

**THE EFFECT OF PROBLEM-BASED LEARNING MODEL ASSISTED BY
WORDWALL APPLICATION TO IMPROVE MATHEMATICAL CONCEPT
UNDERSTANDING ABILITY OF ELEMENTARY SCHOOL STUDENTS**

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ABSTRACT

The background of this research on the ability to understand the mathematical concepts of students, many students do not like learning math because for them math is a difficult learning. This study aims to determine the effect of the problem-based learning model assisted by the wordwall application by comparing two classes, namely the experimental class and the control class. The subjects of this research are third grade students of SD Negeri 1 Cipeundeuy, while the objects are classes III B and III C, the class was selected using purposive sampling technique which is based on the consideration of teachers from the school and after being tested the class also has an equal level of ability to understand mathematical concepts. This study used a quantitative approach with a Quasi-Experiment type research method and the research design used was Nonequivalent Control Group Design. Pretest, posttest and observation sheet are the data collection methods used. Based on the results of the study, the results of the t-test of two independent samples showed differences between the experimental and control classes; with a 2-tailed significance value of $0.011 < 0.05$, H_0 was rejected and H_1 was accepted. This shows that students who use the problem-based learning model assisted by wordwall application and students who use conventional learning have different mathematical concept understanding abilities. The results of the normalized n-gain test show that the increase in the experimental class is 80% while the control class is 57%, meaning that the class using the problem-based learning model assisted by the wordwall application has a greater improvement than the class using the conventional learning model. Meanwhile, to calculate how much influence the problem-based learning model assisted by wordwall application used the effect size test and got a value of 0.82 which is included in the large effect category. So it can be concluded that the learning process using problem-based learning model assisted by wordwall application has a difference with the learning process using conventional learning model. The use of problem-based learning model assisted by wordwall application also has a great influence and effect for students.

Keywords: Mathematical concept understanding ability, problem-based learning model and wordwall application.