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**ANALYSIS OF REGULATION CHANGES IN JUDO**

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*Abstract*

During its evolution, judo has undergone numerous regulation changes determined by the need to increase the spectacular character of the show and boost the fight. The research hypothesis consists in analysing these changes to see whether they produce effects on the preparation and participation in the competitions of the new Olympic cycle, and what measures and methods are necessary in the training of athletes. The purpose of this paper is to determine the effects produced by the main regulation changes on training and competition in top performance judo. Establishing and analysing these effects enable to schedule, plan and model preparation for the new Olympic cycle and achieve the intended results. The subjects are elite judo athletes aged 18 to 27 years, participants in the latest edition of the Olympics. Among the methods used to conduct the research, we mention: comparative data analysis, statistical processing, graphical representation. Statistical processing and comparative data analysis reveal the changes occurred in the training components. The increasingly dynamic and spectacular character of the competition, imposed by the media, requires modelling the physical, technical, tactical and psychological training. Thus, changing the technical rules generates effects on the physical preparation and exercise capacity, while changing the length and structure of the fight leads to modifications in the techniques and tactics of approaching the competition. Conclusions highlight the need to optimize preparation for all Olympic teams as regards the new effects of these changes on training and competition, determined by the periodic modification of the rules.

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**Keywords:** Judo, evolution of regulations, competition, training.



## 1. Introduction

Judo, as an Olympic sports discipline and a martial art, has undergone numerous changes in its regulations during over 120 years of evolution. Changing the rules has been periodically determined by the importance of increasing the spectacular character of the show offered by the fight and the need to avoid the emergence of injuries. Initially, the combat duration was not limited, but subsequently, between 1950 and 1960, the matches were limited to 20 minutes (Kanō, 1932, p. 37). Introducing judo, as an Olympic sports discipline, to the 1964 Olympic Games has led to major changes in the regulations, structure of the fight and preparation of judo athletes.

## 2. Problem Statement

The significant increase in the spectacular character of the combat can occur only through the regular modification of the rules (Kanō, 1936, p. 197). More and more researchers consider the evolution of regulations as a fundamental factor for increasing performance capacity in this sports discipline (Hantău & Bocioacă, 1998, p. 110). The adaptation of athletes to the constant changes in the regulations requires learning and adopting different fighting styles and effort demands. Determining the mechanisms for modifying the structure of the fight, from a technical and tactical point of view, also required to determine and analyse the regulation changes. Through our paper, we want to present the main changes in the rules, their relationship with the combat modelling and the adaptations that occur in the actions performed by judo athletes.

## 3. Research Questions

The research has raised some questions that highlight the situations generated by changing both the rules and structure of the fight:

- What is the relationship between the changes in the statutory length of the fight and the actual fight?

During the evolution of judo, an increasingly higher number of specialists, coaches, methodologists, physicians and athletes have noticed the need to adapt preparation and approach the fight so as to increase its spectacular character, attractiveness, dynamism, and win the victory in the shortest time possible.

- To what extent does the modification of the rules influence the technical and tactical way of approaching the fight?

Modification of the rules has led to introducing or eliminating certain techniques, adjusting some fighting postures and grips, increasing the anaerobic effort capacity.

- The increased dynamics of the fight has required the athletes' specialization in the execution of techniques based on high speed and strength.
- The fight has started being approached to the limit of the regulations by using sacrifice techniques, but also very safe foot/leg techniques (Tachi-Waza).

#### 4. Purpose of the Study

The research aims to analyse the interdependence relationship between the training and competition factors in judo, relative to the periodic modification of the rules. In this respect, we determined the main periods of regulation changes and their effects on the technical and tactical structure of the fight. As regards the changes in the competition structure, it was determined their influence on modelling the specific training sessions of judo athletes.

#### 5. Research Methods

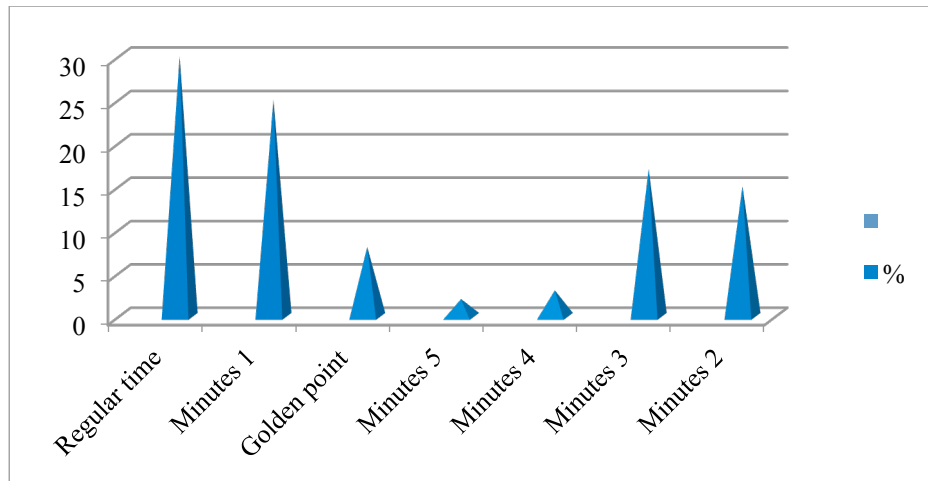
For collecting and processing the data, there were randomly analysed the electronically recorded matches played at the World Championships and Olympic Games, where the participants were athletes of both genders, in different weight classes. The data were made available by the Romanian Judo Federation. The methods used were: statistical processing, comparative data analysis, graphical representation, etc.

#### 6. Findings

The main results obtained during the research, as regards the influence of regulation changes in judo throughout different periods of time and their effects on both the structure of the fight and the athletic training, are shown in Table 01.

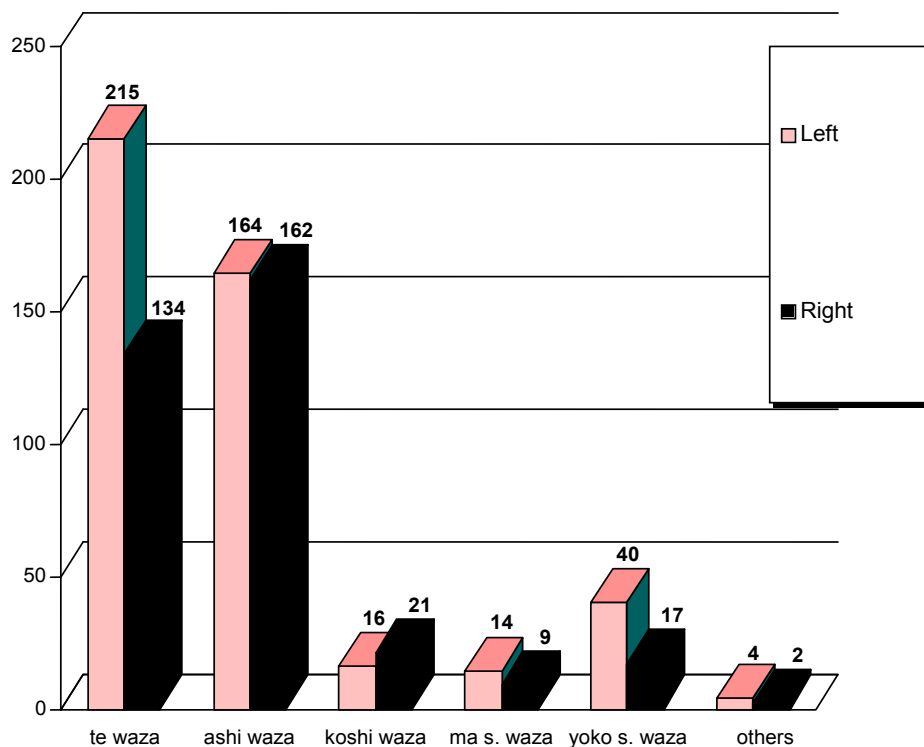
**Table 01.** The influence of regulation changes in judo

Period (year) of change in the regulations	Type of change	Effect of change	Adaptation
1884	The Red and White Tournament and its rules appear	Emergence of the attack and defence rules	Increased sporting character of the fight
1887-1889	The locks of fingers, toes, wrists, knees and ankles are banned	Elimination of the specific ju-jitsu techniques	Increased safety and attractiveness of the fight
1960-1970	Duration of the fight is limited to 20 minutes	Increased dynamics of the fight	The use of techniques based on high speed and strength
1964	Introduction of 3 weight classes (68kg, 80kg, +80kg) and duration limited to 5 minutes	Increased objectivity and rhythm of attack in the fight	The use of increasingly spectacular techniques based on strength-speed
1992	Introduction of 7 weight classes	Increased objectivity and rhythm of attack in the fight	The use of increasingly spectacular techniques based on strength-speed
2003	Inclusion of a penalty for Kawazu Gake, creation of a Golden Score overtime, simplification to only two types of penalties (Shido, Hansoku)	Increased dynamics and objectivity of the fight	Elimination of the actions blocking the fight



**Figure 01.** Percentage distribution of integral matches according to the duration of the fight

It is noticed a varied distribution of the combat duration, the most significant percentage being recorded in the matches won below the statutory time limit. The matches completed within the statutory time represent only 35% of all competitions (Franchini et al. 2007, p. 59).



**Figure 02.** Distribution of technical procedures according to the direction of execution

Figure 02 indicates that the combat actions are performed, in a significant percentage, on the left side, for both the arm and leg techniques, due to the use of a surprising, dynamic fighting style. Similar results were obtained in the structure of the fight for youth and juniors (Bocioacă, 2004, p. 26).

Figure 03 shows that, in attack, the mean distribution records the highest percentage in the third minute of the fight, considered by most specialists as the decisive minute (Pedro, 2001, p. 81). Regarding the analysis of the maximum score achieved, the second minute represents the actual time of winning the victory, following a downward curve determined by the points obtained by defensive judo athletes.

The actual time of winning the victory is more and more a benchmark in the training of high-performance athletes, for all weight classes (Hoare, 1993, p. 112).

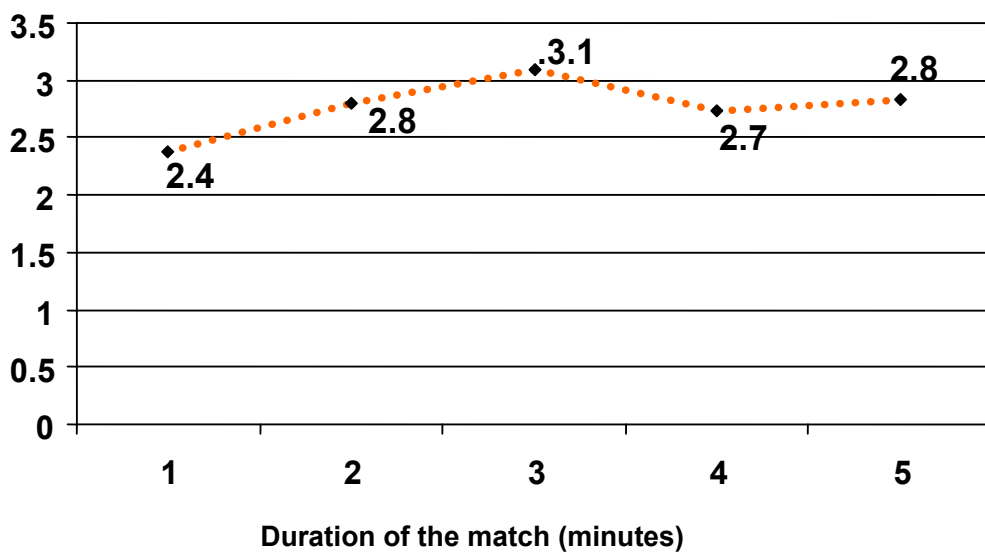


Figure 03. Distribution of average attack rate according to the duration of the match

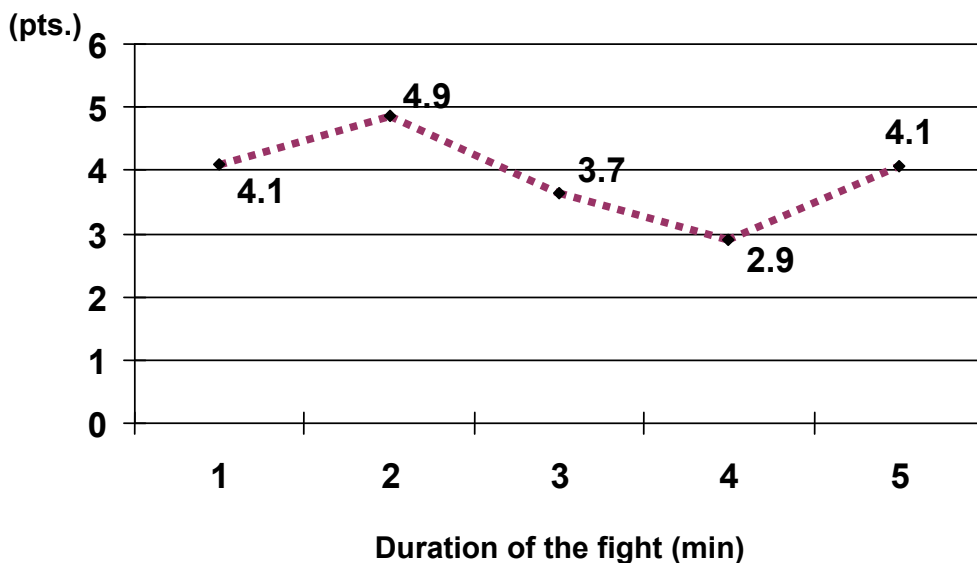


Figure 04. Evolution of the score relative to the duration of the fight

## 7. Conclusion

After analysing the research data on the importance of changing the rules and the effects of these changes on the competition structure in judo, we can draw the following conclusions:

- Introducing the weight classes has significantly increased the equality of chances in competition and has gradually eliminated dangerous techniques and the emergence of injuries.
- Establishing the statutory duration of the fight has increased its dynamism and has led to the constant modification of the technical and tactical structure, orienting the preparation of judo athletes toward anaerobic lactic efforts.
- Establishing the rules regarding the grips and the introduction of penalties has led to increased safety during the fight and the emergence of the total combat, while avoiding injuries.
- The participating female judo athletes prefer the attack on the left side, similar to the trend in men's international competitions;
- The domination of Seoi-Nage and Uchi-Mata techniques, as well as their combinations, amplify from one edition to the other;
- The Ne-Waza attack is highly effective but reduced in the overall structure of the actual fight;
- Introducing the two penalties and the Golden Score has led to reducing the actual combat time for both men's and women's competitions, judo athletes of all weight classes using high-risk techniques based on speed, coordination and strength.

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