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DEVELOPMENT OF MOTOR-COORDINATION ABILITIES OF YOUNG JUDOISTS

Daminov Ilkhom Ashiraliyevich
Professor of the department of sports management
Termez State University

Abstract: Development of coordination abilities is one of the most important areas of training athletes in various sports, especially in those disciplines that require high precision of movements, the ability to quickly adapt to changing conditions and demonstrate flexibility of thinking. In martial arts, in particular in judo, these qualities acquire special significance, since the success of technical and tactical actions directly depends on the level of coordination development. In the study, the authors developed and tested a special technique aimed at the targeted formation and improvement of coordination abilities in young judokas. The use of this technique made it possible to significantly accelerate the process of mastering complex motor actions, increase resistance to stressful competitive situations, and expand the motor experience of those involved. The results obtained indicate that systematic work on the development of coordination contributes not only to faster mastering of technical techniques, but also to the formation of stable skills that ensure high efficiency of competitive activities. The practical significance of the study lies in the possibility of using the proposed methodology in the process of sports training, which makes it a universal tool for coaches working with young athletes.
Keywords: development, coordination abilities, martial arts, judokas, motor skills, technical and tactical actions, sports training.

Introduction. Motor-coordination abilities include: the ability to orientate oneself, the ability to accurately determine and promptly change the position of the body; the ability to perform movements with high precision and efficiency; the ability to respond to certain objects and signals [2, 4, 5]. The development of coordination abilities is necessary for athletes of various sports, including martial arts. Many experts have recently noted a significantly increasing volume of workload carried out by judokas in complex variable situations of competitive fights, which places high demands on the speed of motor reactions, on the ability of the wrestler to instantly make optimal decisions and perform effective technical and tactical actions with the greatest possible speed [1, 3, 6]. According to a number of authors, the basis for training novice judokas should be considered harmonious physical development, the main task of which, along with local strengthening of the musculoskeletal system, is the development of motor-coordination abilities [7, 8, 9, 11].

In this regard, one of the most important problems requiring revision and experimental justification is the improvement of forms, means, methods and techniques aimed at developing the motor-coordination abilities of young judokas. The development of coordination abilities affects the dynamics of the formation and improvement of technical and tactical actions, wrestlers quickly master complex motor-coordination skills, acquire special motor experience, which significantly improves the quality of competitive activity [13,14].

Methodology and Results. The research methodology was based on the analysis of scientific and methodological literature, systematic observation, and the implementation of a pedagogical experiment. The experimental methodology included the following sequence of stages: defining the common goal and specific objectives of motor and coordination training for judokas; developing a general training plan; designing specific training tasks aimed at improving motor

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and coordination abilities; implementing the training plan within the framework of the pedagogical experiment; and, finally, monitoring effectiveness and making the necessary adjustments to the training program.

The experimental program demonstrated that a structured approach to the development of coordination skills significantly improves the ability of young judokas to master complex technical actions. The results of the study confirmed that systematic training not only accelerates the acquisition of motor and coordination skills but also enhances the quality of technical and tactical performance during competitive activities. Furthermore, the introduction of regular monitoring and correction within the training plan allowed for the timely identification of difficulties and ensured consistent progress.

Despite these positive results, the study also highlighted the absence of a unified classification of technical and tactical actions in judo, which complicates the process of creating comprehensive training programs. Therefore, the development of such a classification, aligned with established standards of sports training, remains an important task for further research.

Table 1. Maximum training load of judokas at the initial stage of preparation

Staged standard	Up to a year	Over a year
Number of hours per week	6	9
Number of workouts per week	3-4	3-5
Total hours per year	312	468
Total number of training sessions per year	208	260

The initial training stage lasts three years. This stage is counted from the age of 10. Standards for the maximum volume of training load at the initial training stage are presented in Table 2.

The program of technical and tactical training in judo wrestling should be aimed at developing skills and abilities in the following positions:

1. Using a convenient dynamic situation to perform the assessed technical action.
2. Carrying out qualified defense against attacking actions.
3. Creating convenient dynamic situations to perform the assessed technical action.
4. Carrying out combinations of assessed techniques.
5. Carrying out counter-techniques against attacking actions.

Table 2. Volume and aspects of sports training at the initial stage of preparation

Training sections	1 year (hour)	Over a year (hour)
General physical training	156	187
Special physical training	47	94
Technical and tactical training	78	140
Theoretical and psychological preparation	19	33
Recovery measures	-	33
Instructor and refereeing practice	-	5
Participation in competitions	3	9

Discussion. The following content and sequence of training material is proposed for the first year of the initial training stage of basic tactical training.

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The first year of the initial training stage is planned to study four techniques of ground fighting and six techniques of standing fighting.

The study of a small number of techniques is compensated by the study of defense and counter-techniques against attacking techniques. When studying techniques, special attention is paid to bringing the motor skill to the skill of the highest order. For this, we allocate almost 8 hours to each technique, which was not observed in other programs developed earlier.

Due to the standard of sports training, the distribution of technical and tactical material and the volume of hours of the latest programs relative to previous programs. When developing the program, attention was paid to the number of techniques studied each year. Each year, 10 techniques are studied and brought to automatism.

This approach will lead to the possibility of their use in competitive clashes, since by this time there is a certain set of techniques fixed in competitions.

As a rule, coaches aim to learn a large arsenal of techniques and then hone them. Today, there is no unified system for forming a technical and tactical arsenal in judo [4]. Also, the technical and tactical requirements imposed when moving from one academic year to another are not clear enough. When developing the program, the authors took into account the technical and tactical standards.

The need to substantiate and develop a new program for a technical and tactical judo wrestler based on the standard of sports training is due to the content and sequence of presentation of the program training material for the currently used physical education and sports organizations, which does not contribute to the formation of a complete and individual technical and tactical arsenal [5].

The second year of training involves learning techniques from a selected stance in conditions of their replacement by opponents.

To improve the effectiveness of the long-term training system, it is necessary to:

- optimize the content of long-term training based on the standard of sports training in judo; - improvement of the assessment system and technical and tactical standards;
- to ensure high motivation for judo classes and to maintain the contingent of students, it is necessary to pay attention to psychological preparation.

The initial training stage is the basis for the development of an athlete. At this stage, it is necessary to arm the athlete with a technical and tactical arsenal, brought to automatism.

It is very important to teach an athlete to skillfully select techniques that are brought to automatism in competitive activities [6]. Comparison of the results of physical fitness showed that the judokas of the control and experimental groups improved their results during the experiment. However, the positive changes identified during the study period were not the same. At the same time, statistically significant differences were also established ($p<0.05$). The results of testing young judokas of the experimental group showed that the tested groups statistically significantly improved their physical fitness indicators ($p<0.05$). A comparative analysis of the balance and stability indicators of the young wrestlers participating in the experiment showed that the judokas of both groups improved their results in tests characterizing motor-coordination capabilities. However, these results were not equivalent. Thus, the following changes were registered in the control tests of young judokas in the control group: "quality of the balance function" - 7.3% ($p<0.05$), "total area of the movement zone" - 4.7% ($p<0.05$).

In turn, the results in the tests characterizing the motor-coordination abilities of the judokas in the experimental group were more significant compared to the wrestlers in the control group: "quality of the balance function" - 95 16.8%, "average speed of the center of pressure" - 17.5%, "total area of the movement zone" (0.5%)

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Conclusions. The data obtained during the study indicate the feasibility of developing an experimental methodology aimed at developing the motor-coordination capabilities of young judokas.

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