

Development of STEM-Based Constructivistic Learning Model Modules to Improve Creative Thinking Skills and Students' Motivation to Learn Physics

by Supahar, Irvany Nurita Pebriana, Bayu Setiaji

ABSTRACT

Physics learning in the 21st century is not only oriented towards understanding physical concepts but also oriented towards the development of 4C skills that are a demand in 21st-century learning. So that in learning requires learning tools that not only play a role to convey the material but also train creative thinking skills and increase the learning motivation of learners. The research aims to: (1) generate and know the feasibility of STEM-based e-SSP physics learning devices for physics learning. (2) know the categories of creative thinking skills improvement learners after using STEM-based e-SSP physics. (3) know the categories of learning motivation improvement of learners after using STEM-based e-SSP *physics*. This research is development research that uses the 4D *Models* approach. The subject of this study is a student who is in several high schools in Yogyakarta. STEM-based e-SSP assessment data is obtained through validator assessments. Data on improving critical thinking skills and learning outcomes are obtained through *pretest* and *posttest*. Data on learning motivation improvement is obtained through questionnaires. RPP implementation data is obtained through RPP implementation observation sheet.

Kata Kunci: creative thinking, motivation to learn physics, module, constructivists