DEVELOPMENT OF LONGJ UMP DETECTOR TOOLS LJDOF-SDH BASED ON SENSORS AS MEDIA LEARNING FUNDAMENTAL OF ATLETICS

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ABSTRACT

Background: Problems that occur when athletes are required to be able mastering the things that are needed in the long jump at the etic is the occurrence of injury.
Objectives: Specifically this research aims: first, to realize DEVELOPMENT OF LJDOF-SDH FAR DETECTOR TOOLS SENSOR BASED AS A BASIC MOTION LEARNING MEDIA ATHLETICS. and second, it can become a reference book for the whole community Atletik in Indonesia and can also be a reference as a book handle on Athletic sports coaching lectures in Indonesia.
Specific Targets:
realized to DEVELOPMENT OF LONGJ UMP DETECTOR TOOLS LJDOF-SDH BASED ON SENSORS AS MEDIA LEARNING FUNDAMENTAL OF ATLETICS was developed so that it can meet market needs in a day! as a reference or guide as well as a book a guide for coaches, sports teachers at school and for students of the Faculty of Sport Science in Indonesia and also for lecturers who take care of related subjects in Indonesia in order to produce output more qualified in achieving student and student achievement targets and also athletes, especially in the field of sports, besides this product was tested its feasibility with a *stake holder* and will be refined according to input from *stakeholders.* The results of the research can be realized in the article scientific published in national or international scientific journals or presented at the Maupuo international national seminar forum.
Research Methods: Research Methods and Validation are the research methods used to produce certain products, and test the effectiveness of the product terse but (Sugiyono, 2011: 297). The validated product is a Model reference book DEVELOPMENT OF LJDOF-SDH FAR DETECTOR TOOLS BASED ON SENSOR AS A BASIC MOTION LEARNING MEDIA ATHLETICS.
Results and · Discussion: The design of this product will use a Ky-008 laser sensor, arduino nano for the brain's program and a photodiode for the flow of electricity or the light to the arduino uno which will be re- worked and is a sign. In This long jump *take off* validation detector circuit , we use components Medium-sized electronic components so they don't need space too much which is great for the place of this validation detector. Besides that is also taken into account function of these components in order to obtain the desired results. By therefore, making tool designs should not be arbitrary.
Conclusion: The results of research on the development of a *take off* jump validation detector Remote *sensor* -based as a means to validate the results of the long jump *take off* when learning basic athletic motion, this validation detector tool is more effective compared to previous operating tools. By using a sensor this laser along with other supporting components then students "wa and lecturers only need to watch and validate *take off in* a leap. After through several stages of the development of the operation of the *take* validation detector tool *off* based *sensors* by using laser *sensors* , then this research can concluded that: (I) The creation of the validais detector tool *takes off* the long jump *sensor* -based with specifications: CPU: ATmega328, Data control: Arduino IDE Sensor: ky-008, Barerai system: lipo 3cell I 2V / 2500mah, Indicator: servo motor 9g, Long jump detector application, Electrical system with po [a AC-DC, System automatic data input via Micro chip data, (2) Products are feasible to use in terms of working system tools and resistance to external interference such as shock resistance of the athlete's body during *take off, (3)* Product analysis tool equipped with user manuals that have been prepared by researchers.

Kata Kunci: *Development, Long Jump, Sensors.*