

10. Development of Physical Test Brake Speaker Speed Data Model Application in (PPLPD) *By Hartati Hartati*



Development of Physical Test Brake Speaker Speed Data Model Application in (PPLPD)

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Abstract

This study aims to produce a product in the form of software for physical test data processing based on Visual Basic 6.0 to help trainers and athletes to process data from physical tests. This study uses the R & D method (research and development). The results of this study indicate that practicality in the use of application products is really good, practical, and efficient. The findings obtained from this study are in the form of an athlete's physical test data processing application that makes it easier for the trainer to process the results of physical test data performed by the athlete, this application uses Microsoft visual basic 6.0 programming. The implications of the results of this study are to assist trainers in processing data from the physical tests conducted by the trainers to their athletes, so that the trainers can be helped in processing data in a practical and efficient manne.

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INTRODUCTION

Sports is a series of physical activities designed in such a way as to increase or maintain physical fitness. According to Mutohir quoted by Giriwiarso (2015: 5) sport is a systematic process in the form of all activities or businesses that can encourage, develop, and foster the physical and spiritual potential of a person as an individual or member of the community in the form of games, competitions / competitions, and peak achievements in the formation of a fully qualified Indonesian human being based on Pancasila. Whereas according to Liliani Puspa in sports achievement journal, the role of sports physiology in supporting achievement. Anggriawan (2015: 9) Sport is a series of activity skills or playing objects, arranged structurally and systematically by using a certain set of rules in its implementation. The scope of Sport according to Meaning Widowati (2015: 220) is divided into three types, namely educational sports, sports achievements, and recreational sports. Sport achievement is a physical activity aimed at increasing individual and group individual achievements, such as: Football, handball, volleyball, pencak silat, athletics, and much more.

The sports branch of Pencak Silat is one sport that combines dance and martial arts, where martial arts can be done by individuals, couples, or teams. According to Nurul Ihsan in sports and health science journals, the contribution of concentration towards the single pencak silat jatah learning outcomes (2015: 43) has now been contested in various levels of schools, both elementary, junior and senior high school categories and individuals. As an achievement sport, pencak silat is a competition that is fostered in accordance with the principles and norms of the sport, such as developing physical coaching, and techniques to foster knight traits. Pencak silat is one of the sports that is competed to be held as a prestigious sporting event such as in Sea games and Asean games. The prestigious Asian sporting party, the Pencak Silat sport has become one of the gold medalist branches for Indonesia, such as the recent sports party namely Asean Games 2018 held in Indonesia, Pencak Silat is the most gold miner for Indonesia because it successfully won the categories which was contested in pencak silat in the Asean games.

Pencak silat athletes who come from coaching that has been prepared by the government through programs such as the establishment of regional student education and training centers (PPLPD), coaching centers and student training (PPLM) so that in Pencak Silat sports events can stand and win gold medals. PPLPD is a forum for future athletes, where athletes in it have pas-

sed a series of selections held to become PPLPD students and educated to become reliable, professional athletes, and can achieve later. According to PPRI NO 22 YEAR 2010 article 5: talent development for national flagship athletes is carried out at the student education and training center (PPLP), student training and training center (PPLM), sports schools, sports clubs and through beginner level sports competitions or juniors inside and outside the country.

According to Bompa in the journal of sports and health science, efforts to improve the physical quality of pencak silat through the circuit method at the special school in South Sumatra, Sukirno (2015: 12) to create a champion is not as easy as turning a palm, relatively long enough to reach 8 year to 12 years. In line with the statement above, Musi Banyuasin district established a center for education and training for pencak silat sports students that was fostered in accordance with the principles and norms of sports, such as developing physical, technical, mental, and quality qualities of athletes, to foster knight qualities. One of them is monitoring the athlete's physical and physical fitness level every 3 months.

Physical measurements of Musi Banyuasin PPLPD athletes the pencak silat sport is carried out by testing, using valid and standard instruments in accordance with the rules set by the experts in testing and measurement, the test is an important instrument in the training and training of athletes, without a test or measurement of the coach or coach unable to make training programs for athletes, and have no data on the athletic fitness of the athlete. Widiastuti (2015: 2) tests and measurements are a tool to collect data or information about what is to be achieved. Other than that, the usefulness of tests and measurements as well as evaluations helps teachers and trainers to know the strengths and weaknesses of each student, so that future teachers and trainers can prioritize an exercise to facilitate the achievement of targets ¹⁷the athlete's trainers, while in processing data **the results of tests the physical athletes of the** Pencak Silat sports branch PPLPD Musi Banyuasin still use manual methods and are prone to errors and very time consuming, this is due to the coach's ignorance about the existence of technology that facilitates sports activities.

For this reason, we need a technology in the form of special software applications that can help and facilitate the process of processing data as a result of the physical fitness test of the Musi Banyuasin PPLPD athletes. Application is a software in a computer, in terms of the application is a program that is ready to use that is made to carry out a function for users of application services and the use of other applications that can

be used by a target to be addressed, according to Juans⁸ (2015: 4).

Based on the opinions above, it can be concluded that the application is a problem solving that is made to carry out a function that uses one of the processing techniques for a target to be addressed. To help the application work must¹⁴ supported by several software, one of which is Microsoft Visual Basic 6.0, Microsoft Visual Basic 6.0 is one of the applications under Windows based on visual or graphic (Kenedi, et al.: 2013). he basic module of Visual Basic programming is a programming language that is very easy to learn, with this visual programming technique allows users to be more creative in creating an application, another advantage of Visual Basic is characterized by the ability to interact with other applications in the Windows operating system using active components. control, because visual basic is the right choice in making applications that facilitate the processing of data results from physical tests of martial arts athletes PPLPD Musi Banyuasin, because of the ease in the development process of the application that will be made.

Based on the above description, it is necessary to have innovations that help trainers and coaches in processing data on athletes' physical fitness test results through research entitled development of application models processing physical test data for athletes in Pencak Silat sports in PPLPD, Musi Banyuasin district because of the ease in the development process of the application that will be made. Based on the above description, it is necessary to have innovations that help coaches and coaches in processing data on athletes' physical fitness test results through research entitled the development of application models for physical test data processing for athletes in the martial arts at PPLPD in Musi Banyuasin.

METHODS

This research method uses the type of research and development research (research and development) which is meant by research and development research (research and development) is a research method that intentionally, systematically, aims / directed to find, improve, develop, produce, test effectiveness product, model, effective, efficient, productive, and meaningful. Population is a subject or object that has certain characteristics or traits determined by the researcher to be studied later (Sugiono, 2014: 117). In this study, the total population to be studied were 24 pencak silat athletes in Musi Banyuasin PPLPD.

Data analysis in this study was conducted by using quantitative descriptive analysis techni-

ques, namely by analyzing data from expert questionnaires and field tests. because the processed data is physical test results data processed by a Microsoft Visual Basic 6.0 based data processing system that is assisted by the Microsoft Excel application program that is used to facilitate the process of printing reports on the results of athletes' physical tests as a comparison of the processing system Data analysis manually.

RESULTS AND DISCUSSION

¹⁰ Based on the results of the study, it was concluded that according to the validator the percentage of first stage appraisal according to physical experts and pencak silat trainers was 70% and software application experts were 65.62% after getting the results of the first stage revision and input from the expert team in the second stage with the percentage of physicists and pencak silat coach 86.67% and software application experts at 87.5% after getting validation, this application is tested on a small scale with a percentage of test results is 54% and large scale is 75%. The practicality of this product was proven directly by martial arts trainers, this was seen through a single questionnaire questionnaire given after the trainer used the application with a value of 76% which was categorized as "WORTH". Based on these data, it can be concluded that the application of the physical test data for the pencak silat sports branch can be applied in processing data from the athlete's physical test. With the results of the study, it can be concluded that the application can be used in the martial arts training specifically to create professional and quality athletes.

This development research is carried out based on several stages carried out by involving several validators who are experts in their fields, the stages starting from looking at potential problems, collecting information, designing products, conducting product validation, conducting trials and finally making final products. The stages of expert validation are carried out in two stages. The first stage was used as the basis for researchers to revise the deficiencies in the tools developed. The¹³ research uses grooves (1) preliminary studies (research and information gathering) (2) planning (3) product design development (developing preliminary product forms) (4) preliminary field testing (5) main product revisions (6) main field testing (7) product revisions II, revision of operational products (8) operational field testing (9) final product revisions, and (10) dissemination and implementation (Borg & Gall In Pradipta, 2018: 54).

Physical test material in this application refers to the opinion of the Exper, According to Su-

giyono in the journal of physical education and sports, the development of sports information management system municipal SMICO of KONI Salatiga Bayu Pratiya et al (2018: 90) Improvement procedures are as follows: (1) potential and problems (2) information gathering (3) design product (4) design validity (5) revised design (6) product trial (7) product revision (8) trial use (9) product revision (10) Large-scale production. The quality of the physical test data processing application is included in the criteria of "good and worth trial". The statement can be proven from the results of "Good" assessment analysis from software application experts and pencak silat and physical experts, as well as in assessments, small group trials and tests try the field. The test results can be described in the following discussion.

Testing to experts Pencak silat physical test

The results of the questionnaire test given to the trainers and pencak silat physical experts show a percentage of 86.67%, this shows that this application belongs to the category "WORTH" to be tested.

Testing to software application experts

The questionnaire test results conducted to software application experts showed a research feasibility level of 87.5%, this indicates that this application belongs to the category "WORTH" to be tested and in other words that the research "Development of Physical Test Data Processing Process Model for Pencak Sports Branches silat At the regional student education and training center (PPLPD) in Musi Banyuasin district "it is appropriate to be used in the future physical test instrument research aids. After the assessment process was conducted by validators who were experts in their fields, this study was tested on a small scale and on a field scale. This is done after getting approval from the validator that this application is feasible to use

Small Scale Trial

Small-scale trials were carried out using students of Palembang MAN 3 who participated in pencak silat extracurricular activities with a total of 15 people as testers consisting of 8 women and 7 men, with a physical percentage of athletes 57.3%. This shows that the application processing products for physical test data in small-scale experiments can be categorized as "GOOD ENOUGH" to be tested.

Large Scale Trial

Large-scale trials were carried out using the Musi Banyuasin PPLPD martial arts athlete with a total of 24 people as a tester consisting of

12 men and 12 women, with the physical percentage of athletes 71.25%. This shows that the application processing products for physical test data in large-scale experiments can be categorized as "GOOD ENOUGH" to be tested

Test questionnaire For Trainers

Coacher's questionnaire data was taken from two trainers who were the main assistant trainers of PPLPD in the Pencak Silat sports, the questionnaire given to the trainers had previously been validated by software experts and physical test experts as well as pencak silat trainers. Based on the results of the questionnaire table above, the percentage value of 76% is obtained with the category "WORTH" so that according to the trainers, the application for processing physical test data for the Pencak Silat sport can be considered useful and helps in processing athletic physical test data. This application is based on existing sources.

Research and development adapted by Dick and Carey In journals (Hartati, et al., 2018) consists of three stages: (1) program planning and development, (2) testing and improvement programs, and (3) program implementation. In this study with the method and flow that has been determined then on this research has a method to produce certain products or products that exist today and to test the effectiveness of products (Sukmadinata In, 2018: 164). The results of the data obtained are interpreted according to predetermined categories. The category used in the development research is divided into several parts. According to Suharsimi Arikunto in the journal *Negrei*, Yogyakarta University, the development of biology learning media for food testing using adobe flash professional CS5 Pradana (2012: 6), namely for 0-39% values categorized as inappropriate, 40 - 55% categorized as inappropriate, 56-75 % is categorized as quite feasible, and 76-100% is categorized as feasible. The four scales can be written as follows:

Table 1. Feasibility category

Score in percentage	Feasibility category
0-39%	Not Good / Not Fair
40%-55%	Poor / Appropriate
56%-75%	Pretty Good / Fair enough
76%-100%	Good / Worth

Cover

Sports and science and technology are an inseparable unit, because they will continue to co-exist. This data processing application was made as one of the proofs that science and technology

and sports cannot be separated in practice especially in modern times such as today, application processing athletes' physical test data helps trainers in processing data so that trainers can more easily determine what can be prioritized in training. so that this research can be used to improve the quality of trainers in training So the researchers hope that this data processing application product can be continued and developed again, because researchers are aware of it many innovations and improvements that will continue to exist in the future.

CONCLUSION

Results of the study "Development of Physical Data Processing Application Model for Pencak Silat Sports Branch at the Regional Student Education and Training Center (PPLPD) of Musi Banyuasin District" it is categorized as feasible and practical to be used as a physical test tool for martial arts athletes. This can be seen from the results of the questionnaire of the martial arts trainer who used the application during the large scale trial with the results of 76%, the validation of the first phase of softwares by 65.62% and the physical experts and pencak silat trainers by 70% while the results of the second stage validation software 87.5% and physical experts as well as pencak silat trainers 86.67% of this data can be concluded that the physical test data processing application is feasible to use. Small-scale trials got a percentage of 57.3% and a large scale trial of 71.25%.

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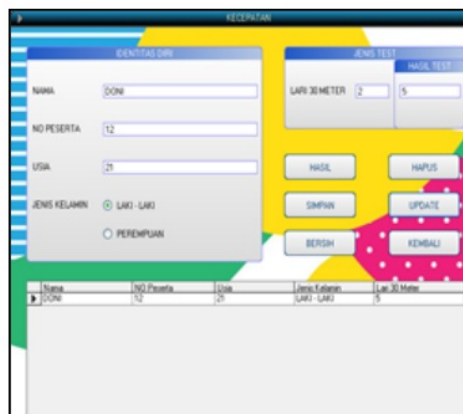
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Picture 1. Looks early in application



Picture 2. Result Tes and Measurement

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