Effectiveness of the Creative Attitude Model in Science Learning (CASL) to Train Creative Thinking Skills for Elementary School Teacher Education Students

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ABSTRACT
Students must have superior competencies to answer the demands of 21st century skills and the Industrial Revolution 4.0, one of which is creative thinking skills. The purpose of this study was to produce a Creative Attitude in Science Learning (CASL) learning model as a valid, practical, and effective product as an effort to improve creative thinking skills and positive attitudes towards PGS Science students. The development research design used refers to the development model design according to McKenny, consisting of: (1) preliminary study phase, including needs analysis, literature study, and field survey; (2) the model design phase includes model design, validation, revision; and (3) the model testing phase. The research subjects were 3 classes of the Elementary School Teacher Education program. The data collection method used a creative thinking skills test sheet. The data analysis technique used is descriptive qualitative and quantitative. Based on the results of the study, it can be concluded that the CASL model can be used to train the creative thinking skills of elementary school teacher education students.

INTRODUCTION
College is one of the places that can be used to train and develop student creativity (Daud, et al., 2012). This is reinforced by the opinion of Beckers et al. (2017), which states that universities must provide students with skills based on 21st century skills and the Industrial Revolution 4.0, one of which is creative thinking skills. Presidential Decree No. 8 of 2012 Article 5 concerning the Indonesian National Qualifications Framework, a student must have competence according to level 6. Students must have superior competence with various demands for 21st century skills and the Industrial Revolution 4.0, one of which is creative thinking skills. When creative thinking skills are not developed in students in Indonesia, the graduates produced by Educational Institutions and Education Personnel will not be able to survive and compete with other global communities (Musu et al., 2012). Science learning in Educational Institutions and Education Personnel is still oriented to conventional learning that focuses on a product and memorization, so that learning that emphasizes students’ creative skills is neglected (Kemenristik Dikti, 2015; Bappenas, 2014) and students who study physics are not interested and have no understanding after studying physics (Irving et al., 2015).

The Creative Attitude in Science Learning (CASL) model was chosen by researchers to inspire educators in teaching students creative thinking skills and positive attitudes towards science. Every human being in everyday life is faced with problems that need to be addressed immediately, both at home, in the classroom, and in society. The development of the CASL model follows the path of solving problems by John Dewey (Arends, 2012) and
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