



EVALUATION OF THE EFFECTIVENESS OF THE TECHNICAL CHARACTERISTICS OF TAEKWONDO AS PART OF THE MODEL CHARACTERISTICS OF THE COMPETITIVE EVENT - SPARRING IN TAEKWONDO

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ABSTRACT

The systems for reporting points in taekwondo are changing. That requires rethinking the effectiveness of technical-tactical characteristics. The most significant model characteristics of Taekwondo are derived through expert evaluations and adapted to the features of the recently introduced electronic system for reporting points Daedo Gen 2. Two types of characteristics are presented: technical and tactical. The derived Taekwondo model characteristics are the basis for determining the most important qualities in that sport and for creating a training methodology which could stimulate, develop and improve these particular qualities.

Keywords: program-target approach, technical characteristics, tactical characteristics

INTRODUCTION

The result-oriented approach has been widely used in sports-pedagogical practice in recent years. The main peculiarity of the result-oriented approach is revealing and using those means and methods which facilitate the achievement of the preplanned sports-technical shape and applying them in the training process. This approach enables the organization of the training process so that clearly defined goals can be achieved, and effective control on the level of preparation can be exercised (1).

The in-depth study of an athlete’s abilities is in the basis of the result-oriented approach. According to these abilities, the means and methods for increasing athletes’ sports fitness are planned. According to athletes’ abilities and level of readiness for participation in competitions, we can use a wide range of indicators showing

functional abilities, psychic readiness, and technical-tactical mastery. Taking a great number of indicators into account would impede the most significant ones in their actual state and the purposeful preparation in training. That is why, when using the result-oriented approach, we outline a smaller number of criteria characterizing sports performance. These criteria are the most essential. In a sense, they are secondary, regulatory, and general indicators comprising the number of indicators from various spheres and levels in the structure of athletes’ sports-technical preparation (2).

These quantitative and qualitative indicators are determined as model characteristics of the athlete (3). The model characteristics are peculiar to a specific kind of sport. They reflect the major specific characteristics of a sports discipline as an activity and serve as a model of the “ideal athlete” in the sport (1).

When we create model characteristics of a certain kind of sport, two main groups of factors are taken into account – the specific peculiarities of the sport and the peculiarities of the conditions where

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it is practiced. The model characteristics reveal the specific structure of the kind of sport and the requirements for its successful performance (4; 5). They are the basis for efficient, specialized preparation in sport.

The efficiency of the result-oriented approach depends primarily on whether the model characteristics accurately reflect the actual and result-oriented levels of sports mastery and preparation of athletes, whether these characteristics are interrelated, and whether the chosen means and methods of training correspond to the set tasks (6). Training programmes are also developed according to the specifics of the athletes being trained - e.g. some sports clubs develop sports didactic programmes to suit the specifics of Generation Z children (12-17 year olds). The development of the innovative programmes is aimed at increasing the motivation of the youth playing taekwondo sports (7), who are "digital natives" because they spend a lot of time in front of screens from early childhood (8; 9).

The realization of the result-oriented approach in taekwondo is impeded due to the lack of information about the model characteristics in competition and criteria for the evaluation of athletes' level of preparation. It is also impeded by the lack of information about the training programs, their structure, and the peculiarities of the training influences.

Revealing the model characteristics of taekwondo athletes is the basis for planning the general training strategy, which includes selecting the most rational means and methods for preparation, planning the training and competitive loads, and choosing the most efficient out-of-training factors optimizing these parameters.

Hypothesis

Taekwondo is characterized by specific technical-tactical characteristics. Revealing and integrating them into model characteristics will enable the creation of a scientifically grounded training program that will build and perfect athletes' technical-tactical abilities.

Research task

To analyze the efficiency of technical-tactical characteristics of taekwondo.

Participants

The research was done among twenty-three coaches, assistant coaches, instructors, and judges from 10 leading clubs – members of the Bulgarian Taekwondo Federation. They are experts in evaluating the significance of the factors determining taekwondo athletes' sports performance.

METHODS

Questionnaire - a standard format for revealing the significance of the elements from the sports-technical sphere peculiar to taekwondo. All the possible answers to the questions were formulated in advance, and the experts were asked to choose the one which corresponded to their opinion. The questionnaire includes different qualities (indicators) and a 10-point scale for evaluation of their significance. The significance of the evaluated qualities increases from 0 to 10 points. The scores from 0 to 2 mean insignificant, the scores from 3 to 4 mean little significance, the scores from 5 to 6 mean average significance, the scores from 7 to 8 mean considerable importance, and the score from 9 to 10 – great significance. Only the end scores "0" and "10" were marked on the visual analog scale. The other scores were marked with dividing lines. We assume that scales constructed in this way stimulate experts to give their more accurate evaluation of the indicators.

The questionnaire consists of two groups of characteristics – technical and tactical.

RESULTS

Technical characteristics

Taekwondo's technical characteristics determine its specificity as a kind of sport, the peculiarities of the competitive play, and are fundamental for athletes' sports-technical mastery and successful performance.

The group of technical characteristics includes kicks primarily. The specific competitive requirements determine kicks as the most efficient "weapon" in taekwondo. Kicks are used equally well in attack, defense, and counterattack. A kick in the defensive "hogo" is worth 2 points. A punch in "hogo" is worth 1 point.

A kick with a rotation of the torso is worth 4 points. A kick in the head area is worth 3 points; with rotation – 5 points.

The results from the variation analysis showed that, according to the expert evaluation, all technical characteristics were of great importance (**Table 1**). It is explicable – the lack of complex development of all technical approaches could hardly lead to significant success in this sport. Each of them is important, and each can lead to success depending on the opponent's style of play

and the competitive situation. For some technical characteristics, the range of expert evaluation was quite broad, e.g., for the side kick, the evaluations ranged from 1 to 10. However, the frequency analysis showed that only one expert gave an evaluation equal to 1; the others marked scores from 7 to 10.

Table 1. Expert evaluation of the significance of the technical characteristics

	N	Min	Max	M	SD
Side kick	23	1	10	9.04	1.96
Turning kick	23	3	10	9.00	1.73
Back kick	23	2	10	8.96	1.78
Crescent outside, inside kick	23	5	10	8.87	1.55
Axe kick	23	4	10	8.87	1.71
Punch	23	2	10	8.48	2.08
Spinning hook kick	23	3	10	8.43	2.04
Push kick	23	3	10	8.22	2.06
Front kick	23	3	10	8.00	2.08
Hook kick	23	3	10	8.00	2.00

In recent years, the Side kick has displaced the leading Turning kick due to the changes in the sports gear and has been prevalent in the training sessions and competitions. It is used as a counterattack in the torso and head area and for pushing the opponent off. It is performed as a single kick, as a trick, and in combination with kicks from a stationary or moving position and with a jump.

The Turning kick is still a basic kick in taekwondo and is used as a basis for learning the other types of kicks. It constitutes about 50% of the techniques perfected in training. It is used for attacks, counterattacks, and tricks. It is performed as a single kick or a sequence of kicks in the torso and head area from a stationary or moving position and with jumps.

According to the expert evaluation, the Back kick is the third most significant kind of kick. The kick is performed behind the back after rotation, which adds to the power of the kick in the opponent's torso and, more seldom, in the head. It is successfully used as a counterattack or in a combination of kicks. It is performed from a stationary or moving position and very often with a jump. Of all kicks, the Back kick is the most knockout-effective.

The other two types of kicks – The Crescent outside, inside kick and the Axe kick belong to the swinging kicks in taekwondo and are most often used in attacks to the opponent's head. They are frequently performed from a clinch, stationary or moving position, and with a jump, as single kicks or in combinations. The Crescent outside, inside kick and the Axe kick require the development of athletes' flexibility and in training are preliminarily used for this purpose.

The first arm hit – the Punch, allowed by the Code of Rules, has been much more frequently used by the more experienced athletes. It is used successfully in the attack only of the torso, in a counterattack, in a combination of hits and simultaneous defense and counter hits.

The Spinning hook kick is the most attractive behind-the-back kick with a spin directed toward the opponent's head. It is not much preferred because it is a complex biomechanical structure that allows many counterattacking actions. It is performed from a stationary position, in a combination of hits, and with a jump.

The Front kick and the Push kick do not earn points and are used in combinations of kicks such as tricks, defense, and pushing off the opponent. They are used primarily on the level of the torso,

and the Push kick is used with a jump toward the head.

The Hook kick has a similar biomechanical structure to the Spinning hook kick but is not performed behind the back with a spin. It requires the development of athletes' flexibility and agility. It is performed from a stationary or moving position, as a single kick in attacks and counterattacks or in combinations of kicks.

Tactical characteristics

Tactical characteristics are closely related to technical characteristics and specific motor skills. The technique of taekwondo athletes is greatly determined by their development and the peculiarities of the opponent's play. Tactical indicators reveal how to fulfill the technical ones, the degree of mastery, complexity, and knowing different options applied according to the situations during the bout.

The results from the variation analysis allow us to conclude that, according to the experts, all the

analyzed tactical approaches are very significant (**Table 2**). The first places are taken by the kicking techniques, the adequate choice of defense, and the sense of counterattack. Kicks determine the success in taekwondo. The experts were in favor of the kicks from stationary or moving positions. The kicks with a jump were ranked as less significant. They are very attractive, but their use is less effective. The last places in the ranking of the technical characteristics were taken by the defensive actions – arm defense, leg defense, body defense, and simultaneous defense. Success in taekwondo is determined by the number of hits on the opponent's body. Defensive actions are part of the technical and tactical approaches but do not determine success in this sport. However, their role should not be undervalued because they determine the effective counteraction to the opponent's attack and are the basis of counterattacks. According to the experts, counterattacks are among the most significant tactical approaches.

Table 2. Expert evaluations of the tactical characteristics

	N	Min	Max	M	SD
Leg techniques	23	8	10	9.65	0.71
Adequate selection of defense	23	7	10	9.48	0.94
Sense of counterattack (anticipation, counterblow)	23	6	10	9.43	1.12
Moving	23	7	10	9.35	1.02
Working with a partner	23	7	10	9.35	0.98
Lightness and flexibility of all technical elements	23	7	10	9.30	1.12
Defensive techniques (complex)	23	7	10	9.26	1.09
Ability for strength distribution	23	4	10	8.96	1.58
Execution of different technical combinations	23	6	10	8.91	1.27
Economy of movements	23	4	10	8.91	1.75
Tricking movements	23	5	10	8.87	1.35
Arm defense	23	5	10	8.78	1.47
Concomitant defense	23	5	10	8.35	1.74
Fight stance	23	1	10	8.09	2.15
Techniques with a jump	23	2	10	7.91	2.25
Leg defense	23	2	10	7.91	2.71
Body defense	23	1	10	7.57	2.79

The sense of counterattack is not determined only by physical and motor abilities. Most probably, it depends greatly on psycho-physical qualities that can also be subjected to training and perfection. Counterattack is one of the most efficient tactical

moves in combat sports and, as a result, is preferred by most specialists and athletes in these sports. The counterattack style is one of the three main styles, together with attack and combined ones. The athletes intentionally provoke the

opponent's attack so that they can counterattack with single hits or a sequence of hits. The results from this research confirm the ones obtained by Lefterov about kickboxers (7).

CONCLUSION

The expert evaluation allowed for outlining model characteristics for taekwondo which can serve as determining the most significant indicators in this sport and creating training methods that can stimulate, develop, and perfect, namely these indicators. The model characteristics obtained by the expert evaluation can serve as a reference point for the ideal taekwondo athlete.

However, we should cautiously approach the outlined indicators because the expert evaluation could have been subjective. It is necessary that the model characteristics be compared with the ones possessed by taekwondo athletes and demonstrated in competition.

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