

The Development of Gating Drill Tool of Woodball Sports Branch on Central Java Woodball Athlete

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Abstract

This research is conducted based on the athletes' problems during gating drill. Therefore, the researcher is interested in researching the development of the drill tool to improve the basic swing technique in woodball sports. The objectives of this study are to: (1) produce a drill tool for gating technique for Central Java Woodball athletes. (2) Know the effectiveness of the toll for basic gating techniques training skills for Central Java woodball athletes. This research was development research that was conducted in Central Java; the purpose was to produce gating drill tool products. The subject of this study involved 7 Central Java athletes. Through development research steps to produce products, the final product was obtained in the form of gating drill development model. The indicators of the success of this product are in the form of analysis of observations, questionnaires, discussions with woodball experts, woodball trainers, Central Java woodball athletes, and the documentation of all test subjects in the research. The conclusions of this study are (1) Gating drill products are feasible and can be used as a means of gating drill for Central Java Woodball athletes. (2) The gating drill product is effectively used as a tool to improve the basic swing technique of woodball on Central Java Woodball athletes. The results of the analysis related to the effectiveness of the use of gating drill tools reached a good category. Hence, it is concluded that the tool was suitable for use as a gating drill tool.

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INTRODUCTION

The existing and recognized sports branches in the world have experienced much improvement both regarding quality and quantity. Regarding quantity, in the last nine years, there have been new sports which have been introduced and even competed in regional and national sporting events in each country, even at the international level. One branch of the sport that is developing in the world is woodball.

The woodball sports (wooden balls) were first discovered in Taiwan in 1990 by Ming Hui Weng and Kuang Chu Young (Kriswantoro, 2015). Woodball is a modified sport from the golf branch. The technique that is used in woodball sports is almost similar to the technique used in golf games (D. Soetrisno. 2015).

The terms used in woodball games are also adopted from golf such as fairway, par, OB (out of bound), the gate in one (from a hole in one) (Dwiwiyogo, Wasis, and Kriswantoro. 2009).

A significant difference lies in the bat, ball, and game targets which are mostly made of wood. The ball beater in woodball is called a mallet, and the game target is not a hole but a gate. The drill that is carried out by the athletes uses simple methods so far. The athletes do gating swing exercises through the floor line.

The athletes do swing gating on the floor line by swinging the mallet; they follow the line with the aim of straightening the swing. The finishing movement is different with a full swing motion. Dede Owens (2010)

Based on observations made by the researcher on athletes who have not mastered the basic technical skills of gating swing well, the athletes tend to decrease movement skills when they are practicing. This happens because athletes have not mastered the correct swing track.

The tool that has a special swing track is expected to help athletes to adjust their body position to get a good and consistent blow swing. Based on the background that the researcher described above, the researcher conducts the research to make a tool. In this case, it is focused on practicing gating swings, by developing ways that are usually carried out by athletes who

practice on the floor line. This tool can be used as a variation in doing training. According to Junaidi (2013), sports facilities and infrastructure are supporting resources consisting of all forms and types of equipment and tool used in sports activities covering all fields and sports buildings as well as the equipment with indicators of the basic principles of infrastructure, completeness of infrastructure.

METHODS

This development research used procedural development model, because this model was descriptive, which was a procedure that described the steps that must be followed in producing a product. According to Wasis (2004) in each development, the researcher can choose and find the most appropriate step for his/her research based on the conditions and constraints that he/she faced.

This research was to produce a product through steps of development and validation. The development procedure has two main objectives, (1) developing the product, and (2) testing the effectiveness of the product.

The development research steps were carried out based on the Research and Development (R & D) method. The steps of research and development did not have to use the standard steps that must be followed, but each development can choose and determine the most appropriate steps for the research based on the conditions he/she faced.

This research has steps that are related to finding research information, planning, developing initial form products, major product revisions, operational product revisions, final product revisions, socialization implementation (Wahyudi, Agung. 2017).

Gating drill tool products were said to be developed and can also overcome obstacles in the gating hit training is marked by the average calculation results from the quality assessment questionnaire filled by woodball experts (lecturers) and woodball trainers. The analysis technique used was using a descriptive analysis technique in the form of a percentage.

RESULTS AND DISCUSSION

The research involving various parties related to woodball sports, they are two woodball experts, consisting of woodball trainers and lecturers, and involving three woodball athletes in Central Java on a small scale test and seven woodball athletes in Central Java as a large-scale trial subject. In this research, woodball athletes or research subjects do the training by using a gating drill. This research is carried out by analyzing training conducted by woodball athletes, conducting direct observation, documentation, and conducting interviews and discussions with woodball trainers. The following is the initial draft of the gating drill tool product developed by the researcher before being validated by the team experts.



Figure 1. Gating Drill's Initial Draft (Initial Product)

Tool specifications:

1. The initial product is designed to be used as a gating training tool for Central Java athletes
2. The tool frame is made of iron which consists of a swing track, the place where the foot stands and the ball place
3. Permanent tools and patents
4. Empowering blacksmiths and welders
5. Local iron that is easily available
6. Made manually by a welder.
7. Affordable price, which is Rp. 1.500.000.00

The data obtained from the filling out the questionnaire by experts is a guideline, which states whether or not the Gating drill product is

suitable to be used as a gating tool by Central Java woodball athletes.

The results obtained from the expert evaluation as a trainer were 55 with the sufficient category and the expert lecturers of 54, it has sufficient criteria. In the small scale test, the results of the respondents' questionnaire on the gating drill product, it is obtained by the results of "yes" with a percentage of 80%, it is classified as **good** with the meaning of **can be used**.

Based on suggestions and input from the expert team on Gating drill products that have been tested on a small scale, the researcher then focused on product revisions before a wide scale trial

Large scale trial data is obtained after revision of small scale tests on Gating drill products. Large-scale tests are tested on Central Java Woodball athletes, consisting of 7 Central Java woodball athletes.



Figure 2. Gating Drill Product After Revision

Tool specifications:

1. Drive motor: Mg996R servo motor 180 degrees
2. Controller: Arduino Nano 328 with push button and potential
3. Supply: Samsung Li-ion 2000mAh 3.7v with Li-ion charger
4. Sensor: Adjustable vibration sensor module
5. Dimensions: 215x140x550 mm
6. The swing track material is added to the pipe and has a sound sensor
7. The place of the ball is made with plywood base material and has a driving sensor

Before the tool is revised, it made of iron as a whole; the ball exit is not automatic, the swing track had no sound sensor when the athlete made a mistake, the footrest is equipped with an artificial grass carpet that could be used as a whole base.

The results of the respondents' questionnaire on gating drill products on a large scale test, it has shown a percentage of 90% of the total calculation of the "yes" answers, it is classified as **good** with meaning **can be used**.

CONCLUSION

The process of developing a research model for the development of gating training equipment for Woodball athletes, the results of the tool products are named Gating drill.

The conclusion of the discussion in this thesis, it can be concluded that: (1) Gating drill products can be used as training facilities for Central Java woodball athletes. (2) Gating drill products can be used effectively to correct mistakes and train gating swings towards Central Java Woodball athletes.

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