MODEL STEAM TERINTEGRASI ENVIRONMENT LOCAL POTENCIAL DALAM PEMBELAJARAN IPA DI SEKOLAH ADIWIYATA

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ABSTRACT

Science learning is packaged in one learning activity design, namely the STEAM Model integrated with Local Environmental Potential to produce meaningful learning. The implementation of the integrated STEAM model with local potential at the Adiwiyata school has not yet been implemented. Innovation in developing an Integrated STEAM model with Local Environmental Potential by varying TPACK (Technological Pedagogical Content Knowledge) and local potential to make learning contextual. Integrating natural science materials with local potential is able to train environmental literacy, cognitive components and students' attitudes as well as environmental context thinking skills. This research aims to produce: (1) mapping of local environmental potential in relation to natural science materials; products developed for each local environmental potential, as well as problem mapping/thinking skill variables that will be improved to the indicators (Year I); (2) testing the effectiveness of the STEAM learning model integrated with local environmental potential to improve students' thinking abilities and environmental literacy and testing the practicality of the STEAM model integrated with local environmental potential to improve students' creative thinking abilities and environmental literacy (Year II).

This research uses the Borg & Gall R and D model method with preliminary research development procedures to the validation stage for year I (2023), while product effectiveness trials are carried out in year II (2024). The instruments used were observation sheets on local environmental potential conditions, literature studies, FGDs to determine the type of product being developed and FGDs to determine variable indicators or problems that would be improved through product development (Year I). The instruments for Year II are questions to measure thinking skills and environmental care attitude questionnaires. Data analysis techniques are descriptive qualitative (input and comments on FGD results) as well as quantitative (product feasibility results) and effectiveness testing using quasi-experiments.

The results of the research were (1) mapping of local environmental potential, namely a) local potential of the Yogyakarta Code River, b) Mini Forest of SMP N 1 Minggir, c) Ledok Sambi Pakem Tourism Village and d) Kaliaji Embung, Turi, Sleman which integrated materials- science metrics. Research results (2) product mapping developed includes a) RPP b) Handout c) Module and d) assessment. The resulting article has been submitted to the Indonesian Science Education Journal (Sinta 2). Other outputs are published intellectual property results (IPR) related to module products and handouts for the integrated STEAM model of local environmental potential in science learning at Adiwiyata schools. The Technology Readiness Level (TKT) from the proposed research in 2023 will be carried out until the final target of the 3rd TKT.

Kata Kunci: *STEAM, Potensi Lokal, Lingkungan, Pembelajaran IPA, Adiwiyata*