampuan Pemecahan Masalah dan Disposisi Matematis Siswa SMP. Tesis. Medan: Program Studi Pendidikan Matematika Pascasarjana Universitas Negeri Medan. 2022.

Penelitian ini bertujuan untuk mendeskripsikan: validitas, kepraktisan dan efektifitas perangkat pembelajaran berbasis pendekatan *Contextual Teaching and Learning*, peningkatan kemampuan pemecahan masalah dan disposisi matematis siswa dengan menggunakan perangkat pembelajaran yang dikembangkan dan proses jawaban siswa dalam menyelesaikan soal-soal kemampuan pemecahan masalah. Penelitian ini merupakan penelitian pengembangan dengan model pengembangan 4-D. Instrumen penelitian ini adalah lembar validasi dan observasi, Buku Siswa, Tes Pemecahan Masalah Matematis dan Angket Disposisi Matematis. Pelaksanaan tahap pertama dilakukan *pre-test* dan *post-test* pada siswa kelas VIII-A dan pelaksanaan tahap kedua dilakukan *pre-test* dan *post-test* pada siswa kelas VIII-B SMP Gajah Mada Medan. Dari hasil penelitian ini diperoleh bahwa: (1) Validitas Perangkat pembelajaran *Contextual Teaching and Learning* meliputi BS, LKPD, TKPMM, Angket Disposisi Matematis yang dikembangkan termasuk dalam kategori valid; (2) Kepraktisan Perangkat pembelajaran berbasis *Contextual Teaching and Learning* yang dikembangkan diperoleh bahwa: perangkat dapat dipergunakan dengan sedikit revisi dan hasil pengamatan keterlaksanaan perangkat pembelajaran di kelas diperoleh rata-rata nilai praktis, reliabilitas instrumen perangkat baik; (3) Keefektifan Perangkat pembelajaran berbasis *Contextual Teaching and Learning* yang dikembangkan menunjukkan ketuntasan klasikal *pre-test* siswa pada uji coba I sebesar 16,67% dan *post-test* 79,17%. Sedangkan *pre-test* siswa pada uji coba II sebesar 20,83% dan *post-test* 87,50%, lebih dari 80% siswa memberikan respon positif terhadap perangkat pembelajaran yang dikembangkan dan lebih dari 85% setiap komponen keterlibatan siswa menunjukkan siswa aktif dalam pembelajaran; (4) Kemampuan pemecahan masalah dan disposisi matematis siswa menggunakan perangkat pembelajaran berbasis *Contextual Teaching and Learning* yang dikembangkan meningkat dengan skor N-gain 0,57 untuk kemampuan pemecahan masalah matematis dan 0,56 untuk disposisi matematis.

Kata kunci: Pengembangan Perangkat Pembelajaran, Model 4-D, Pendekatan *Contextual Teaching and Learning*, Kemampuan Pemecahan Masalah, Disposisi Matematis.

ABSTRACT

MONADIA LIIMAN. Development of Learning Devices Based on Contextual Teaching and Learning Approaches to Improve Problem Solving Ability and Disposition of Students Mathematichal at SMP. Thesis. Medan: Postgraduate Mathematics Education Study Program, State University of Medan. 2022.

This study aims to describe: the validity, practicality and effectiveness of learning tools based on the Contextual Teaching and Learning approach, improving problem-solving abilities and students' mathematical dispositions using developed learning tools and the student's answer process in solving problem-solving skills questions. This research is a development research with a 4-D model. The research instruments are validation and observation sheets, student books, problem-solving ability test and Mathematical Disposition Questionnaires. The implementation of the first stage was carried out pre-test and post-test on class VIII-A students and the implementation of the second stage was carried out pre-test and post-test on class VIII-B SMP Gajah Mada Medan.. The results of this study are: (1) The validity of Contextual Teaching and Learning learning tools included included Student's book, Student's Worksheet, problem solving ability test, The developed Mathematical Disposition Questionnaire has fullfil in the valid category; (2) Practicality of learning tools based on Contextual Teaching and Learning that was developed, it was found that: the device could be used with a few revisions and the results of observing the implementation of learning tools in the classroom obtained an average practical value, the reliability of the instrument was good; (3) The effectiveness of the learning tools based on Contextual Teaching and Learning that the students' classical pre-test mastery in the first trial was 16.67% and the post-test was 79.17%. While the pre-test of students in the second trial was 20.83% and post-test was 87.50%, more than 80% of students gave a positive response to the learning tools developed and more than 85% of student are actively engage in learning; (4) The problem solving ability and mathematical disposition of students taught by using learning tools which is developed based on Contextual Teaching and Learning was improved with N-gain score 0,57 for problem solving ability and 0,56 for mathematical disposition.

Keywords: Development of learning tools, 4-D models, Contextual Teaching and Learning Approaches, Problem Solving Ability, Mathematical Dispotision.