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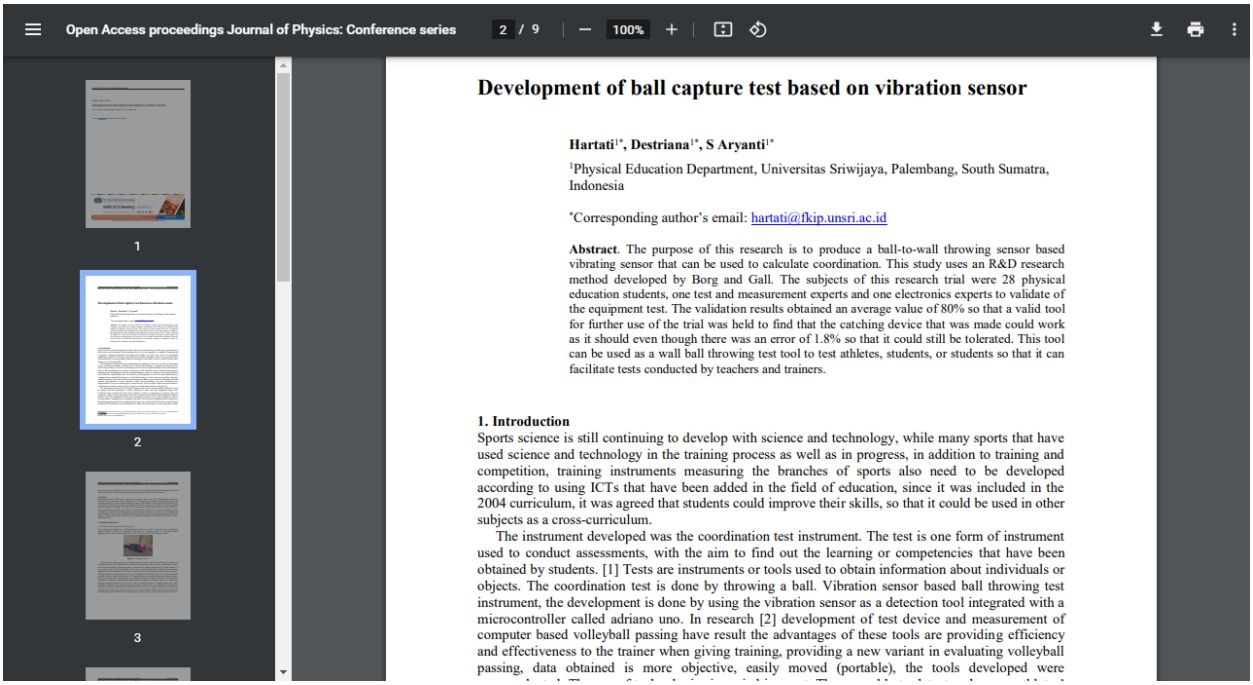

Development of ball capture test based on vibration sensor

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Abstract. The purpose of this research is to produce a ball-to-wall throwing sensor based vibrating sensor that can be used to calculate coordination. This study uses an R&D research method developed by Borg and Gall. The subjects of this research trial were 28 physical education students, one test and measurement experts and one electronics experts to validate of the equipment test. The validation results obtained an average value of 80% so that a valid tool for further use of the trial was held to find that the catching device that was made could work as it should even though there was an error of 1.8% so that it could still be tolerated. This tool can be used as a wall ball throwing test tool to test athletes, students, or students so that it can facilitate tests conducted by teachers and trainers.

1. Introduction

Sports science is still continuing to develop with science and technology, while many sports that have used science and technology in the training process as well as in progress, in addition to training and competition, training instruments measuring the branches of sports also need to be developed according to using ICTs that have been added in the field of education, since it was included in the 2004 curriculum, it was agreed that students could improve their skills, so that it could be used in other subjects as a cross-curriculum.

The instrument developed was the coordination test instrument. The test is one form of instrument used to conduct assessments, with the aim to find out the learning or competencies that have been obtained by students. [1] Tests are instruments or tools used to obtain information about individuals or objects. The coordination test is done by throwing a ball. Vibration sensor based ball throwing test instrument, the development is done by using the vibration sensor as a detection tool integrated with a microcontroller called adriano uno. In research [2] development of test device and measurement of computer based volleyball passing have result the advantages of these tools are providing efficiency and effectiveness to the trainer when giving training, providing a new variant in evaluating volleyball passing, data obtained is more objective, easily moved (portable), the tools developed were