ABSTRACT

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This study aims to describe the tendency and describe the metasynthesis of learning device development to improve students' mathematical problem-solving ability. The research method used is metasynthesis, which is to summarize the results of primary research from articles on learning device development to improve students' mathematical problem-solving ability by identifying, evaluating, interpreting, and criticizing all the articles with the aim of getting conclusions and deeper understanding. The results showed a tendency that of the six synthesized articles using the Plomp development model, the indicator of student problem-solving ability was low in the devising a plan and carrying out the plan section, the learning model applied was the discovery learning model and the learning material that was widely used was the system of linear equations. two variables. The results of the metasynthesis of this study showed that articles with the Borg and Gall development model (based on valid values), scientific approaches (based on effectiveness scores) resulted in better learning tools to improve students' mathematical problem-solving ability, the interpretation results obtained that if the development model and model learning if exchanged between the two articles, will both produce learning device that can improve students' mathematical problem-solving ability, as well as the results of criticism that can be given that previous researchers should describe the process at each step of developing learning device and also put the pretest, posttest, and scores for each indicator so that readers can find out more clearly about how the increase the students' mathematical problem-solving ability in question.

Keywords: Metasynthesis, learning device, problem – solving ability.