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Педагогические подходы к обучению эстетической групповой гимнастике в системе дополнительного образования

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Аннотация. Цель исследования – обоснование педагогических подходов к обучению эстетической групповой гимнастике в системе дополнительного образования с учетом технического, функционального и педагогического компонентов образовательного процесса. В статье рассматриваются особенности эстетической групповой гимнастики как средства физического воспитания, сочетающего точность движений, согласованное групповое взаимодействие, выразительность, гибкость, равновесие и формирование двигательной культуры. Научная новизна исследования заключается в педагогической интерпретации методических подходов к эстетической групповой гимнастике с их адаптацией к задачам физического воспитания и дополнительного образования. Установлено, что эффективное обучение художественной гимнастике в рамках дополнительного образования должно основываться на поэтапном формировании базовых движений, развитии специальных физических качеств, дифференцированном регулировании нагрузки и здоровьесберегающей организации занятий. Показано, что необходимо обеспечение педагогических условий, включая конструктивное взаимодействие преподавателя и обучающихся, учет особенностей восприятия собственного тела, предупреждение деструктивных форм перфекционизма и развитие саморегуляции в условиях оценочной деятельности.

EN

Pedagogical approaches to teaching aesthetic group gymnastics in additional education

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Abstract. The purpose of the study is to substantiate pedagogical approaches to teaching aesthetic group gymnastics in the system of additional education, taking into account the technical, functional, and pedagogical components of the educational process. The article examines the specific features of aesthetic group gymnastics as a means of physical education that combines movement precision, coordinated group interaction, expressiveness, flexibility, balance, and the development of movement culture. The scientific novelty of the study lies in the pedagogical interpretation of methodological approaches to aesthetic group gymnastics and their adaptation to the objectives of physical education and additional education. It has been established that successful teaching of aesthetic group gymnastics within additional education should be based on the gradual formation of basic movements, the development of special physical qualities, differentiated load regulation, and the health-preserving organization of classes. It is shown that appropriate pedagogical conditions must be ensured, including constructive interaction between the teacher and students, consideration of body image perception, prevention of destructive forms of perfectionism, and the development of self-regulation in situations of evaluative activity.

Introduction

The relevance of this study is determined by the need to clarify the pedagogical approaches to teaching aesthetic group gymnastics in the system of additional education. Aesthetic group gymnastics combines movement precision, coordinated group interaction, flexibility, balance, musicality, and expressiveness, which creates significant opportunities for the development of motor skills, movement culture, posture control, discipline, and motivation for regular physical activity among children and adolescents. In additional education, however, this discipline should not be reduced to competitive training alone, since its educational value is connected with the broader tasks of physical development, health preservation, social interaction, and the formation of a positive attitude toward physical activity.

The theoretical relevance of the study is related to the fact that existing research on aesthetic group gymnastics (Balbekova, Vishnyakova, Borisenko, 2023; Bulgacheva, Shugol, Novikova, 2024; Bystritskaya, 2023; Kondrateva, Ivashina, 2024) is mainly focused on technical preparation, competitive performance, physical fitness, and functional readiness of athletes. These areas are important, but they do not fully explain how the content and methods of training should be adapted to the objectives of additional education. As a result, the pedagogical potential of aesthetic group gymnastics remains insufficiently systematized in relation to age-appropriate instruction, gradual formation of basic movements, differentiated load regulation, and psychologically safe teacher-student interaction. The practical relevance of the study is determined by the difficulties observed in the organization of classes in additional education. In practice, teaching often reproduces the logic of sports training and focuses primarily on technical complexity and performance outcomes. Such an approach is not sufficient for solving the educational tasks of additional education, because it may lead to premature complication of exercises, excessive training load, insufficient attention to health-preserving conditions, and the use of corrective feedback that does not always support students' psychological stability. Therefore, there is a need for pedagogical approaches that integrate technical, physical, functional, and psychological-pedagogical components into a unified educational framework. The implementation of such approaches can optimize the educational and training process within additional physical education and contribute to the harmonious development of students engaged in this type of gymnastics.

Thus, the research problem lies in the contradiction between the developmental potential of aesthetic group gymnastics in additional education and the insufficient theoretical and practical elaboration of pedagogical approaches that would make it possible to use this potential in a safe, age-appropriate, and pedagogically justified way.

To achieve this purpose, the following objectives are set:

- to identify the methodological foundations of technical instruction in aesthetic group gymnastics in relation to the objectives of additional education;
- to characterize the role of physical, functional, and load-management components in the organization of classes on aesthetic group gymnastics;
- to determine the pedagogical conditions ensuring the effectiveness, safety, and psychological sustainability of teaching aesthetic group gymnastics in additional education.

To solve the stated research objectives, the following methods were used: analysis and synthesis of scientific literature on technical, physical, functional, and psychological-pedagogical aspects of teaching aesthetic group gymnastics (to identify the theoretical foundations of the study and determine the degree of elaboration of the problem in existing research); comparative interpretation of research findings (to compare approaches used in aesthetic group gymnastics and related coordination-based and aesthetically oriented sports); systematization of pedagogical approaches (to distinguish the main components of teaching aesthetic group gymnastics in additional education and correlate them with educational, developmental, and health-preserving objectives); theoretical generalization (to formulate pedagogical provisions for organizing the teaching process with regard to technical instruction, load regulation, functional support, and psychologically safe teacher-student interaction).

The practical significance of the study lies in the possibility of using its results (the formulated pedagogical approaches, the principles of gradual technical instruction, differentiated load regulation, health-preserving organization of classes, and psychologically balanced teacher-student interaction) in the design and improvement of additional education programs in aesthetic group gymnastics, including the planning of educational content, the regulation of physical load, and the organization of pedagogically sound teacher-student interaction aimed at ensuring safety, developmental productivity, and the sustainability of participation in physical activity.

Discussion and results

In the system of additional education, aesthetic group gymnastics should be considered not only as a form of sports preparation, but also as a means of physical, social, and personal development of children and adolescents (Balbekova, Vishnyakova, Borisenko, 2023; Bystritskaya, 2023; Gaspari, Bogdanis, 2024). This determines the specific pedagogical orientation of teaching: the training process must be adapted to educational goals, age-related characteristics, different levels of preparedness, and the need to maintain students' motivation for regular physical activity. In this context, the methodological organization of classes in aesthetic group gymnastics should include several specific features:

- orientation toward educational and developmental outcomes, including the formation of movement culture, discipline, cooperation, and a positive attitude toward physical activity;
- gradual complication of technical content, which prevents premature specialization and allows students to master basic body movements before moving to complex elements;
- differentiated regulation of physical load according to age, preparedness, health status, and individual adaptation to training tasks;
- combination of technical instruction with health-preserving conditions, including injury prevention, sufficient recovery, and control of fatigue;
- pedagogically balanced teacher-student interaction, in which correction is focused on movement quality, coordination, and expressiveness rather than on external appearance or excessive competitive pressure;
- preservation of students' motivation through achievable tasks, positive group interaction, and the inclusion of aesthetic, musical, and creative components in the educational process (Martin, Nguyen, Williams et al., 2025; Proietti, Borozan, Chaigneau et al., 2024; St-Cyr, Gavrilă, Tanguay-Sela et al., 2024).

Therefore, the pedagogical approaches to teaching aesthetic group gymnastics in additional education should transform sports-oriented training methods into an educationally justified system aimed at technical progress, health preservation, psychological stability, and sustainable participation in physical activity.

Building on these general pedagogical conditions, the methodological foundations of technical training in aesthetic group gymnastics are determined by the specific nature of this sport, in which competitive success depends on the integrity of group performance, the precision of body actions, the expressiveness of movement, and the ability of athletes to present a technically complex composition as a unified artistic whole. In contrast to disciplines where the result is largely based on the isolated execution of individual elements, aesthetic group gymnastics requires a stable combination of individual mastery and collective coordination. For this reason, technical training in this sport should be understood not simply as the acquisition of motor skills, but as a purposeful pedagogical process aimed at forming technically consistent, compositionally coordinated, and aesthetically convincing movement patterns within the group routine. An important methodological premise in this context is the idea that the quality of performance is inseparable from the degree of technical compatibility among athletes, since discrepancies in amplitude, timing, body line, rhythm, or dynamic accents weaken both the visual integrity of the exercise and its competitive value (Balbekova, Vishnyakova, Borisenko, 2023; Bulgacheva, Shugol, Novikova, 2024).

A significant methodological guideline for organizing technical training is the unification of individual techniques within the team. In aesthetic group gymnastics, the athlete does not perform as an isolated performer; she acts as part of a coordinated system in which every movement must be aligned with the movement logic of the whole group. Therefore, the training process should include not only the development of correct execution on the individual level, but also the gradual standardization of technical actions among all team members. This concerns body positions, wave-like actions, balances, turns, jumps, transitions, arm lines, dynamic accents, and movement completion. The pedagogical value of this approach lies in the fact that it creates a common technical basis for group synchronization and reduces the discrepancy between personal motor habits and collective compositional requirements. In practical terms, such unification is achieved through repeated work on model execution, visual comparison, correction of technical differences, and the formation of shared movement standards adopted by the group and the coach. Thus, one of the first methodological principles of technical training in aesthetic group gymnastics is the principle of technical unification, according to which the quality of group performance is built on the coordinated refinement of individual actions rather than on isolated technical excellence (Balbekova, Vishnyakova, Borisenko, 2023, p. 54).

Another essential methodological foundation is the orientation of training toward the structure of basic body movements defined by the logic of competitive performance. In aesthetic group gymnastics, complex technical content is impossible without a stable command of the fundamental movement base. Body waves, swings, tilts, lunges, balances, turns, steps, and dynamic transitions form the structural core of the routine and determine the overall movement culture of the athletes. This means that technical training should be constructed from the basic to the complex, from elementary body actions to integrated combinations, and from stable motor patterns to variable technical sequences performed under compositional and musical conditions. Such progression is methodologically justified because it ensures continuity in skill formation and reduces the risk of superficial mastery of difficult elements. A technically sound routine is produced not by the mechanical accumulation of difficult actions, but by the coherent connection between fundamental body movements and higher-order technical combinations. Consequently, the coach's task is not only to teach the external form of the element, but also to develop in athletes a stable understanding of body mechanics, posture control, amplitude management, and expressive continuity. This allows the technical base to function as a reliable foundation for both competitive stability and artistic interpretation. From a pedagogical point of view, attention to basic body movements also supports technical consistency across the stages of long-term preparation, since the quality of fundamental actions influences the later acquisition of more difficult coordinative motor actions (Bystritskaya, 2023, p. 79).

The next methodological aspect concerns the targeted development of technically complex elements, including jumps of higher difficulty categories. The performance of such elements in aesthetic group gymnastics requires a combination of strength, flexibility, coordination, spatial orientation, and movement control in limited temporal conditions. Therefore, training methodology should not treat difficult jumps as isolated competitive fragments to be mastered through repeated attempts alone. On the contrary, their acquisition must be based on phased pedagogical progression, in which preparatory exercises, lead-up tasks, partial execution, controlled repetition, and technical correction are systematically combined. This phased organization is especially important because the technical quality of a difficult jump depends on a series of interconnected components: the precision of the approach, the timing of take-off, the alignment of body segments in the flight phase, the amplitude of the form, and the controlled landing that preserves continuity with the next movement. If one of these components is methodologically neglected, the element loses both technical clarity and aesthetic appeal. From this perspective, technical training in aesthetic group gymnastics should include specialized work on the division of the gymnastic element into phases, movement analysis, and the gradual integration of difficult actions into routine structure. It is also necessary to ensure that technically difficult elements are not introduced before the athlete has acquired sufficient movement preparedness, because premature complication may lead to unstable performance stereotypes and reduce the overall quality of group execution. Thus, the methodological principle of progressive complication should be considered central to technical preparation of athletes, especially in relation to jumps and other high-value elements (Kondrateva, Ivashina, 2024, p. 298).

An additional methodological basis for technical training is the orientation toward those components of performance that have the greatest influence on competitive outcome. In modern aesthetic group gymnastics, technical preparation cannot be limited to general ideas about "good execution"; it must be linked to the evaluative logic

of the discipline and to the components of technical value that contribute most directly to the final score. This means that the training process should be structured in a way that develops those technical characteristics that are both formally significant within the rules and practically associated with high-level performance. Among such characteristics are the precision of body movements, the quality of group interaction, the complexity and cleanliness of difficult elements, and the coherence of the technical structure of the composition. From a methodological standpoint, this requires a shift from intuitive coaching to analytically grounded planning, in which technical content is selected, sequenced, and corrected according to its competitive relevance. The practical implication of this principle is that coaches should regularly correlate the technical content of training with the criteria by which routines are evaluated in competition, thereby ensuring that the effort invested in technical refinement is strategically meaningful. Such an approach strengthens the connection between training and performance and allows the technical preparation of athletes to be understood as a result-oriented pedagogical system rather than a collection of isolated exercises (Bulgacheva, Shugol, Novikova, 2024, p. 76).

At the same time, methodological planning in technical training must take into account the fact that competitive evaluation in aesthetic group gymnastics is not completely free from perceptual influences. Even when the routine contains technically valuable elements, the final impression may depend on how clearly, confidently, and uniformly these elements are presented to judges. This gives particular importance to such qualities as movement clarity, synchronization, compositional readability, precision of lines, and the expressive completion of technical actions. In methodological terms, this means that technical training should include not only the development of objective motor skill, but also the formation of a performance manner that minimizes ambiguity in the perception of motor elements. According to Suominen, athletes should be trained to execute elements in a way that makes their form and difficulty visually evident, especially in a group context where slight discrepancies can reduce the perceived quality of the entire routine. Therefore, technical work in aesthetic group gymnastics must be closely connected with presentation training, group timing, and the stabilization of performance under evaluative conditions. This does not imply adaptation to subjectivity in a negative sense; rather, it reflects the need to make technically correct performance maximally transparent and convincing in competition. As a result, one more methodological principle can be formulated: the principle of perceptual clarity, according to which technical mastery in aesthetic group gymnastics should be developed in forms that are not only biomechanically correct, but also visually legible and competitively persuasive (Suominen, 2023, p. 441).

In summary, the methodological foundations of technical training in aesthetic group gymnastics include the unification of individual technique within the group, reliance on a stable base of fundamental body movements, phased development of difficult elements, orientation toward competition-relevant components of technical value, and the achievement of perceptual clarity in performance.

The methodology of training in aesthetic group gymnastics must include a clearly structured system of physical, functional, and load-management support. Technical execution in this discipline depends on the athlete's ability to maintain movement precision, amplitude, stability, and synchronization throughout the entire routine. For this reason, physical preparedness should be treated not as an auxiliary component of training, but as its operational basis. A comparative analysis of female athletes engaged in artistic and aesthetic gymnastics shows that aesthetic gymnastics requires a specific profile of physical preparedness. The key methodological conclusion is that training content should be selected in accordance with the actual motor demands of the discipline rather than borrowed mechanically from related sports. In this context, the priority physical qualities are flexibility, coordination, balance, speed-strength readiness, and postural control (Erkomayshvili, Lebedikhina, Semenova et al., 2025, p. 7).

The functional component of training is directly connected with the preservation of execution quality under fatigue. Aesthetic group gymnastics includes continuous motor activity, tempo changes, complex transitions, jumps, balances, and coordinated group patterns. This creates substantial demands on the cardiovascular and respiratory systems. Therefore, functional training should be integrated into the general methodology of preparation and aimed at developing:

- general endurance;
- special endurance within routine-like movement sequences;
- the capacity to preserve technical accuracy in the final phase of performance.

A comparison of conditioning approaches used in aesthetic group gymnastics and other sports confirms that endurance and speed-endurance should be developed in forms that correspond to the rhythm and structure of competitive routines (Bachynska, Ivchenko, Kondratenko et al., 2024, p. 27).

The planning of physical preparation must also rely on the logic of the training cycle. Morphological changes observed in athletes during different periods of preparation indicate that training effects are not uniform across the year. This means that the content and intensity of work should vary depending on the objectives of the preparatory, competitive, and transitional periods. From a methodological perspective, periodization in aesthetic group gymnastics performs three functions: regulates the ratio between load and recovery; aligns physical preparation with current technical tasks; prevents maladaptation caused by premature intensification of training.

Accordingly, physical loads should be distributed in a way that supports stable adaptation and does not disrupt technical performance (Shipunov, Ivashina, Ilchenko et al., 2024, p. 508). An essential condition of methodological effectiveness is systematic training load monitoring. In technically complex sports, the result depends not only on the volume of work completed, but also on the adequacy of the load in relation to the athlete's age, qualification, and current functional state. Research on elite youth gymnasts demonstrates that load monitoring is necessary for controlling adaptation, identifying excessive fatigue, and maintaining performance stability (De Freitas, Debien,

Silva et al., 2024). In aesthetic group gymnastics, this requires regular assessment of: the athlete's response to training load; movement quality during repeated execution; recovery dynamics after intensive sessions; the stability of technical and coordination performance over time. Thus, load monitoring should be considered a standard methodological instrument rather than an optional element of coaching practice.

This conclusion is supported by broader theoretical reviews devoted to physical fitness in aesthetically oriented gymnastics disciplines. These studies show that competitive effectiveness is based on the combined development of flexibility, balance, coordination, explosive strength, and body control. However, the methodological value of these parameters lies not in their isolated improvement, but in their integration into sport-specific movement tasks. In aesthetic group gymnastics, physical preparation is effective only when it improves the execution of jumps, balances, waves, synchronized transitions, and the continuity of movement composition. Therefore, the training process should be based on the principle of functional specificity: physical qualities must be developed in forms directly related to competitive motor actions (Gaspari, Bogdanis, 2024).

The pedagogical organization of training in aesthetic group gymnastics must also include injury prevention. In aesthetic sports, the risk of overuse injuries is associated with repeated technical work, early specialization, high flexibility demands, and insufficient recovery. These risks increase during periods of growth and maturation, when adaptation reserves may be limited (Kolokythas, Metsios, Dinas et al., 2023, p. 115). Consequently, the organization of training should account for age-related and developmental characteristics and should exclude unjustified acceleration of technical and physical progression.

From a practical point of view, injury prevention requires the following methodological conditions:

- gradual progression of training load;
- limitation of excessive repetition of high-strain elements;
- coordination between technical complexity and current physical readiness;
- inclusion of recovery periods in the training cycle;
- continuous correction of execution errors that may increase mechanical stress (Charpy, Billard, Dandrieux et al., 2023).

Therefore, the physical, functional, and load-management component of preparation in aesthetic group gymnastics should be defined as an integrated methodological system that includes: development of sport-specific physical qualities, targeted functional conditioning, periodized planning, systematic monitoring of training load, and preventive regulation of overload risks. Such a system provides the physical basis for stable technical execution and supports sustainable athlete development in the long term.

The methodology of athlete training in aesthetic group gymnastics should include not only technical and functional components, but also clearly defined pedagogical conditions that ensure the stability, safety, and psychological sustainability of the training process. This requirement is particularly important because aesthetic sports are characterized by increased sensitivity to external evaluation, perfectionistic standards, and body-related pressure. In such conditions, competitive effectiveness cannot be reduced to physical and technical readiness alone. It also depends on the athlete's psychological well-being, the quality of coach-athlete interaction, and the pedagogical climate in which training is organized. Research in aesthetic sports shows that perfectionism may be associated with disordered eating patterns and reduced well-being, which means that the training process must be built in a way that supports motivation and achievement without producing destructive forms of self-control and emotional tension (St-Cyr, Gavrilă, Tanguay-Sela et al., 2024).

An equally significant pedagogical condition is attention to body image and mental health. In highly aesthetic sports, the athlete is evaluated not only through the correctness of movement execution, but also through the visual impression created by posture, body line, and expressiveness. Under these conditions, body perception becomes part of the sports experience and may directly influence emotional stability, self-esteem, and confidence in performance. A systematic review devoted to female athletes in highly aesthetic sports shows that body image perception is closely related to mental health indicators. This means that pedagogical support in aesthetic group gymnastics should exclude practices that intensify body dissatisfaction and should instead promote adequate self-perception, confidence, and constructive feedback focused on performance quality rather than on appearance as such (Martin, Nguyen, Williams et al., 2025).

This conclusion is reinforced by studies analyzing the relationship between body image and eating-disorder risk in aesthetic sports. These data confirm that the training environment may either reduce or intensify psychological vulnerability depending on the norms accepted within it. For this reason, methodological approaches to training should include not only physical and technical planning, but also preventive pedagogical regulation of communication, expectations, and evaluative practices. In applied terms, this means that the coach should control not only the athlete's training load, but also the way training goals are formulated, the language used in correction, and the balance between performance demands and psychological safety. Therefore, one of the necessary conditions of effective preparation is the rejection of pedagogical models in which body control is interpreted in a narrowly external or punitive manner (Berengüi, Angosto, Hernández-Ruiz et al., 2024, p. 241).

A central role in this system belongs to the coach. The pedagogical position of the coach determines how athletes interpret success, failure, discipline, and self-assessment. A study by Voelker, Vissek, Fairhurst, and Learner (2024) of coaching practices in aesthetic sports shows that coaches' attitudes toward female athletes' bodies may directly shape behavioral norms and the internal standards accepted by athletes themselves. Consequently, the methodological model of training in aesthetic group gymnastics should be based on pedagogical interaction that combines exactingness with professional restraint. Technical correction must be objective, task-oriented, and clearly linked to motor

performance. Comments that shift attention from movement quality to personal dissatisfaction with appearance should be excluded from training practice. In this context, pedagogical effectiveness is expressed not in the intensity of pressure, but in the coach's ability to create a disciplined and psychologically stable developmental environment.

An additional pedagogical condition is the development of self-regulation and stress resilience. Competitive performance in aesthetic group gymnastics requires concentration, emotional control, resistance to external evaluation, and the ability to preserve movement quality under stress. Evidence from gymnastics research shows that self-regulation training can improve stress resilience in young female athletes, which makes this component methodologically relevant for aesthetic group gymnastics as well (Proietti, Borozan, Chaigneau et al., 2024). Therefore, the pedagogical structure of training should include means aimed at developing attentional control, emotional stability, and readiness for competitive pressure.

Drawing on the findings of Proietti, Borozan, Chaigneau et al. on self-regulation training, the methodological organization of training in aesthetic group gymnastics should include the following pedagogical recommendations. First, training goals should be formulated through performance criteria, technical quality, and movement culture rather than through externally imposed body standards. Second, coach feedback should be specific, neutral in tone, and directly related to the correction of motor actions. Third, the training process should include elements that support psychological self-regulation, especially in the pre-competitive period. Fourth, pedagogical control should extend not only to training load, but also to the emotional climate of the group. Fifth, athlete development should be assessed through the combination of technical progress, functional readiness, and psychological stability (Proietti, Borozan, Chaigneau et al., 2024).

Therefore, the pedagogical component of training in aesthetic group gymnastics should be defined as a system of conditions that ensures effective performance development without compromising athlete well-being. Such conditions include constructive coach-athlete interaction, body-image-sensitive communication, prevention of maladaptive perfectionism, and the purposeful development of self-regulation. Within this framework, training methodology becomes not only a means of improving competitive performance, but also a basis for sustainable and pedagogically sound athlete development.

Conclusion

The study substantiated pedagogical approaches to teaching aesthetic group gymnastics in the system of additional education by correlating them with the technical, physical-functional, and psychological-pedagogical components of the educational process.

First, the methodological foundations of technical instruction were identified. Teaching should be based on the gradual formation of basic body movements, the unification of individual technique within the group, the development of coordination and movement precision, and the phased mastering of more complex elements. Second, the role of physical, functional, and load-management components was characterized. Classes should include the development of sport-specific physical qualities, functional conditioning, differentiated regulation of physical load, monitoring of students' response to training tasks, and health-preserving organization of the educational process. Third, the pedagogical conditions of result-oriented and psychologically sustainable teaching were determined. These include constructive teacher-student interaction, psychologically balanced feedback, prevention of maladaptive perfectionism, body-image-sensitive communication, and the development of self-regulation in situations of evaluative stress.

Thus, aesthetic group gymnastics in additional education should be organized as an integrated pedagogical process that combines technical instruction, physical and functional support, health preservation, and psychologically safe pedagogical interaction. Further research may focus on empirical testing of the proposed pedagogical approaches in additional education programs and on the development of criteria for assessing students' technical, physical, and personal progress. This organization of the educational process can optimize teaching and training in additional physical education and harmonize the development of students engaged in aesthetic group gymnastics.

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