

**THE EFFECT OF THE PROBLEM-BASED LEARNING (PBL) MODEL
ASSISTED BY QUIZIZZ ON IMPROVING THE MATHEMATICAL
CONCEPT UNDERSTANDING OF ELEMENTARY
SCHOOL STUDENTS**

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ABSTRACT

This study was motivated by the low level of mathematical concept comprehension among students at SDN 127 Sekeloa and the limited innovation in learning activities. In today's era, learning requires development supported by relevant technology, not just relying on textbooks or the role of teachers alone. The purpose of this study is to determine the effect of implementing the Problem-Based Learning (PBL) model assisted by the Quizizz application on the mathematical concept comprehension ability of students at SDN 127 Sekeloa. This study used a quantitative approach with a quasi-experimental method, employing a Nonequivalent Control Group Design. The research subjects consisted of 30 fourth-grade students in Class IV A as the experimental group and 30 fourth-grade students in Class IV B as the control group. The treatment given to the experimental group was the PBL model assisted by the Quizizz application, while the control group received conventional instruction. Data collection techniques were conducted through pre-tests and post-tests as well as observation sheets of activities. Data were analyzed using normality tests, homogeneity tests, and Mann-Whitney tests. The results of the study showed an increase and significant effect on students' mathematical concept comprehension skills. This was evidenced by the Mann-Whitney test results, which yielded a significance value of 0.000, an N-Gain value of 65% (moderate category) in the experimental class, and an Effect Size value of 1.82 (large category). Therefore, it can be concluded that there is a significant improvement and impact on students' mathematical concept understanding when using the PBL model assisted by Quizizz compared to conventional learning.

Keywords: *Problem-Based Learning, Quizizz, Mathematical Concept Understanding, Mathematics Learning.*