

ABSTRACT

Melsa Arvia. 2021. "Development of Mathematics Learning Sets based on Contextual Teaching and Learning (CTL) to Improve Students' Mathematical Problem Solving Ability in Class VIII SMP". Thesis. Padang, Graduate Program of Padang State University.

Based on preliminary observations made at Junior High School IT Iqra 'Solok City, students' mathematical problem solving abilities were still low. The low ability of students to solve problems was due to the lack of learning media (lesson plan and worksheet) that are able to facilitate these problem solving abilities. Based on that problem, the development of learning media (lesson plan and worksheet) using the Contextual Teaching Learning (CTL) was needed. The purpose of this study was to create a mathematical learning media based on Contextual Teaching and Learning (CTL) to improve the problem solving skills of students in grade VIII that were valid, practical and effective.

The development research model used is the Plomp development model. This model consists of three stages, namely preliminary investigation, prototyping phase, and assessment phase. At the preliminary investigation stage, needs analysis, student analysis, curriculum analysis and concept analysis were carried out. In the prototyping phase, a prototype development is carried out which will be tested in stages and revised based on the formative evaluation stage consisting of self-evaluation, expert review, one-to-one evaluation and small group. The tools being developed are CTL-based RPP and LKPD. The subjects of this study were students of class VIII SMP IT Iqra' Solok City. Data were collected by observation, interviews, questionnaires, tests and documentation. Data from observations, questionnaires and tests were analyzed quantitatively, while teacher interviews and student interviews were analyzed qualitatively.

The results of the study based on the data obtained indicate that the mathematics learning tools in the form of RPP and LKPD based on CTL for class VIII SMP semester I which are produced meet the valid, practical and effective categories. Valid in terms of content, presentation, language and graphic aspects. Practical in terms of ease of use, attractiveness, and time, and effective in terms of its potential impact on students' problem solving abilities. In this study, it can be concluded that mathematics learning tools are suitable to be used as reference materials in mathematics learning tools, especially the material for the two-variable linear equation system for class VIII SMP.

Keywords: Mathematical Problem Solving Ability, CTL Approach, Learning media.

ABSTRAK

Melsa Arvia. 2021. "Pengembangan Perangkat Pembelajaran Matematika Berbasis *Contextual Teaching and Learning* (CTL) untuk Meningkatkan Kemampuan Pemecahan Masalah Matematis Peserta Didik di Kelas VIII SMP". Tesis Program Pascasarjana Universitas Negeri Padang.

Berdasarkan pengamatan awal yang dilakukan di SMP IT Iqra' Kota Solok, kemampuan pemecahan masalah matematis peserta didik masih rendah. Rendahnya kemampuan pemecahan masalah peserta didik tersebut disebabkan karena belum ada perangkat (RPP dan LKPD) yang mampu memfasilitasi kemampuan pemecahan masalah tersebut. Untuk itu dilakukan pengembangan perangkat pembelajaran (RPP dan LKPD) dengan menggunakan pendekatan *Contextual Teaching Learning* (CTL). Tujuan dari penelitian ini adalah untuk menghasilkan perangkat pembelajaran matematika berbasis *Contextual Teaching and Learning* (CTL) untuk meningkatkan kemampuan pemecahan masalah peserta didik kelas VIII SMP yang valid, praktis dan efektif.

Model penelitian pengembangan yang digunakan adalah model pengembangan Plomp. Model ini terdiri dari tiga tahapan, yaitu *preliminary investigation*, *prototyping phase*, dan *assessment phase*. Pada tahap *preliminary investigation* dilaksanakan analisis kebutuhan, analisis peserta didik, analisis kurikulum dan analisis konsep. Pada tahap *prototyping phase* dilaksanakan pengembangan *prototype* yang akan diujicobakan secara bertahap dan direvisi berdasarkan tahap evaluasi formatif yang terdiri dari *self-evaluation*, *expert review*, *one-to-one evaluation* dan *small group*. Perangkat yang dikembangkan adalah RPP dan LKPD berbasis CTL. Subjek penelitian ini adalah peserta didik kelas VIII SMP IT Iqra' Kota Solok. Data dikumpulkan dengan observasi, wawancara, angket, tes dan dokumentasi. Data hasil observasi, angket dan tes dianalisis secara kuantitatif, sedangkan wawancara guru dan wawancara peserta didik dianalisis secara kualitatif.

Hasil penelitian berdasarkan data yang diperoleh menunjukkan bahwa perangkat pembelajaran matematika berupa RPP dan LKPD berbasis CTL untuk kelas VIII SMP semester I yang dihasilkan memenuhi kategori valid, praktis dan efektif. Valid dari segi aspek isi, penyajian, kebahasaan dan kegrafikan. Praktis dari segi kemudahan dalam penggunaan, menarik, dan waktu, dan efektif dari segi dampak potensialnya terhadap kemampuan pemecahan masalah peserta didik. Penelitian ini dapat disimpulkan bahwa perangkat pembelajaran matematika layak untuk dijadikan bahan rujukan dalam perangkat pembelajaran matematika khususnya materi sistem persamaan linear dua variabel kelas VIII SMP.

Kata kunci: Kemampuan Pemecahan Masalah matematis, Pendekatan CTL, Perangkat Pembelajaran