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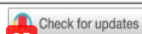
Analysis of The Application of The STEAM Approach to Learning In Indonesia: Contributions to Physics Education

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ABSTRACT

Optimizing the learning process in achieving student development requires a special strategy in learning. The strategy can be run by applying the STEAM learning model. The STEAM learning process is expected to prepare the next generation to be ready to face the times, helping to develop innovations in life. The purpose of this study was to analyze the application of STEAM learning in Indonesia, especially the contribution to physics education. The method used in this paper is descriptive qualitative through the study of relevant literature with the objectives of the research conducted. The result of this study is that STEAM can be integrated into various learning subjects and levels of education. In addition, the application of STEAM can help develop the skills of students in the 21st century along with technological developments and increasing demands in modern times. In physics learning, the implementation of STEAM can make students actively involved in the teaching and learning process of physics. Students will be involved in ongoing learning and will assist students in finding solutions to the problems given. This has a positive impact because it can improve creative, critical thinking skills and make it easier for students to understand concepts. The implementation of STEAM in international education is very good, for STEAM learning in Indonesia is still lacking. This is because in implementing STEAM learning, you must have special skills to teach it. Thus, it is very important to develop STEAM starting from human resources and appropriate learning materials.

INTRODUCTION

Education is an effort made to prepare students through learning activities that are aimed to help students actively develop their potential, abilities, and talents (Nasrah, 2021; Collins et al., 2018; Mishra et al., 2020). Education has a very important role in human life because it can improve the quality of human life to be able to develop its potential. The development of the world of education cannot be separated from the effectiveness of the teaching and learning process. The teaching and learning process occurs with the interaction between the teacher and the role of transfer of knowledge and students as recipients of knowledge (Bada & Olusegum, 2015; Pitsoe & Maila, 2012; Koehler et al., 2013). The learning process can be used to measure students' abilities such as observing, asking questions, experimenting, associating and communicating experimental results which are stages in the scientific approach (Serevina & Mulyati, 2018; Gunawan et al., 2019; Gerde et al., 2013). Scientific learning does not only view learning outcomes as the end, but also a process. Learning is seen as very important (Defara et al., 2018; Cheng & Tsai, 2013).

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