



Creative Attitude in Science Learning Model to Improve Creative Thinking Skills and Positive Attitude of Students Towards Science

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2 BSTRACT

The results of the literature study show that the Problem Based Learning (PBL) and Creative Problem Solving (CPS) models are proven to be able to improve students' creative thinking skills, but also have weaknesses that need to be improved. To complement the weaknesses of the application of the PBL Model and the CPS Model, it is necessary to develop an Innovative Learning Model that can improve students' creative abilities. The CASL (Creative Attitude In Science Learning) model is a learning model that integrates the CPS model with the PBL model in learning activities. The development of the CASL model is supported by the latest learning theories and the empirical foundation of the latest research. The CASL model has five phases, namely: (1) Generating positive attitudes as creative individuals, (2) Organizing creative learning, (3) Guiding creative investigations, (4) Forming positive attitudes in demonstrating scientific creativity, and (5) Attitude evaluation positive and scientific creativity.

INTRODUCTION

Physics is a branch of science that examines natural phenomena in everyday life and is based on the results of observations or experiments by measuring certain variables in it. The results of these observations or experiments are used to develop theories that can be used to predict future observations or experiments (Serway & Jewett, 2014). Learning physics is not enough to memorize physics concepts and practice questions alone, but can be used to develop student creativity in solving a problem through observation or experimentation activities according to the material being taught (Mukhopadhyay & Sen, 2013; Kier & Lee, 2017). Learning that uses scientific methods can foster a positive attitude towards student science, where students will feel optimistic in dealing with, solving problems, and finding creative ideas in problem solving to get satisfactory results (Rukavina, et al., 2012). The demands of the 21st century and the Industrial Revolution for the field of education are faced with global competition so that the demand for quality resources is demanded. To realize this, a way is needed, one of which is by improving the quality of education with various innovations carried out by the academic community in producing graduates, especially educators.

Several learning models that have been used to train creative thinking skills and positive attitudes towards science are the PBL and CPS models. The PBL model is able to increase the effectiveness of learning outcomes, but there are still some weaknesses that need to be improved, namely (1) less time for exposure and evaluation of ideas/ideas from others in developing scientific creativity; (2) lack of feedback in learning physics; and (3) the instruction given to students in conducting exploration is not in-depth, students are not

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