



DEVELOPMENT OF MICROCONTROLLER-BASED PUNCH SPEED MEASUREMENTS TOOL OF KARATE ATHLETE

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Article Info

Article History :

Received : June 2021

Revised : June 2021

Accepted : June 2021

Available online : June 2021

Keywords:

Punch Speed
Measurements, karate,
Microcontroller

Abstract

This study aims to develop microcontroller-based punch speed measuring instrument for Karate Athletes. The research method used is research and development (research and development). The subjects in this study were karate athletes coaching FORKI (Indonesian Karate Sports Federation) Palembang City, which consisted of 30 senior athletes aged 17-25 years who were divided into two groups. Small group trials consist of 10 athletes and large group trials consist of 20 athletes. The technique of taking the research subject used a purpose sampling technique. The results showed that the development of a Microcontroller-Based Punch Speed Measurement Tool has a percentage level of validity of material test experts (karate) of 93%, the validity of media experts (Information Technology) is 2 people, 95% and 91%, respectively. exercise test and measurement experts by 97% so that the tool can be said to be feasible. The level of reliability in the small group trial was 0.994 with the High category. While the large group trial was 0.993 with a high category so that it was said that the level of reliability of the tool carried out in large group and small group trials had a high reliability category. Overall, this microcontroller-based punch speed measurement tool has been declared feasible to be used as a tool in calculating punch speed in meters/second (m/s) digitally. 993 with a high category so that it is said that the level of reliability of the tool carried out in large and small group trials has a high reliability category. Overall, this microcontroller-based punch speed measurement tool has been declared feasible to be used as a tool in calculating punch speed in meters/second (m/s) digitally. 993 with a high category so that the level of reliability of the tool carried out in large and small group trials has a high reliability category. Overall, this microcontroller-based punch speed measurement tool has been declared feasible to be used as a tool in calculating punch speed in meters/second (m/s) digitally.