

## ABSTRAK

**Futry Kesuma Wardani Nasution. Pengembangan Perangkat Pembelajaran Berbasis *Contextual Teaching And Learning* (CTL) Untuk Meningkatkan Kemampuan Metakognisi Dan Kreativitas Matematis Siswa SMP Negeri 1 Padangsidimpuan.** Tesis. Medan. Program Studi Pendidikan Matematika Pascasarjana Universitas Negeri Medan. 2018.

Penelitian ini bertujuan untuk mengetahui: 1) Produk pengembangan perangkat pembelajaran yang valid dan efektif berbasis *Contextual Teaching And Learning* (CTL) untuk meningkatkan kemampuan metakognisi dan kreativitas matematis siswa, 2) Peningkatan kemampuan metakognisi siswa dengan menggunakan perangkat pembelajaran berbasis *Contextual Teaching And Learning* (CTL), dan 3) Peningkatan kemampuan kreativitas matematis siswa dengan menggunakan perangkat pembelajaran berbasis *Contextual Teaching And Learning* (CTL). Penelitian ini merupakan penelitian pengembangan dengan modifikasi model 4-D oleh Thiagarajan, Semmel dan Semmel melalui tahap *define, design, develop* dan *disseminate*. Subjek penelitian ini adalah siswa kelas VII-1 dan kelas VII-2 SMPN 1 Padangsidimpuan. Dari hasil uji coba I dan uji coba II diperoleh: (1) Perangkat pembelajaran yang dikembangkan telah memenuhi kriteria valid dengan nilai rata-rata total validitas RPP sebesar 4,49, buku siswa sebesar 4,52, LAS sebesar 4,50 dan butir soal tes kemampuan metakognisi dan kreativitas matematis juga telah berada pada kategori valid. Perangkat pembelajaran berbasis *Contextual Teaching and Learning* (CTL) yang dikembangkan juga telah memenuhi kriteria efektif, ditinjau dari: a) Ketercapaian tingkat penguasaan siswa terhadap kemampuan metakognisi dan kreativitas matematis yaitu, siswa telah mencapai ketuntasan klasikal 90,91% untuk kemampuan metakognisi matematis dan 86,36% untuk kemampuan kreativitas matematis, b) Aktivitas aktif siswa selama kegiatan belajar memenuhi kriteria toleransi waktu ideal yang ditetapkan, c) Respon siswa terhadap komponen-komponen perangkat pembelajaran dan kegiatan pembelajaran positif. (2) Perangkat pembelajaran berbasis *Contextual Teaching and Learning* (CTL) dapat meningkatkan kemampuan metakognisi siswa ditinjau setiap indikator metakognisi dan rata-rata hasil *post-test* kemampuan metakognisi pada uji coba I dan uji coba II, dan (3) Perangkat pembelajaran berbasis *Contextual Teaching and Learning* (CTL) dapat meningkatkan kemampuan kreativitas matematis siswa ditinjau setiap indikator kreativitas dan rata-rata hasil *post-test* kemampuan kreativitas matematis siswa pada uji coba I dan uji coba II.

**Kata Kunci:** Perangkat Pembelajaran, Pembelajaran berbasis *Contextual Teaching and Learning* (CTL), Model Pengembangan 4-D, Kemampuan Metakognisi dan Kemampuan Kreativitas Matematis.

## ABSTRACT

**Futry Kesuma Wardani Nasution. The Development of Learning Devices Based on Contextual Teaching And Learning to Improve Students' Metacognition and Creativity of Mathematics at SMP Negeri 1 Padangsidimpuan.** Thesis. Medan. Mathematics Education Postgraduate Programme, State University of Medan. 2018.

The purpose of this research was to know: 1) The validity and effectiveness of learning devices that was developed based on contextual teaching and learning to improve students' metacognition and creativity of mathematics, 2) Improved metacognition ability of students by using learning devices based on Contextual Teaching And Learning (CTL), 3) Improved students' mathematical creativity by using learning devices based on Contextual Teaching And Learning (CTL). This research was development research with modification of 4-D model by Thiagarajan, Semmel dan Semmel through define, design, develop and disseminate. The subjects of this research were students of class VII-1 and VII-2 SMPN 1 Padangsidimpuan. From the results of trial I dan II were obtained: (1) The validity of learning devices have fulfilled valid criteria with the average value of the total validity of RPP of 4.49, student books of 4.52, LAS of 4.50 and test metacognition and mathematical creativity has been in the category valid. (2) The effectiveness of learning devices have fulfilled the effective criteria, reviewed from: a) Achievement level of student mastery of the ability of metacognition and mathematical creativity that is, students have achieved 90.91% classical completeness for the ability of mathematical metacognition and 86.36% for the ability of mathematical creativity, (b) limits of tolerance that have been established on students' active activity, c) students' responses was positive to the components of learning devices and learning activities. (2) The Learning devices based on Contextual Teaching and Learning (CTL) can improve students' metacognition ability in every metacognition indicator and average post-test of metacognition ability in trial I and trial II, and (3) The Learning devices based on Contextual Teaching and Learning (CTL) can improve students' mathematical creativity ability in every creativity indicator and average post-test result of students' mathematical creativity ability in trial I and trial II.

**Keywords:** Learning Devices, Learning Based on Contextual Teaching and Learning (CTL), 4-D Development Model, The Ability of Metacognition and Creativity.