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Analysis of the Implementation of Measuring Skills and Physical Futsal Sports Based Desktop Program

Aditya Gumantan[1]✉, Imam Mahfud[2], Rizki Yuliandra[3]

Program Studi Pendidikan Olahraga, Fakultas Sastra dan Ilmu Pendidikan, Universitas Teknokrat Indonesia. Jalan Z.A Pagar Alam no 9-11, Bandarlampung, Lampung, Indonesia[123]

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Abstract

The purpose of this study was to determine the effectiveness of the implementation of a desktop program-based skills and physical measurement tools for futsal. Seeing the level of effectiveness and level of efficiency of the time used compared to doing the test manually. The research method used is quantitative research with descriptive statistical techniques. The study population was active students in the futsal student activity unit of the Indonesian Technocrat University, amounting to 30 people with 17 men and 13 women who had good skill and physical classifications. The data collection technique used a non-test instrument, in the form of distributing questionnaires to the entire population. The results of the study found that the effectiveness of the desktop-based measuring instrument program was more than 85%, with the results that had a large percentage classification, the overall answer was that the tool could be used properly and easily. The desktop program tool has good speed and time efficiency in taking tests and gets accurate scores, students could view their scores forthwith compared to the tests that are evaluated manually, so the desktop program-based futsal measurement tool is very effective and can be used properly as a new development in the futsal sports measurement test.

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✉ **Correspondence address :**
E-mail: Aditya.gumantan@teknokrat.ac.id

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INTRODUCTION

The sport of futsal makes this sport much in demand by many people in every community, both in terms of performance and improving the physical condition of humans so that they make themselves fit and healthy. Health is the body's ability to allocate and distribute energy intake properly (Abidin. Dindin & Supeno, 2015 p 56). Health is one of the main things when doing this sport other than in terms of achievement. Some of the main factors of health are the necessity for doing various sports such as futsal, in addition, football performance facilitates recreational facilities. According to Ardianto in (Narlan Juniar & Millah, 2017, p 67) Futsal is a team sport that is contained in a five-person team that has players with fast tenpo and has a smaller field than football with only 20 minutes. Futsal originates from a Spanish country that is a mixture of the two words futbal and sala which has a smaller field than indoor football as a recreational facility that is in great demand by many people (Juniarsyah et al., 2017, p 36). The game of futsal itself has become one of the favorite sports and is in great demand so that this sport, in addition to recreation, is a means of forming athletes' achievements. The branch of futsal is very different from football, where soccer balls require a large space and a lot of players, while futsal only requires a much smaller field and only five players, futsal sports can be done openly or in a sports hall.

When discussing futsal towards achievement, there are several things that must be considered, one of them in the aspects of physical fitness and health to support much better achievement. The achievements of an athlete are determined from various factors, one of them is the training pattern that develops a person's physical aspects. For that, it takes practice that is measured and systematic where there are several aspects of training. The component of physical condition training is a very important part in making a periodization of training. It is because the formation of physical conditions must be well planned and measured (Harsono, 2018, p. 87). A good training pattern will make an athlete excel. Exercise is a process of physical activity that is carried out in a measured and structured manner with an increasing training load (Zafar. Dikdik & Pesurnay, Paulus, 2019, p. 124). Apart from the good training factor, the development of sports which develops sports science and sports technology WHICH will later help an athlete and coach in increasing more measurable training. The progress of times and eras will continue to develop that will have an impact on the development of technology in sports, especially in the futsal sport.

Science and technology are very difficult to separate, the two things are related to one another. We can feel the benefits of today's technological developments in our daily life. These technologies help humans to assist their work (Gumantan. 2020. p53). The development of knowledge and technology is not only in daily activities but also in the world of sports. This is one of the positive impacts of the development of science and technology in sports. Technology in sports has been widely used by coaches to optimize results during training. The process of using technology in the sports sector is very busy being used. This is because the use of technology in sports is proven to increase the desired results.

Sports in developed countries are now better known as sport science. Sport science includes the use of technology in sports. One of the benefits of using technology in sports is that it provides maximum results during the training process, namely in the form of increased physical abilities and techniques. The physical components are endurance, speed, agility, power and flexibility (Yuliandra, 2020, p. 158). Technology in sports does not only play a role in the process of improving physical abilities but also helps in the field of sports testing and measurement. The tools used in sports tests and measurements are now based on science and technology, this is a development of the tools that were previously used manually. Currently, these tools are computerized and the data can be processed directly.

Computer-based test and measurement tools in sports greatly facilitate the work of coaches to obtain data on the abilities of their athletes. The results of these tests and measurements do not take a long time to process the result data. This technology is related to the ease with which coaches can get superior seeds in finding potential athletes (Malik. 2020. p55). At this time sport went hand in hand with technological advances. Various countries are currently competing to create equipment that will be very helpful in the world of sports.

The development of technology in the field of sports has been widely embodied in research published in the form of articles to support achievements in the sports field (Yuliandra. 2020. p62). Achievement is not only about getting a champion during a match, but achievement can also be in the form of increasing physical and technical abilities. The form of increased physical ability can be in increasing endurance, speed, agility, flexibility, and power. Increasing technical ability is the increasing ability of athletes to perform techniques in a sport. The improvement

process cannot be done instantly, but is done repeatedly. The role of technology in this process is to maximize the results to be achieved in the training process.

The development of technology in the world of sports has made researchers want to develop test and measurement tools in the futsal sport based on a desktop program which is believed to be able to help coaches obtain athlete data more quickly. The thought related to the development of a desktop-based measuring instrument for this program was because there was no technology development for test and measurement tools in the futsal sport. In this study, the researcher also analyzed how the implementation in the field of the test tools and skills measurement and physical skills based.

METHODS

The research method used is quantitative research with descriptive statistical techniques. The study population was active students in the futsal student activity unit of the Indonesian Technocrat University, amounting to 30 people with 17 men and 13 women who had good skill and physical classifications. The data collection technique used a non-test instrument, in the form of distributing questionnaires to the entire population. This research uses quantitative research methods with descriptive statistical techniques. According to (Sugiyono, 2018). Distributing questionnaires in the form of questions are actually filled out by athletes as a research process which will later be classified in percentage and given descriptive explanations.

The study was carried out by distributing questionnaires to 30 active students in the futsal student activity unit at the University of Teknokrat Indonesia, distributing questionnaires at the time of starting and ending sports measurement tests, and comparing the level of effectiveness and time efficiency before and after having a desktop-based sports measurement test application program.

During the research, athletes carried out tests as usual, namely physical tests of push-ups, sit-ups, bleep tests, agility, standing broud jumps, and 20 meter sprints and for skills tests in the form of shooting, dribling, passing and futsal control which were carried out simultaneously.

The research was conducted in December 2020 with a single test taking of the futsal sport measurement carried out in the sports arena on the Indonesian Teknokrat University campus which took approximately three hours. To obtain the data needed, the researcher looked at the questionnaire that had been given before conducting the research. Researchers formulated quantitatively and described them in a study to determine the level of effectiveness and efficiency of the implementation of the measurement tool for skills and physical tests for the desktop-based futsal sport program that was previously prepared by the researcher.

RESULTS AND DISCUSSION

This study provides a detailed description of how the personal assessment of active students in student activity units for futsal sports at the Technocrat University of Indonesia with the following results;

Figure 1. Desktop layout view

The description of the program desktop layout view is the final result that has been validated by the Tesort expert, inputting name, age and gender for the physical measurement test components such as (a) Ilionist Aglity Run, (b) Standing Broad Jump, (c) 20 meter Sprint, (d)) Bleep test, (e) push-ups, (f) Sit-ups.

TThe skill test component contains test items (a) Shooting, (b) Dribling, (c) Passing, (d) Control. There are back and next menus which function to enter page two and return to the previous page, the submit menu to enter data again when the test is complete, the home menu to enter the final display in physical test items and futsal skills.

After inputting into the desktop program, the final data results are final data when all data has been inputted and a printout is carried out, the data is stored in a data bank that has been provided in a computer program, when we are going to access again, the data can be made as printed or in the original form in the the software application for measuring physical test and football sport skills.

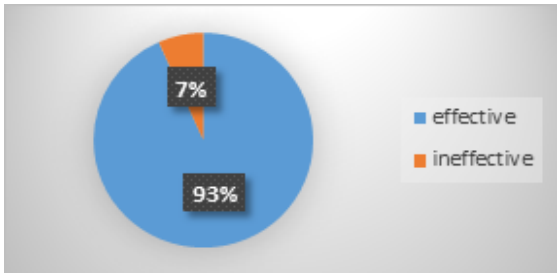

Figure 2. The level of effectiveness of the measuring instrument

The **Figure 2** Digram above illustrates the 30 students who took the measurement test, 28 students stated that the tool was effective at the time of carrying out the test, students who gave good effectiveness stated that this tool was easier to do. Students do not need to take the test repeatedly. The focus is on the tests that will be carried out sequentially, in contrast to the two students who stated that it was not effective in answering and there were still doubts about the testor. Thus, students did not feel this tool was effective when carrying out the futsal sports measurement test with an effectiveness level of 93%. The next survey measures the level of time efficiency carried out when the test results are obtained.

Figure 3. Time Efficiency Level

Figure 3 Measurement of the time efficiency level of all students states that this tool is very efficient, students no longer need to worry about taking a long time as usual when using manual tests, so the efficiency level is 100%.

The implementation of further research measured the level of convenience of the desktop program-based futsal sports measurement test tool.

Figure 4 Measuring the ease of this test kit itself, there were 26 students who stated that this tool was easy to use, where each student only took the test and saw the test results that were carried out by only looking at the program, which had been made, but there were 4 students who said it was not easy where they explained the tool This is still accessed manually by the testor so that the testor may incorrectly access and input the scores that have been done by the student. Thus the level of ease of the tool can be given 86% results.

Figure 4. Ease of use of the tool

Measuring the level of accuracy of this new product is one of the results of the research of this measuring instrument it self.

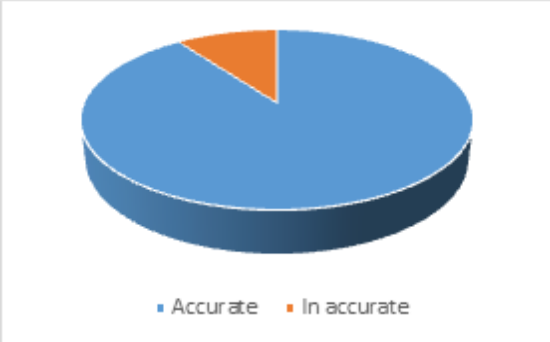

Figure 5. Accuracy of Measuring Instruments

Assessment of the accuracy of the tool as many as 27 students stated that this tool was accurate with the norms that had been made so that there was no need to worry about the accuracy level of the desktop program-based measuring instrument, in contrast to other students three children said this tool was inaccurate due to concerns about software-based tools or machines that could just experience an error so that the accuracy of this measuring instrument can be questioned properly, with the results obtained explaining that 90% of students said this measuring instrument was accurate.

The implementation of this research reaches the end of this research which states that this tool is feasible or not widely carried out if it is to carry out tests and measurements of the futsal sport based on the desktop program, which will later become a new product in a better development process.

Figure 6 In the feasibility test of the sports measurement test, which is a new development

in the sports measurement test, it was found that 100% of students said this tool was suitable for use in the desktop program-based futsal sports test and measurement, this tool is a solution to the boredom of the tests that have been carried out on previous test.

Figure 6. Equipment feasibility test

In previous studies using smart software applications as a measuring tool for the development of an agility measurement tool based on a desktop program, three agility test instruments, namely the doging run, the bomberang test, and the ilionist agility run test with the brog and gall development research method, got the effectiveness of the tool with material experts. 96, media and practitioners at 85% (Gumantan & Mahfud, p. 86). The following research is research on the development of a fitness measurement tool based on andorid research programs that use development research by measuring physical fitness levels using the Andorid program with the classification of men and women who have a menu of measurement tests, there are endurance tests, sit-ups, push-ups, strength. Andoroid-based leg muscles and speed get more than 80% of the effectiveness of the tool and say the tool is suitable for use (Gumantan, Mahfud, & Yuliandra, 2020, p. 145). In subsequent research, developing a physical fitness measuring instrument, the application of a test measuring heart and lung endurance, obtained a product feasibility test of 88.41% (Putro, 2018, p. 85).

CONCLUSION

Based on the results of the discussion that has been carried out, research on skills and physical measurement tools for futsal sports based on desktop programs has been carried out. The results show that the measuring instrument is the development of a new measuring instrument and it also has a very good efficiency and effectiveness as shown by the massive number of percentages of the tool.

This desktop-based measuring instrument product is a new breakthrough in sports measurement tests, which is the development of a tool that was previously accessed manually, so that this tool itself becomes a product that will later be able to contribute greatly achievement and more measurable development factors for futsal sports.

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