

Dynamics of the level of choreographic preparedness of athletes at the stage of preliminary basic training (on the basis of sports aerobics)

Valentina Todorova

Lviv State University of Physical Culture, Lviv, Ukraine

Purpose: to reveal the change in the level of choreographic preparedness of young athletes at the stage of preliminary basic training.

Material & Methods: an expert evaluation of 61 athletes, gymnasts, sports aerobics. Following research methods were used: theoretical analysis of literary sources, method of expert evaluation, methods of mathematical statistics.

Results: a methodology for assessing the choreographic preparedness of athletes at the stage of preliminary basic training was introduced. Based on the data obtained, it was found that in the group of gymnasts there was a significant increase in the choreographic skill, which was recorded according to the group indices of the formation of the choreographic preparedness, as well as all the criteria for choreographic readiness.

Conclusion: experimentally proved the effectiveness of the introduction of the author's program of choreographic training in the training process of gymnasts at all stages of training athletes in order to improve their choreographic skills.

Keywords: choreography, choreographic preparation, technical and aesthetic sports, stages of sports training, level of choreographic readiness.

Introduction

Choreographic training in sports is a system that performs technical, special-physical, aesthetic, educational functions, and also has great significance in the composite decision of sports exercises [3, 4, 6; 7 etc.]. The multifaceted nature of sports training, where choreography is only one of the components of a common system next to technical, physical, psychological, moral-volitional, tactical, aesthetic, theoretical, functional and other forms of training, causes a lack of time for choreographic work in technical and aesthetic sports. Therefore, the development of loyal programs of choreographic training is considered appropriate and relevant at each stage of sports training.

The stage of preliminary basic training is characterized by a diversified development of the athlete's capabilities. At this stage, the tasks of strengthening the health of young athletes, the elimination of deficiencies in their level of physical development and physical fitness, the creation of motor potential, involves the development of a variety of motor skills. Choreographic preparation at this stage with a small amount of choreographic exercises is more favorable for further sports improvement than a narrowly specialized training [5].

Relationship of research with scientific programs, plans, themes. The work was carried out in accordance with the theme of research work: "Theoretical and methodological fundamentals of managing the training process and competitive activities in the Olympic, professional and adaptive sport" in accordance with the LSUPC plan for 2016–2020. (Number of state registration: 0116U003167).

The purpose of the research: to reveal the change in the level of choreographic preparedness of young athletes at the stage of preliminary basic training.

Objectives of the study:

1. Introduce the method of objective assessment of choreographic preparedness in technical and aesthetic sports at the stage of preliminary basic training.
2. To study the level of the formation of criteria for the choreographic preparedness of athletes in sports aerobics at the beginning and at the end of the experiment.

Material and Methods of the research

Research methods: theoretical analysis of literary sources, pedagogical experiment, method of expert evaluation, statistical methods of research.

The study involved 61 athletes – female gymnasts aged 11–14 years (1st category, KMS) who expressed a desire to become participants in the approbation. Based on preliminary expert evaluation, the subjects were distributed in the experimental (n=30) and control (n=31) groups.

Results of the research and their discussion

The analysis of the latest publications has shown that specialists in techno-aesthetic sports define choreographic training as a system of exercises and methods of their influence aimed at forming a "school of movements", educating the motor culture, expanding expressive means [2; 3; 7 etc.]. Many scientists understand choreographic training in the narrow sense of the word, and define it in teaching the established positions of the legs and hands, mastering the technique of performing the basic elements of choreography, using exercises for the trunk, head and limbs. Considerable attention in the research of various authors is given to the content, orientation, features of the choreographic training in technical and aesthetic

sports. Currently, there are methodological recommendations with examples of choreographic exercises for various stages of the multi-year training process [6].

In the experiment at the stage of preliminary basic training in the EG, choreographic exercises were introduced into the training session as a warm-up. The warm-up was arranged from the following choreography means: varieties of steps, various combinations of steps, jumps, turns, dance steps in waltz, polka, mazurka; jumps with changing positions, open and closed jumps; turns and cross turns. The duration of the choreographic workout is from 15 to 20 minutes. In the final part of the training session, the parterre choreography – to 15 minutes.

Separately, classes were held on choreography for 60 min 3 times a week. In the process of CP, three types of the main part of the lesson were used: on the basis of classical dance; on the basis of elements of folk and ballroom dances; mainly built on the movements of free plastics. In the final part of the exercise, the load was reduced with the help of specially selected exercises for relaxation, for stretching (moderate intensity). Gymnasts were offered exercises of parterre choreography in combination with respiratory. With fatigue for emotional adjustment to further work, dance movements and combinations with modern choreography.

The training process in the CG was held according to the standard program on sports aerobics.

For testing, a group of experts from five sports experts (choreographers and coaches for sports aerobics) were involved. The experts were offered such a set of criteria for choreographic preparedness with a detailed description of each of them: posture, turning and stretching of the legs, stability, accuracy of movements with hands and feet, completeness, ease and unity of movements, musicality, dance, illustrative and emotional expressiveness. All criteria were evaluated taking into account the requirements for the technique of performing “choreographic elements” on the part of choreography and in the aspect of the requirements of competition rules.

The logic of the evaluation was based on the fact that the criterion can be formed with a corresponding mark of two or one point. The judges were given the opportunity to provide an additional 0,5 (half-point) for grace, as a specific quality of the choreographic movement, or to reduce the score by “0,5 points” for the ungratefulness of the performance. Thus, a five-point scale was created, according to which the score of “0,5 points” was raised if the criterion was formed very poorly; “1 point” – if the criterion is not formed enough to successfully master the program of choreographic training; “1,5 point” – if the criterion is formed sufficiently to master the program of choreographic training; “2 points” – if the criterion is formed well; and “2,5 points” – if the criterion is formed flawlessly.

In order to study the effectiveness of the proposed experimental programs, we calculated the increase in the choreographic readiness indicators.

The group index of the athletes’ choreographic preparedness was calculated by formula:

$$I_{gr} = \frac{3 \sum_{n=1}^k P_O + 2 \sum_{n=1}^k P_S + 1 \sum_{n=1}^k P_I}{100 k},$$

where I_{gr} – index of choreographic readiness; k – number of criteria; P_O – number of athletes (in %), which had an optimal level according to certain criteria, P_S – number of athletes (in %), which had a sufficient level according to certain criteria, P_I – number of athletes (in %), which had a low level according to certain criteria.

At the heart of the author’s scheme for interpreting the results I_{gr} :

- low level (less than 1,2 points) – the predominance of gross errors in the performance of most choreographic elements;
- sufficient level (1,3–1,7) – the athlete assumes inaccuracy of execution of details of techniques, reduces efficiency of action as a whole;
- optimal level (more than 1,8) is the unmistakable performance by the athlete of most of the basic choreographic elements.

The generalization of the results of the analysis of individual data on the formation of the criteria for the choreographic preparedness of the female athletes of the EG at the stage of preliminary basic training at the end of the experiment makes it possible to determine, that according to individual indices of choreographic preparedness and for the majority of analyzed criteria, the majority of participants demonstrated the growth of choreographic skill from low or sufficient levels to a sufficient and even high levels (Table 1).

At the same time, according to certain criteria (Posture, Turnout, Leg stiffness, Stability, Emotional expressiveness) in a certain part of the athletes, the insufficient formation of the choreographic readiness. Consequently, the introduction of gymnasts into the training process during the preliminary basic preparation of the developed program of choreographic training in most cases can lead to a positive dynamics of improving the choreographic skill. However, a certain small proportion of athletes may remain insensitive to molding effects. Explaining this fact and proceeding from our own experience of coaching, we will make the assumption that the inhibitory effect, as a rule, produces a crisis during adolescence, which, according to specialists [1, 2 and etc.], is accompanied by specific effects in the manifestation of regulatory mechanisms sports activities.

Statistical check of certain changes in the choreographic readiness of athletes EG during the experiment using the reliability criterion with the use of the Student’s t-test showed that during the period from the beginning to the end of the experiment in EG this index increased by 0,45 points. In this case, the calculated value of Student’s t-test ($t=10,04$) significantly exceeds the critical value ($t_{cr}=3,47$), at which these changes can be considered statistically reliable at the level $p<0,001$.

In addition, significant growth, at the level of reliability $p<0,001$, was found when comparing the arithmetic mean values of previous and final results by the criteria “posture” on 0,39 point ($t=4,36$), “turnout” – on 0,38 point ($t=4,49$), “leg stiffness” – on 0,38 point ($t=3,75$), “accuracy of arm move-

Table 1
Changes in the formation of criteria for the choreographic preparedness of athletes EG (n=30) at the stage of preliminary basic training during the experiment

Indicators	Before experiment		After experiment		Student's t-test
	M	±SD	M	±SD	
Posture	1,23	0,37	1,62	0,31	4,36**
Turnout	1,25	0,34	1,63	0,32	4,49**
Leg stiffness	1,42	0,47	1,80	0,28	3,75**
Stability	1,42	0,47	1,77	0,31	3,34*
Accuracy of leg movements	1,55	0,50	1,88	0,25	3,22*
Accuracy of arm movements	1,27	0,45	1,83	0,24	5,85**
Completeness	1,37	0,47	1,83	0,24	4,68**
Legerity	1,27	0,31	1,73	0,25	6,29**
Continuity of movements	1,22	0,28	1,73	0,25	7,41**
Musicality	1,43	0,41	1,78	0,25	3,93**
Dance	1,17	0,24	1,73	0,25	8,88**
Illustrative expressiveness	1,03	0,13	1,67	0,24	11,39**
Emotional expressiveness	1,05	0,15	1,53	0,26	8,30**
Index of choreographic readiness	1,28	0,20	1,73	0,11	10,04**

Remark. M – arithmetic mean; ±SD – mean square deviation; * – changes are statistically significant at the level of $p < 0,01$; ** – changes are statistically significant at the level of $p < 0,001$.

Table 2

Changes in the formation of criteria for the choreographic preparedness of athletes CG (n=30) at the stage of preliminary basic training during the experiment

Indicators	Before experiment		After experiment		Student's t-test
	M	±SD	M	±SD	
Posture	1,23	0,31	1,34	0,35	1,24
Turnout	1,26	0,41	1,39	0,40	1,16
Leg stiffness	1,34	0,51	1,50	0,48	1,18
Stability	1,47	0,45	1,48	0,38	0,01
Accuracy of leg movements	1,44	0,46	1,56	0,36	1,08
Accuracy of arm movements	1,29	0,46	1,55	0,39	2,24*
Completeness	1,39	0,50	1,56	0,40	1,41
Legerity	1,31	0,38	1,47	0,36	1,58
Continuity of movements	1,27	0,36	1,40	0,37	1,27
Musicality	1,53	0,43	1,55	0,37	0,02
Dance	1,21	0,25	1,27	0,28	0,84
Illustrative expressiveness	1,06	0,17	1,24	0,25	2,15*
Emotional expressiveness	1,05	0,15	1,26	0,31	2,27*
Index of choreographic readiness	1,30	0,20	1,43	0,18	1,56

Remark. M – arithmetic mean; ±SD – mean square deviation; * – changes are statistically significant at the level of $p < 0,05$.

ments” – on 0,56 point ($t=5,85$), “completeness” – on 0,46 point ($t=4,68$), “legerity” – on 0,46 point ($t=6,29$), “continuity of movements” – on 0,51 point ($t=7,41$), “Musicality” – on 0,35 point ($t=3,93$), “dance” – on 0,56 point ($t=8,88$), “illustrative expressiveness” – on 0,64 point ($t=11,39$) and “emotional expressiveness” – on 0,48 point ($t=8,30$), and also at the level $p < 0,01$ by the criteria “stability” – on 0,35 point ($t=3,34$) and “accuracy of leg movements” – on 0,33 point ($t=3,22$). The above data allow us to conclude that in the group of gymnasts who were involved in the implementation of the developed program, there was a significant increase in the choreographic skill, which was recorded by the group indices of the formation of the choreographic readiness, as well as by all the criteria for determining this index.

The distribution of subjects according to the levels of the formation of the choreographic readiness indicates that a certain part of the CG female athletes at the final stage of the experiment remained at a low or sufficient level of choreographic skill (Table 2).

According to the statistical check of the changes in the formation of the choreographic preparedness of the CG athletes during the experiment by comparing the arithmetic mean values based on the results of the expert evaluation, it showed, that for the period from the beginning to the end of the experiment the value of the group index of formation (I_{gr}) of choreographic readiness increased by 0,13 points. In this case, the calculated value of Student's t-test ($t=1,56$) does not exceed the critical value ($t_{cr}=2,01$), at which these changes can be considered statistically reliable.

Conclusions

A methodology for assessing the athletes' choreographic preparedness at the preliminary basic training stage has been introduced. The objectivity of the technique consisted in calculating the index of choreographic readiness. Experimentally tested the effectiveness of the introduction of the author's program of choreographic training in the training process of athletes (on the basis of sports aerobics). Based on the ob-

tained data, it was found that in the group of gymnasts there was a significant increase in the choreographic skill, which was recorded according to the group indices of the formation of the choreographic readiness, and also by all the criteria for determining this index. That is, experimentally proved the effectiveness of the author's program of choreographic training

in the training process of gymnasts at the stage of preliminary basic training to improve their choreographic skills.

Prospect of further research is to determine the dynamics of the level of choreographic preparedness at the next stages of sports training in technical and aesthetic sports.

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Information about the Authors

Valentina Todorova: Lviv State University of Physical Culture, 11, Kostushko str., 79000, Lviv, Ukraine.

ORCID.ORG/0000-0002-2679-5062

E-mail: Valentina_sport@ukr.net