
Abstract

Lorentz force teaching aids are proven to improve students' cognitive abilities. The average result of N-Gain after using Lorentz force props is 0.8 which is included in the high category. In the learning process, the teacher needs to designing the learning material, guiding, directing, and evaluating student learning outcomes. Currently, this is still done manually. Along with the development of technology, the Internet of Things (IoT) can facilitate the teaching and learning process. IoT can transmit data over a network without requiring human-to-human or human-to-computer interaction. The implementation of IoT in Education can also be called *Internet of Education Things*(IoET). IoT has many benefits in the teaching and learning process for both teachers and students. Students can learn directly with teaching aids so that students' understanding increases. Teachers can also curtail activities that were previously done manually by reading automatically saved activities, such as preparing, directing, giving questions, to recapitulating assessments. In this study, IoT technology has been implemented into the Lorentz force (E-Lorentz) teaching aid and the system performance has been analyzed based on its functionality parameters, accurate data reading and suitability of the assessment are the main parameters. From the results of the accuracy test, there is a difference in the value of 0.474×10^{-3} N with an error percentage of 2.92% based on the Mean Absolute Percentage Error (MAPE). Data reading and suitability of the assessment have been tested and are able to run 100%.

Keywords: teaching aids, lorentz force, IoET
