ABSTRACT

Erinna Larisa. ***Improving Senior High School Students' Mathematical Communication Skills and Self-Efficacy through a Problem-Based Learning Model Assisted by Quizizz***

Students' mathematical communication skills are generally categorized as low. This study aims to: (1) examine the improvement of mathematical communication skills among students taught using the Problem-Based Learning model assisted by Quizizz compared to those taught using conventional learning models; (2) investigate whether students who received the Problem-Based Learning model assisted by Quizizz have higher self-efficacy than those who received conventional learning models; and (3) analyze the correlation between mathematical communication skills and students' self-efficacy among those who received and did not receive the Problem-Based Learning model assisted by Quizizz in a senior high school context. This study employed a quasi-experimental method with a nonequivalent control group design. The research subjects consisted of 62 students: 31 students from class X.2 who were taught using Problem-Based Learning assisted by Quizizz, and 31 students from class X.1 who received Discovery Learning at Al-Hadi Senior High School, Bandung, in the 2024/2025 academic year. The research instruments included a test instrument to measure students' mathematical communication skills and a non-test instrument to assess their self-efficacy scale. The data were analyzed using an independent t-test to determine the difference in the average test scores between the experimental and control classes. Based on the analysis results, the study concluded that: (1) the improvement in students' mathematical communication skills taught with the Problem-Based Learning model assisted by Quizizz is higher than that of students taught with conventional learning models; (2) students who received the Problem-Based Learning model assisted by Quizizz demonstrated better self-efficacy than those who received conventional learning models; and (3) there is a significant positive correlation between mathematical communication skills and self-efficacy among students taught using the Problem-Based Learning model assisted by Quizizz.

Keywords: *Mathematical Communication Skills, Self-Efficacy, Problem-Based Learning Model, Quizizz*