

Perception of Athletes And Trainers on Use, Security, and Company Tools of Extinguishers on The Exercise Skills of Bolavoli Motion

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Abstract— The problem raised in this study is how the trainer and bolavoli athlete respond to the application and usefulness of the bolavoli thrower on the practice of bolavoli motion skills? The objective is to know the perception of trainers and athletes on the application and usefulness of the ball-throwing tools during bolavoli training. A qualitative research approach was used as a research method with 15 subjects of provincial bolavoli trainers and 40 provincial bolavoli athletes involved as respondents. Data obtained through questionnaires, interviews, and observations as a research instrument, which then performed data processing using descriptive percentage. The results of the study showed that 15 trainers stated that the sprayer tool could be used for motion study exercises and guidance of bolavoli achievement, and could fulfill the need for motion bolavoli skills training. Perceptions of the use of bolavoli launcher are also given by the players as respondents. The results of the assessment showed that athletes stated that the bolavoli launcher was feasible to use, comfortable to use, and safe to use the exercises.

Keywords— *exercises, bolavoli, sprayer*

I. INTRODUCTION

The basic pattern of the game bolavoli mentioned PBVSI (1995: 1) that reflects the ball (volley) continuously over the net. While the goal is to skip the ball over the net in order to fall to touch the floor of the opponent's field and to prevent the same effort from the opponent. According to Beutelstahl, technique is a procedure that has been developed based on practice, and aims to find a solution to the problem of certain movements in the most economical and useful way [2]. Furthermore, technical skills according to Reynaud are grouped into two, namely: 1) attacking technique skills consisting of serving, passing, and attacking, and 2) defensive engineering skills consisting of block and dig [9].

Various basic engineering skills absolutely must be learned and mastered to be able to volley the ball according to the technical principle of bolavoli. Through long and continuous practice, the bolavoli athletes learn, master and improve the skills of serve, pass / dig, set-up, spike, and block motion needed in survival tactics and attacking the sport of bolavoli.

It is clear that now the sport of bolavoli is growing rapidly, fast and far more sophisticated. One example is the emergence of a jump-serve and back row attack on serve and spike skills,

being a much more dominant factor and making the bolavoli game has changed. This means that coaching needs to be accompanied by an adequate training process, including training facilities for bolavoli motion exercises. In developed countries, bolavoli practice based on science and technology innovation has been widely used. The exercise is done with the tools of science and technology innovation, one of which is a tool pelontar bolavoli. The bolavoli launcher is a set of machines that work mechanically to throw / bolt the ball. The ball of the throwing ball is used for the sake of bolavoli practice.

Bolavoli launchers manufactured and marketed include AirCat Volleyball Machine from Airborne Athletics USA, Inc.1800 East Cliff Road, Suite 11A Burnsville, MN and Attack Volleyball Machine from Attack Volleyball from Sport Attack USA. 40 Verdi, NV (Asian Region in Shibita-cho Miyakonojyou-shi Miyazaki, Japan) [1]. The two machines above are some bolavoli throwers that have been manufactured and used to aid in bolavoli exercises. Developed countries use science and technology innovations to drive successful practice, improve performance, and help learn bolavoli motion skills.

In Indonesia, AW_2016 bolavoli drill machine has been developed. A science and technology innovation exercise tool learns the skills of bolavoli motion. So need a study of how the application and usefulness of this tool in the practice of bolavoli motion skills? The world of sporting achievements is very unique because the performance results are measurable and observable, even presented openly, as well as publicly accounted for, broadcast by the media (print and electronic) and recorded as sports performance data. Therefore, according to Lutan, behind the process of sports coaching is needed the formation of a "growth mind set" that emphasizes the endeavor and ethos of hard work, as a reflection of the champion character, or a culture of accountability that emphasizes the process improvement / improvement in a continuous and systematic way [5].

Achievement sports can not develop on a stand-alone basis so as to require synergy of all stakeholders, in order to ensure sustainable sports development. The lack of sustainable coaching is against the sporting demands of achievement that will only succeed when long-term coaching principles are met. Lutan mentions as a system, sports coaching achievements

involving a number of major components and research results revealed at least 10 major components called pillars [5]. The ten pillars are: financial support, organization and integrated sports policy structure, pemasalan and nurseries, performance development: talent identification and development, elite group achievement: reward system and support in the post-career period, sports infrastructure: training facilities, training and quality of training, quality of competition: national and international standards, scientific research: input of sport science and technology, and media environment and sponsorship.

As often argued by experts: "The sports performance should start from an early age to reach peak performance, which takes place through a continuous coaching process for 10-12 years, or at least 10,000 hours of practice." Therefore the implementation of sports achievement development greatly emphasizes the process, rather than product (result). Furthermore, it is necessary to create an environment and pay attention to the factors that support the quality of athletic training, in order for athletes to learn, practice, repeat the movement and be able to master the techniques of attacking techniques and techniques of survival. The quality of the exercise depends not only on the trainer, but on the interaction of many factors that can affect the performance of the athlete. Bompa (2009: 8) states that the factors that affect the quality of the exercise are: a) the trainer's knowledge and personality, b) facilities and equipment, c) supporting science discoveries, and d) matches or competitions. All that is reciprocal with the ability of athletes based on motivation and talent.

AW_2016 bolavoli drill machine is a work system that aims to throw the ball for the benefit of exercise for athletes in learning the skills of receive-serve, pass / dig, set-up, block and spike bolavoli. The ability of bolavoli drill machine AW_2016 is: capable of catapulting 900 times throw / hour, hold for 3 hours continuously, can give the right throw and steady, maximum throwing speed 98.3 km / hour. This bolavoli aids to meet the training needs of a bolavoli athlete in the practice of bolavoli game motion skills. Exercise facility as one of the supporting factors that determine the quality of exercise including equipment or equipment. So to create a quality practice, the coaching club and coach must pay attention to the availability of equipment or equipment that is adequate for athletes in the exercise.

Practicing and learning bolavoli motion skills is learning motion skills on how athletes can master the movement of receiving service, accepting or passing, feeding, punching and stemming, so that the movements are effective and useful for playing the ball back and forth regularly over the net as well. Cooker (2004: 98) mentions that the steps to acquire movement skills according to Fitts and Posner's Three-Stage Model are: 1) Cognitive Stage, 2) Associative Stage, and 3) Stage Automation.

The first step is the cognitive stage, in which the athlete is introduced to new motion skills and the main task used to develop a sense of the need for motion. In this step the athlete experiments with various strategies, sees and perceives things that hinder and support the movement learned. The second step is called an associative stage. At this stage the athlete begins to

choose his motion skills to achieve his motion goals. Characters that arise at this stage include: focused on the chosen motion strategy, there is a lot of repetition of the movement to master its motion strategy, and the increase is slowly. Changes in motion skills can be seen with improved performance, and athletes have a strategy in which motion is possible and selected. Appearance appears to be more consistent and there is a decreased rate of motion errors. The third step is described as the stage of automation. At this stage a high-level appearance is formed and its motion strategy has become an automatic movement. The characteristics of this stage are: 1) the final stage of motion learning is characterized by the ability to perform the movement automatically, 2) in the movement without being affected, although still pay attention to other things, 3) in the process of movement has a lot of memory in the central nervous system 4) this is not all athletes achieve it, 5) automatic movement is not necessarily efficient.

The implementation of sports science in Indonesia is now beginning to develop. However, even though it is not accompanied by the application of high technology, so in its application is not optimal. Infallible Ali (2012: 22) states that a narrow understanding that led to the study of sports science can not develop optimally. This understanding is related to the study of sports science which is only understood as the science of motion and practice. The outside study was considered not a field of sports science. The view needs to be straightened out, given the science of sports has grown considerably away from the understanding.

According to Lutan, the function of sports science and technology is to seek innovation in coaching [5]. If not to the extent of these capabilities, at least the application of science and technology is needed to provide information to make the right decision in the training. In the development of the next science and technology, the existing technology makes sports activity is no longer a heavy activity. Various tools ready to become "weapons"

In the Law of the Republic of Indonesia Number 3 of 2005 on National Sport System chapter XIII article 74 paragraph (3) and paragraph (4) related to Science and Technology Development (Science and Technology) Sport states that: Government, local government, and / or community undertake the continuous development of science and technology to promote national sports; The development of science and technology is conducted through research, assessment, transfer of technology, socialization, scientific meeting, and cooperation among research institutes, both national and international who specialize in sports science and technology; and the results of science and technology development are socialized and applied for the advancement of sport.

II. MATERIAL AND METHOD

A test design is used to find out the perception of usefulness, safety, and comfort of the thrower on the practice of bolavoli motion skills. 40 provincial bolavoli athletes were involved as test subjects (respondents). In addition, 15 provincial-level trainers were involved in the study to make observations and provide assessments.

The instruments used were questionnaires, interviews, and observations. Questionnaires are used to collect information or data from the trainer on the results of the use and performance of the ball launcher. It is also used to gather information on possible adaptation of the tool during use. Observation is used to collect data related to the implementation of the ball launcher. Interview guides are used to explore or supplement data and information from athletes and trainers on the conditions, benefits, and usefulness of the ball launcher. Further data obtained were analyzed by descriptive percentage.

III. RESULT AND DISCUSSION

A. Implementing Tools

The ability of the bolavoli drill machine AW_2016 and its application to the bolavoli exercise, among others: 1) the skills of motion receive the service: give throwing with rotation type rotating or spinning as a service from the opposing team and respondents trying to practice the skill of motion acceptance of service ball, 2) the skill of receiving the attack: giving a flutter like an attack in a ball game with a rotating spinning or spinning ball type and the respondent attempting to practice the skill of the defensive moves of the opposing team's attack; 3) the skill of feeding: giving a flutter like a passionate pass) in a ball game with a rotating or spinning ball type and the respondent tries to exercise the mastery of passing motion skills or feeds the ball in a team so that the ball can be struck by the attacker; 4) the skill of striking or attacking: giving a throw like a u mate of team mates in a ball game with a round ball type and respondents attempting to practice attacking motion skills with a wide variety of ball spoons, and 5) motion detrimental skills: to give off like an attack in a ball game with a spinning or spinning ball type and respondents tried to exercise motion control skills to stem the attack of the opposing team.

B. Perception

The perception of 15 trainers related to the use of bolavoli throwers in motion exercises was observed with three aspects, namely guidance of bolavoli achievement, development of sport science and technology, and bolavoli coaching aspect. The results of the questionnaire showed that all respondents (100%) stated feasible with the perception as follows:

1. Guidance of bolavoli achievement: can be used for exercise and improve bolavoli skills, safe and comfortable to be used for exercises to learn bolavoli motion skills, can be used for athletes of sons and daughters, as well as various levels of athletes.
2. Science and Technological Science development bolavoli: can meet the needs during exercise learn bolavoli skills, and can meet the throwing keajegan during use athletes practice learning bolavoli skills.
3. Bolavoli coaching aspect: can be used to practice skills receiving services, receiving attacks, feeding, hitting, and stemming in a game of bolavoli.

Perceptions of the use of bolavoli launcher are also given by the players as respondents. Perception is given by assessing the bolavoli thrower after the respondent tries to use it in the

practice of bolavoli motion skills. The results of the assessment showed that all respondents (100%) stated that the bolavoli launcher was feasible with observations on:

1. Utility aspect: can be used to practice bolavoli motion skills. The result of respondent's analysis showed that model product can be used to assist trainer in training process (24%), repeating model ability (20,7%), and model can be used to learn technique (17,2%) are three answer most of the respondents. The respondents' highest answer indicates the model product can meet the needs of the ball throw used by the athlete in learning motion skills or bolavoli techniques. The repetitive nature of the ball ejector model results from the ability of the product to throw the ball continuously. This condition is used trainers and athletes to meet the needs of the exercise. Thousands of ball throws produced by the launcher product used by the athlete to repeat the movement as a training process.
2. Security aspect: safe to use for the practice of bolavoli motion skills. The results of the respondent's analysis show that the safe model product is used for bolavoli exercise because it is not in direct contact (48%), the tool can be adjusted or adjusted (20%), effective design (20%), and unobtrusive tool (12%). The biggest and most convincing respondent answer is the absence of physical contact or touch between the model of the thrower and the athlete during use in the training process.
3. Aspect of comfort: comfortable to use for exercising bolavoli motion skills. The result of respondent's analysis showed that the model product of the convenient ejection device was used for bolavoli practice because the model of the spherical device can be adjusted / adjusted (42.3%), can be used for the attacking and survival training (19.2%), physical condition training (15.4%), stable ball burst (7.7%), and other answers (15.4%) refers to repeatable, coach, and efficient tools. The data shows that the system of speed setting, direction, and throwing angle is the answer to convince respondents to feel comfortable using the model product of AW_2016 thrower. The indirect effect of the use of the model of the ball ejecting device is related to the physical condition. This refers to a relatively rapid repetition of each athlete's motion resulting from the throwing of a modeling product model. This situation requires a good athlete's stamina to always show the performance of the exercise as a demand and goal of the exercise.

The AW_2106 bolavoli drill machine tool can meet the needs of a ball-throw for the practice of bolavoli motion skills, can be adjusted to the angle, direction, and ejaculation aspect, can be used to practice learning the skills of receive, pass / dig, set-up, block, and spike bolavoli, and economical. The practicality and effectiveness of the training tool is shown from the interviews of 40 respondents who have tried the AW_2016 bolavoli drill machine. Interviews show that the AW_2016 bolavoli drill machine is useful for bolavoli exercises. The respondents' highest answer indicates this tool can help the trainer in the bolavoli training process obtained from his ability to throw the ball. AW_2016 drill machine tool capable of throwing the ball continuously and steady so that it has the nature of drilling to meet the needs of burst during exercise.

Fulfill the needs of bursts of balls used by athletes in learning motion skills or bolavoli techniques. This condition is used by trainers and athletes to meet the needs of the exercise. Thousands of ball throws are produced by tools used by athletes to repeat the movement as a training process, this is termed drilling. Repetition of the movement by using the ball-throwing out of the tool to learn various motion skills or bolavoli game techniques. AW_2016 bolavoli drill machine is safe for bolavoli exercises, the most responded and convincing answer is the absence of physical contact or touch between the model of the propeller and athlete during use in the training process. This is derived from the ability of the tool that can be positioned, the type of burst, and throw target. In addition, its ability to adjust the direction of throwing, throwing angle, and altitude is the factor of avoidance of physical contact during use in the bolavoli training process. The ability to adjust the speed, direction, and angle of the throw is a factor in the AW_2016 bolavoli drill machine tool. The throwing ball with a choice of speed from 0 to 98 km / h, and the right target due to the direction and angle settings to make the outrage can be used to meet the need for resistance and attack tactical exercises.

The results of throwing the ball used by athletes to practice receive serve, block, and pass / dig for defensive tactics. Set-up and spike exercises are an attacking tactic that can be trained with this model of the thrower. The indirect effect of using this tool is related to physical condition. This refers to the relatively rapid repetition of each athlete's motion resulting from the throwing of the AW_2016 drill machine. This situation requires a good athlete's stamina to always show the performance of the exercise as a practice demands.

The practice of bolavoli motion skills is a long process that follows the Fitts and Posner stages. The athlete seeks to recognize, understand, and master the skills of receiving motion, accepting attacks, feeding, hitting, and blocking bolavoli games using bolavoli thrashing media based on the cognition stage, association stage, and then the automation stage. The process of a movement starts from the presence of external or internal signals that enter through the brain nerve which then causes the contraction of a muscle or muscle group. Lutan (1988: 240) states that: the contraction generates sensory information (response-produced feedback) of the muscles and / or from the movements produced by the contracting muscles. The feedback is regarded as information stimuli as well as other stimuli such as light or sound, which then serve as a trigger or spur for the next contraction. In the next stage, the muscle contraction also produces a feedback response that spurs the third contraction, and so on until a complete contraction circuit takes place. The origin of the feedback-feed generating sequence of subsequent responses can be from various sources such as muscle contractions, joint receptors, or even from sight and hearing.

Sources of information (stimuli / stimuli) that enter through our hearing or vision are processed in the brain by recognizing and identifying the characteristics of the input first, then our bodies respond well in the form of a movement. The presentation of information processing of bolavoli motion

training exercises from ballooning tools can be delivered as follows: first, the athlete captures the information from the spill of the ball and the tasks and functions of motion skills through the sensory organs (eyes, ears, etc.). Some information is filtered (ignored) at the sensory level, then the rest is inserted into short-term memory (consciousness). Short-term memory has limited information maintenance capacity so that its content must be processed in such a way (by repetition or training), otherwise it will disappear quickly. When processed, information from short-term memory can be transferred into long-term memory. Long-term memories (Long-Term Memory) are important in the training process. Long-term storage contains factual information (called declarative knowledge) and information about how to do something (called procedural knowledge). The end of this process is the output, which is the skill of receiving the service, accepting the attack, feeding, hitting, and bolavoli game dam.

IV. CONCLUSION

AW_2016 bolavoli drill machine tool is an innovative exercise, especially training facilities that support athletes learn bolavoli motion skills. This tool has the ability to provide thousands of throwing ball that can be used by athletes in the process of continuous training and demands long training time. Research conclusions are a convenient and safe bolavoli thrower model for exercise, can be used for motion-learning exercises, and can fulfill the need for bolavoli exercises. The proposed recommendation is that the model of a bolavoli thrower can be used by trainers and athletes as an alternative to the bolavoli motion exercises..

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