ABSTRACT

Sarah Nur'aliza (1212050159), ***The Application of Guided Note Taking Assisted by the Desmos Application to Improve Students' Mathematical Comprehension and Self-Regulated Learning Skills***

This study was motivated by the low level of mathematical comprehension and self-regulated learning among students in mathematics education, particularly in the subject of Two-Variable Linear Equation Systems (SPLDV), which is caused by conventional teacher-centered learning. This study is based on active learning theory, the Guided Note Taking approach, the use of learning technology through the Desmos application, and the concepts of mathematical comprehension and self-regulated learning. This study aims to examine the effectiveness of applying the Guided Note Taking approach assisted by the Desmos application in improving students' mathematical comprehension and self-regulated learning. The research method used was a quasi-experimental method with a nonequivalent control group design, involving three groups, namely the Desmos-assisted experimental class, the experimental class without Desmos, and the control class with conventional learning. Data collection techniques included mathematical comprehension ability tests and self-regulated learning questionnaires. The results showed a significant difference in improvement between the three groups, with the Guided Note Taking class assisted by Desmos showing better improvement than the GNT class without the application and conventional learning, as well as better improvement in self-regulated learning in the class that used the Guided Note Taking approach assisted by Desmos. Thus, the application of the Guided Note Taking approach assisted by the Desmos application proved to be effective in improving the quality of mathematics learning among students.

Kata Kunci: *Guided Note Taking, Desmos*, *mathematical understanding*, *self-regulated learning*