

ABSTRACT

Trisky Mangunsong , IDN 4182111031 (2024). Development Of Higher Order Thinking Skill Oriented Learning Devices For The Problem-Based Learning Model On Quadrilaterals Topics.

This research and development aims to create a valid, practical, and effective mathematics learning tool for seventh-grade junior high school students, focusing on the topic of quadrilaterals using the Problem-Based Learning (PBL) approach. The developed learning tools included RPP, LKS, and HOTS test instruments.

This development study employed the Plomp development model, which consists of the following phases: (1) preliminary investigation, (2) design, (3) realization/construction, (4) testing, evaluation, revision, and (5) implementation. The research tools included a validation sheet, a practicality assessment sheet completed by teachers and students, an observation sheet for monitoring learning implementation, and a HOTS test instrument. The test subjects included teachers and eighth-grade students from SMP Negeri 3 Medan. The research results data was analyzed to determine the quality category of the developed learning device. The data analysis was divided into three criteria: (1) Validity analysis of the learning device, (2) Analysis of the practicality of the learning device, and (3) Analysis of the effectiveness of the learning device.

The validity of the learning device relies on the expert assessments of the RPP and LKS meeting both classifications, and the HOTS test instruments being valid according to specialist expertise. The learning kit is considered practical when both the teacher's assessment and student's assessment are excellent, and the lesson plan is implemented at 80% or higher. The learning device is deemed effective when the mastery of learning is over 60%.

The findings of this study indicated that the learning tool was valid, practical, and efficient. The results of expert validation indicated that the learning device was valid, with an average RPP validation score of 4.27 (very good) out of a maximum score of 5. The average validation score for LKS was 4.23 (very good) out of 5, and the average validation score for the HOTS test instrument was 4.17 (good) out of 5. The learning tools developed meet practical criteria with an average practicality assessment score by teachers of 4.21 (very practical) from a maximum score of 5, an average practicality assessment score by students of 3.74 (practical) from a maximum score of 5, and an average learning implementation reached 80,56%. The learning tools developed are viewed from the HOTS of effective students with a percentage of learning completeness reaching 100% with an average HOTS score of students reaching 80 (good).

Keywords: *Higher order thinking skills; learning device; Plomp development model; problem based learning; Quadrilaterals*