

Abstract

RESTI ELIYANI. *Design Research: Developing Algebraic Thinking Skills Learning Function with PMRI Approach at Junior High school number 7 Jakarta.* Essay. Jakarta: Mathematics Education, Faculty of Mathematics and Natural Sciences, State University of Jakarta, in 2016.

This study aims to determine how the students can develop algebraic thinking skills in the learning function with realistic mathematics approach.

The study was conducted from proposal development through research reports. The methodology used in this study is a research design. There are three phases of research that is used in the design of research studies, namely thought experiment (the experimental phase of the ideas), instruction experiment (experimental phase of teaching), and retrospective analysis. The subjects were six students of class VII-E at Junior High school number 7 Jakarta. Data collected in the form of video footage and photographs during the learning takes place, the results of the interview with the student, the student's work, discussions, and field notes at every meeting. Instruments used include documentation in the form of video recordings and photographs, interview sheets, student activity sheets, sheets of field notes, and Tracks Learning Hypothesis (HLB). There are two types of validation in this study they were the internal validation and validation of ecology, while reliability that is the reliability of internal and external reliability.

Algebraic thinking skills of students progressing through the activities that have been designed in accordance with the acquisition of skills in algebra Kriegler thinking component, namely three components of mathematical thinking and mastery of three fundamental algebraic ideas. The learning process goes through a series of activities in accordance with HLB already designed previously. The series of activities related to the approach of Indonesian Realistic Mathematics Education (PMRI) that takes into account characteristics of the research design of this research can develop algebraic thinking skills of students. Based on the results of the retrospective analysis, the characteristics PMRI instrumental in developing algebraic thinking skills of students in the learning function at Junior High school number 7 Jakarta.

Keywords: Algebraic Thinking Skills, Indonesian Realistic Mathematics Education Approach (PMRI), Learning function.