

ABSTRACT

Wido Yudhistira : Meta Analysis of the Effect of Teaching Materials on Understanding Physics Concepts for Middle and High School Students

The 21st century is the century of openness or the century of globalization, where the development of technology and information is growing rapidly. The influence of this progress is very impactful in every area of life, including the field of education. By itself the 21st century demands quality human resources. These all-new demands call for various breakthroughs in thinking, drafting concepts, and taking concrete actions.

This research is a meta-analysis research using teaching materials which aims to 1). determine the effect size of the effect of the use of teaching materials on students' conceptual understanding based on the level of education (2) determine the effect size of the effect of the use of teaching materials on students' conceptual understanding based on the unit of learning material (3) determine the effect size of the effect of the use of teaching materials on students' conceptual understanding based on the type of teaching materials used. The research method used is a meta-analysis of 20 articles that have been visited in various national and international journals and proceedings.

The results of this study are as follows: (1) The use of teaching materials on students' conceptual understanding based on education level, is more influential at the junior high school level; (2) the use of teaching materials on students' conceptual understanding based on material units, has more influence on impulse and vibration material and static electricity for high school level and has more influence on temperature and heat unit material for junior high school level; (3) The use of teaching materials on students' conceptual understanding based on the type of teaching materials has more effect on worksheets and textbooks than the use of modules.

Keywords: Meta-Analysis, Teaching Materials, Concept Understanding