ABSTRACT

Nur Mughniyah Mutiakandi (2022). Application of Problem-based Learning Model with TPACK Framework to Enhance Mathematical Literacy Ability and Self-confidence of Junior High School Students.

In daily life, of course it is inseparable from mathematical problems. Therefore, an individual's capacity to know and use basis of mathematics in various contexts of daily life or also known as mathematical literacy ability is very important for students to have. Furthermore, students need to have self-confidence to get good results in learning. However in reality, mathematical literacy ability and selfconfidence of students in Indonesia are still low. An alternative learning model that can be applied to enhance mathematical literacy ability and self-confidence is Problem-based Learning model with TPACK Framework. This study aims to find out: 1) the enhancement of mathematical literacy ability of students who obtain Problem-based Learning model with TPACK framework is higher than those who obtain ordinary learning model; 2) the self-confidence of students who obtain Problem-based Learning model with TPACK framework is better than those who obtain ordinary learning model; 3) there is a correlation between mathematical literacy ability and self-confidence of students who obtain Problem-based Learning model with TPACK framework. This study is quasi-experimental research with nonequivalent control group design. The population in this study were students' eighth grade of SMP Negeri 22 Bandung. The sampling technique was purposive sampling, using two groups were chosen as an experimental group and a control group. The instruments used in this study were a mathematical literacy ability test and self-confidence questionnaire. The result shows that: 1) the enhancement of mathematical literacy ability of students who obtained Problem-based Learning model with TPACK framework is higher than those who obtained ordinary learning model; 2) the self-confidence of students who obtained Problem-based Learning model with TPACK framework is better than those who obtained ordinary learning model; 3) there is a significant positive correlation between mathematical literacy ability and self-confidence of students who obtained Problem-based Learning model with TPACK framework.

Keywords: Problem-based Learning Model with TPACK Framework, Mathematical Literacy Ability, Self-confidence