?The Impact of Hybrid Model Science Practicum Based on IoT and VR on Prospective Science Teacher Students' the Creative Thinking Ability

by Dadan Rosana, Didik Setyawarno, Eko Widodo, Maryati

ABSTRACT

Hybrid model science practicum is a new term designed by the author to explain the concept of integrated science practicum learning between realistic practicum activities as synchronous activities and practicum activities using the internet of things (IoT) and virtual reality (VR) as asynchronous activities. These activities require prospective science teacher students to think creatively. This study aims to determine the effect of IoT and VR-based hybrid model science practicum on the creative thinking ability of prospective science teacher students. In addition, the research introduces how to apply IoT and VR-based hybrid models in science learning. The research method used is an experiment with one group pretest-posttest design. The research sample amounted to 43 science teacher candidate students of Yogyakarta State University who were determined by purposive sampling technique. The research instruments used include creative thinking ability test questions and observation sheets for the implementation of hybrid model science practicum learning. The quality of the instrument was analyzed with Content Validity Ratio, Fleiss Kappa, Confirmatory Factor Analysis, and Rasch Model. Data analysis included descriptive statistics, paired sample t test, and effect size. The results showed that there was a significant positive effect in creative thinking skills. The implementation of this science practicum provides a meaningful academic experience for students.

Kata Kunci: *science practicum, hybrid model, internet of things, virtual reality, and creative thinking skills*