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CONCEPTUAL BASES FORMATION OF STUDENTS' MOTOR SKILLS IN THE PROCESS OF EXTRA-CURRICULAR PHYSICAL CLASSES

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Abstract

Actuality. The formation of skills to perform motor actions, their transformation into skills of a higher order is a long and complicated process. The study of its regulataries is an important issue of the students` physical education. ***Research Aim*** is to develop the conceptual foundations for the formation of students` motor skills in the process of extra-curricular physical classes. ***Methods and Organization of Research****:* analysis and synthesis of literary sources, method of analysis and synthesis, comparative analysis, generalization method. ***Research Results.*** Teaching of technical device should be carried out in accordance with pedagogical tasks and stages of training. At the first stage, on the basis of creating the visual and logical mode of motion, there is an initial study of the technique of motor action, which corresponds to the stage of forming the ability to reproduce the technique of action in a general form. The second stage is characterized by an in-depth and detailed study. Accordingly, there was a refinement of motor abilities, which turned into a skill. At the third stage, consolidation and improvement of motor activity are ensured, resulting in is the formation of motor skills and skills of higher order. ***Conclusions.*** The formation of students` motor skills in the process of extra-curricular physical classes are carried out by means of: increasing of students` physical training; wide use of imitational, special and competitive physical exercises; optimization of the structure of movements when performing technical techniques; increasing the accuracy and speed of the result when performing technical techniques; an increase of the arsenal of variants of technical methods, the formation of the ability to move freely from one movement to another; stable and effective performance of the techniques during the influence of factors hindering the exercise or during the active opposition of the opponent; performance of techniques with high efficiency in case of fatigue or high mental tension; the formation of individual technique in accordance with the morphofunctional and mental characteristics of students; use of technical techniques in sporting activity in accordance with game and tactical tasks.

Key words: students, formation of motor skills, non-audition classes, physical education, technique of physical exercises.

Олександр Сабіров, Василь Пантік. Концептуальні основи формування рухових умінь і навичок студентів у процесі позааудиторних занять фізичними вправами. ***Актуальність.*** Формування вмінь виконувати рухові дії, їх трансформація в навички та в вміння вищого порядку – це тривалий і складний процес. Дослідження його закономірностей є важливою проблемою фізичного виховання студентів. ***Мета дослідження*** – розробити концептуальні основи формування рухових умінь і навичок студентів у процесі позааудиторних занять фізичними вправами. ***Матеріал і методи дослідження*** – аналіз та узагальнення літературних джерел, аналіз та синтез, порівняльний аналіз, узагальнення. ***Результати роботи.*** Навчання технічного прийому потрібно здійснювати відповідно до педагогічних завдань й етапів навчання. На першому етапі на основі створення зорового та логічного образу руху відбувається початкове вивчення техніки рухової дії, якому відповідає стадія формування вміння відтворювати техніку дії в загальній формі. Для другого етапу характерне поглиблене, деталізоване вивчення. Відповідно відбувалося уточнення рухового вміння, яке переходило в навичку. На третьому етапі забезпечується закріплення і вдосконалення рухової дії, внаслідок чого формувалися рухові навички й уміння вищого порядку. ***Висновки.*** Формування рухових умінь і навичок студентів у процесі позааудиторних занять фізичними вправами здійснюють підвищенням фізичної підготовленості студентів; широким застосуванням імітаційних, підвідних, спеціальних і змагальних фізичних вправ; оптимізацією структури рухів під час виконання технічних прийомів; підвищення точності й швидкості результату під час виконання технічних прийомів; збільшення арсеналу варіантів технічних прийомів і способів, формування вміння вільно переходити від одних рухів до інших; стабільного й ефективного виконання прийомів під часу впливу чинників, які заважають виконувати вправу або під час активної протидії суперника; виконання технічних прийомів із високою ефективністю під час утоми або великого психічного напруження; формування індивідуальної техніки відповідно до морфофункціональних та психічних особли-

востей студентів; використання технічних прийомів у спортивній діяльності відповідно до ігрових і тактичних завдань.

Ключові слова: студенти, формування рухових умінь і навичок, позааудиторні заняття, фізичне виховання, техніка фізичних вправ.

Александр Сабиров, Василий Пантик. Концептуальные основы формирования двигательных умений и навыков студентов в процессе внеаудиторных занятий физическими упражнениями. ***Актуальность.*** Формирование умений выполнять двигательные действия, их трансформация в навыки и в умение высшего порядка – это длительный и сложный процесс. Исследование его закономерностей является важной проблемой физического воспитания студентов. ***Цель исследования*** – разработать концептуальные основы формирования двигательных умений и навыков студентов в процессе внеаудиторных занятий физическими упражнениями. ***Материал и методы исследования*** – анализ и обобщение литературных источников, анализ и синтез, сравнительный анализ, обобщение. ***Результаты работы.*** Обучение технического приема необходимо осуществлять в соответствии с педагогическими задачами и этапами обучения. На первом этапе на основе создания зрительного и логического образа движения происходит первоначальное изучение техники двигательного действия, которому соответствует стадия формирования умения воспроизводить технику действия в общей форме. Для второгоэтапа характерно углубленное, детализированное изучение. Соответственно происходило уточнение двигательного умения, которое переходило в навык. На третьем этапе обеспечивается закрепление и совершенствование двигательного действия, в результате чего формируются двигательные навыки и умения высшего порядка. ***Выводы.*** Формирование двигательных умений и навыков студентов в процессе внеаудиторных занятий физическими упражнениями осуществляют путем повышения физической подготовленности студентов; широкого применения имитационных, подводных, специальных и соревновательных физических упражнений; оптимизации структуры движений при выполнении технических приемов; повышения точности и скорости результата при выполнении технических приемов; увеличения арсенала вариантов технических приемов и способов, формирования умения свободно переходить от одних движений к другим; стабильного и эффективного выполнения приемов во времени воздействия факторов, которые мешают выполнять упражнение или во время активного противодействия соперника; выполнения технических приемов с высокой эффективностью при усталости или большого психического напряжения; формирование индивидуальной техники в соответствии с морфофункциональными и психическими особенностями студентов; использование технических приемов в спортивной деятельности в соответствии с игровыми и тактическими задачами.

Ключевые слова: студенты, формирование двигательных умений и навыков, внеаудиторные занятия, физическое воспитание, техника физических упражнений.

Introduction. The results of the analysis of scientific works testify, that in modern conditions an active research to improve physical education in higher educational institutions is being conducted [2; 8; 10; 13; 15; 16]. In particular, scientists propose to form interest and motivation for exercises, enrich the means and forms of conducting classes, increase the program-normative provision, improve the motor activity of students, develop the programming and algorithm of health-improving training, to form the healthy lifestyle, make the evaluation system better [1; 3; 4; 7; 11; 12; 14].

Physical education in higher educational establishments is carried out in various forms, which allows for the implementation of educational, recreational and educational tasks of education. Extra-curricular forms of organization of sports and physical culture and health activities of students are of great importance [5; 6; 9; 17]. In the system of extra-curricular classes, the leading role is played by sports sections, whose aim is to train students, for participation in competitions.

The purpose of the research is to develop the conceptual foundations for the formation of motor skills and abilities of students in the process of extra-curricular exercices.

Material and methods of research: analysis and generalization of literary sources, analysis and synthesis, comparative analysis, generalization.

Research results. The results of the training process of students-athletes are closely related to designing and planning, which most fully ensure the completion of scheduled tasks and conditions for their optimal implementation. Rational construction of sports training system (namely of planning and design) – is a problem, that can be treated eternally actual. There were attempts solved it from different approaches – system, system-structural, complex, cybernetic, program-target and model-target. The system approach to planning of the training of students-athletes allows you to see the management system as a complex of interconnected elements, united by a general goal.

The basic conditions for the successful training of students in the rugby game are the physical fitness of students, special knowledge and motivation for physical activity, moving experience, proper material and technical support of classes, high professional skills of the teacher.

The systematic effect of physical exercises on a human body can only be successful if the method of their application is agreed with the basic rules and regularities of the physical education process. The knowledge and implementation of these laws allow students to have effective motor skills, and develop needed physical quality. Successful realization of sports tasks is possible due to the principles, which are divided into two groups:

1. Didactic (basic ideas that penetrate all levels and components of education, certify their system integrity and determine the contents, organizational forms and methods of educational work in accordance with the general tasks of education and the regularities of the learning process) – consciousness, activity, accessibility, systematic, consistency, visibility, strength and progression, differentiation and individualization.

2. Specific (basic rules reflecting the regularities of constructing of physical exercises) – focus on higher achievements, in-depth specialization, stability of the training process, gradual increase of loads and tendencies towards maximum loads, wave-like and variable loads, cyclic training process and age-related load adequacy.

Student training involves the variety of physical exercises that directly or indirectly influence the improvement of sport skill. Physical exercises are regarded as a set of motor actions aimed at solving the specific motor task. In training exercises, motor actions can be combined with the need to achieve high levels of strength display, speed or coordination abilities, as well as shifts in the activity of the cardiovascular or respiratory systems, the mobilization of certain energy supply mechanisms. Conditional physical exercises are divided into four groups: general preparatory, specific preparatory, auxiliary and competitive.

General physical exercises are movements of individual parts of the body or their combinations performed at different speeds and amplitudes and muscle tension. General training includes physical exercises, providing comprehensive functional development of the student's body and aimed at preparing it for future work, mastering movements, improvement of physical qualities, and the sanitation of organs and systems of the body. Advantages of general preparation exercises are that they are accurately dosed and can be used in various variants and combinations. This allows you to choose the nature of the effects on individual muscle groups and on certain body systems. General exercises may include elements of gymnastics, acrobatics, sports games, and athletics.

Specific preparatory exercises cover actions that have elements of competitive activity, and those that are close to them in form and structure, as well as the nature of the display of the qualities and activity of the functional systems of the body. Compulsory sign of such exercises is a significant similarity with the competitive in form and contents.

Auxiliary exercises are aimed at creating a special foundation for further improvement of sports activities. They also include tools that help to increase maximum strength, strength endurance and flexibility, as well as tools borrowed from other activities and aimed at improving the aerobic capacity of students.

Competitive exercises provide the implementation of complex of motor activities, which is the subject of sports specialization, in accordance with the current rules of the competition.

At the same time, such division is somewhat conditional, the boundaries between the allocated groups of exercises are not certain, means in form and structure, and by the peculiarities of influence on the organism, can smoothly move from one group to another. However, such classification of physical exercises can purposefully apply physical activity in the process of sports training of.

Training tools can also be distinguished according to directions of action: a) related to the improvement of various aspects of training – technical, tactical, physical; b) aimed at the development of various motor skills, increasing the functional capacity of individual organs and systems of the body.

Methods – are ways of organizing the work of the teacher and the student, which is acquired knowledge, abilities and skills needed to develop quality, and to form worldview. Methods are divided into verbal, visual and practical.

Verbal methods allow in the shortest possible time to transfer more information, to pose the students with the problems and indicate ways for their solution. Verbal methods include narration, explanation, lectures, team discussions, analysis (evaluation) and discussion.

Visual methods of learning are defined as the techniques with the help of which the process of learning is substantially dependent on the usage of visual AIDS and technical means. Visual methods include the methodologically correct presentation (display) of individual exercises and their elements, educational films, videos, computer programs for demonstration of tactical schemes, educational computer games. Visual methods are used in combination with the verbal and practical learning methods.

Practical methods of teaching are based on the practical activities of students and are divided into two main groups: 1) mainly aimed at mastering the techniques and tactics of the game and focused on the formation of motor skills that are characteristic of the chosen type of sport; 2) mainly aimed at the development of motor qualities.

Each of the methods is used according to the requirements determined by the peculiarities of sports training. It is necessary to consider the relevant tasks, general pedagogical and specific principles of sports training, the age characteristics of athletes and their qualifying standards.

The system of sports training is based on years of training as a set of relatively independent and at the same time interconnected stages, as well as cyclic loads (macro cycles, mesocycles, microcycles, separate training sessions). The duration and structure of long-term sports training depend on:

- the structure of competitive activity;
- patterns of formation of various aspects of sportsmanship and the formation of adaptive processes in the functional systems of the body;
- individual and sexual characteristics of the body of athletes, paces of their biological maturation and the growth sportsmanship;
- the age at which the athlete began to do sports, and the time when he started to do special training;
- the content, of training process – means and methods of training, dynamics of physical activity, the construction of the training process, the use of additional factors to intensify the training process.

According to the results of the research, the structure of training process for students of higher educational institutions consisted of three main stages: primary training, basic training and the stage of specialized training. By planning classes in groups of preparation for higher achievements it is necessary to change the correlation of individuals to the training load due to their specialization. In such a way, the value of considering patterns of development, preservation or loss of sports shape increases. The issues of pre-intensive training and the participation of an athlete in individual competition has a special importance. The means of training are wildly used for increasing the functional potential of the body of the athlete with considerable amount of work, as close as possible to the nature of competitive activities. Athletes who are prone to both morphological and functional aspects of speed-force and complex coordination work, such training becomes the basis for the improvement of their sportsmanship.

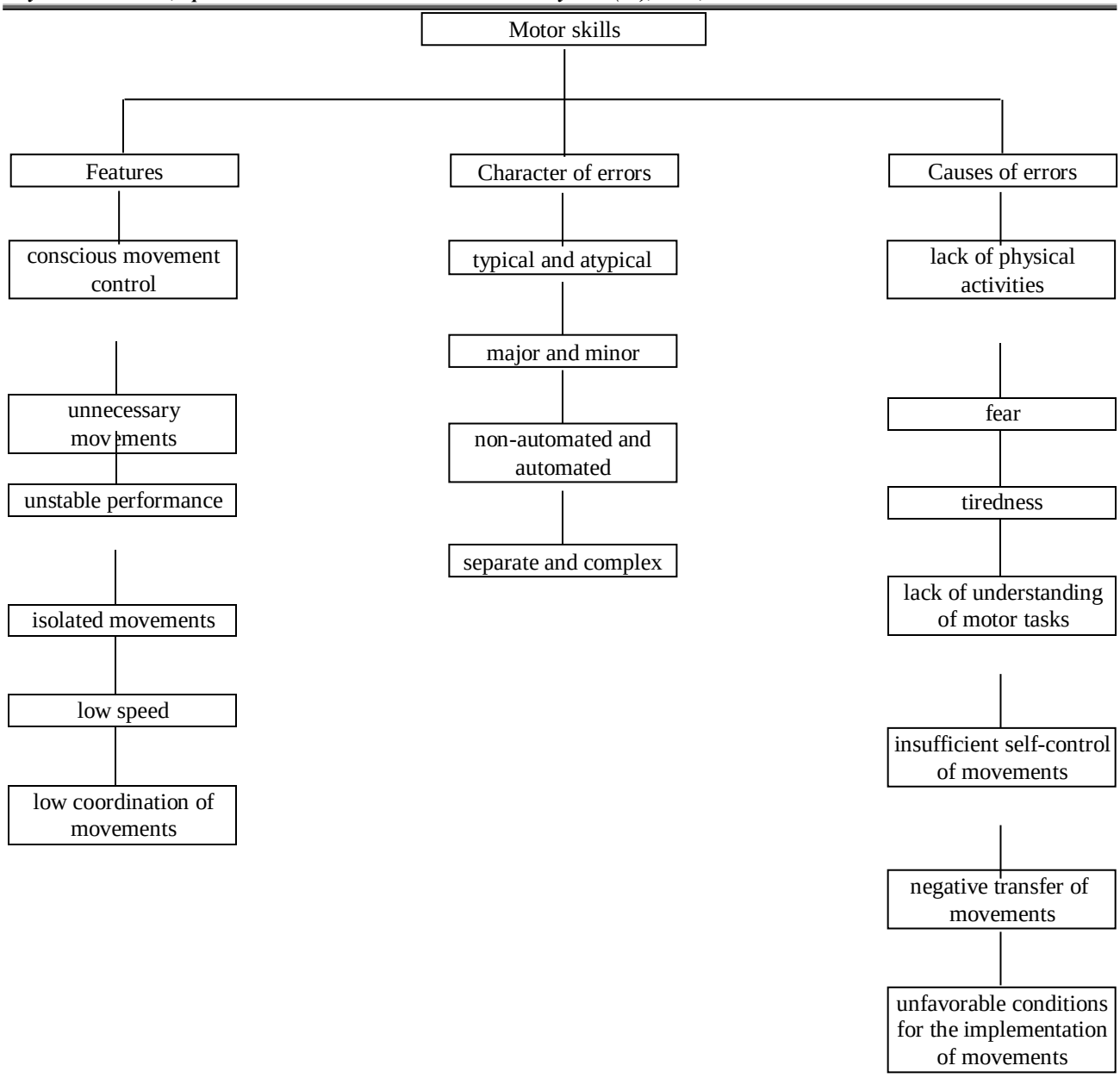
Considerable attention is paid to the improvement of the technique of execution of movements. This task is usually carried out in parallel with the development of physical qualities, and it has two aspects:

- an improvement of qualitative features of motor skills (forms and structures of motion) as a basis for increasing speed possibilities;
- economic development and stable technology of movement as the basis of improvement of special endurance.

The process of learning in the physical education of students has certain features. They are associated with active motor activity, which is carried out not only in accordance with pedagogical but also biological laws. The basis of motor activity teaching of students is the formation of motor skills and abilities.

Motor skills are characterized by a non-automated way of performing motor action. The significant features of motor skills are the conscious control of movements, the presence of unnecessary movements, unstable performance, low speed, isolation movements, lack of coordination of movements. The student must constantly control his movements by increasing the concentration of attention for determining the sequence of elements, direction and amplitude of motion. It causes relative dismemberment of movements and a slow pace of their implementation.

Practice shows that in the learning process, it is not possible to avoid errors in the technique of implementation of complex motor actions. Exercise can be accompanied by deviations of actual technology from a given sample. Error – is an implementation of a deviation from the model of technology, which significantly reduces the effectiveness of the action as a whole. Errors are typical and non-typical, major and minor, non-automated and automated, individual and complex.



Pic. 1. *Technological scheme of motor skills*

To identify the type of students' errors is of fundamental importance in the teaching and methodological providing of physical education because it defines the priorities of the goals of the activity, the priorities of the choice of means and forms of training organization. Mistakes that arise during training are caused by various factors: insufficient physical preparedness, fear, fatigue, insufficient understanding of the motor task, insufficient self-control of movements, negative transfer of movements, unfavorable conditions for the implementation of movements.

The method for correcting the error depends on the reason and consists of an additional explanation, showing the correct implementation of the action, then - attempts to master the correct way. Also important is the use of preparatory and special exercises. In order to improve the efficiency of assimilation of errors of motor actions, the correct valuation of their implementation is of great importance. The main parameters of such a valuation are the number of repetitions and intervals of rest between them.

Along with this, in the theory and method of physical education, the general rules for preventing the occurrence of errors during the training of motor actions are presented:

• to increase interest and motivation to perform physical exercises constantly;

• The number of repetitions of a new action is determined by the ability of students to improve their action at each new attempt;

• repeated occurrence of the same mistakes is a signal to make the break for rest and reflection of their actions;

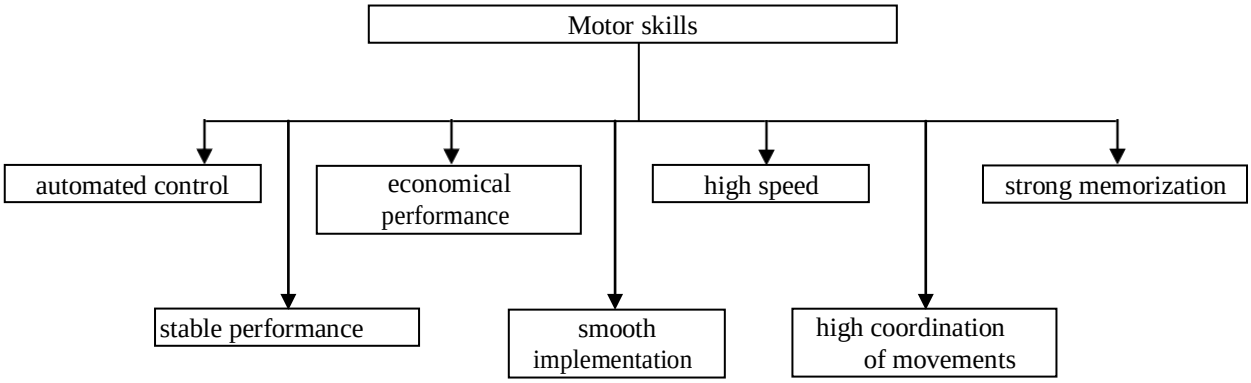
• intervals of rest should provide optimal physical and mental readiness to perform another attempt;

• to continue training motor actions in case of severe tiredness inappropriate and harmful;

• breaks between classes should be as short as possible so as not to lose skills already acquired;

• Avoid continuous observations that emphasize the drawbacks and thus suppress students' faith in their abilities.

The systematic repetition of motor activity leads to the formation of motor skills (such a degree of possession of the technique, by which the control of movements is carried out automated and the movements differ in sufficiently high stability). Motor skills are characterized by the following features: automated control, economical performance, high speed, strong memory, stable and smooth implementation, high coordination of movements (Picture 2).



Pic. 2. *Technological scheme of motor skills*

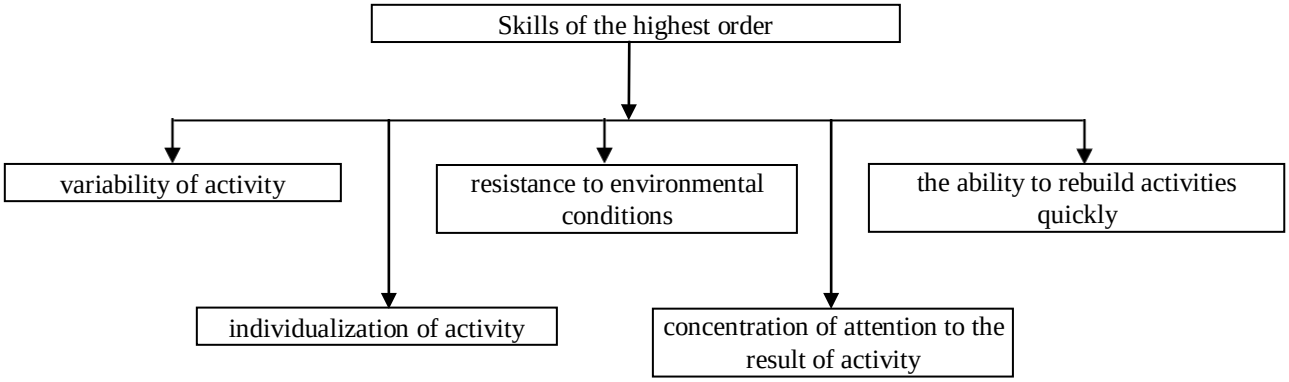
Automation of control involves the release of continuous control over the parts of the movement, which allows you to switch attention to the result of the action and the conditions for its implementation. The motor skills are characterized by a high level of perception of space, time, tempo, speed. During the formation of motor skills, the most optimal form of movement is found, which becomes standard. The standard of motor skills is determined by the constant, regardless of the conditions, the reproduction of an effective form of physical exercise.

In the learning process, it is necessary to take into account the mechanism of transferring motor skills. It arises in those cases where the structures of motor actions are simultaneous both similarity and difference. Such signs determine the nature of the transfer: positive or negative. Positive movement of motor actions is possible in the presence of similarity in most phases of exercise. Negative effect of transfer of skills is observed in those cases where similar preparatory phases and essentially differ basic. Elements of positive transfer of skills are widely used in the process of learning the motor activities of students in the development of the sequence of learning.

Motor skills play an important role in human life as a basis for readiness for diverse activities (sports, labor, and domestic). Human activity can only be successful if it is based on a variety of well-established motor skills. The greater the reserve of skills, the more diverse and effective the human activity is. In sports, it is determined by the speed of mastering the new skills and, in general, the skill of the athlete.

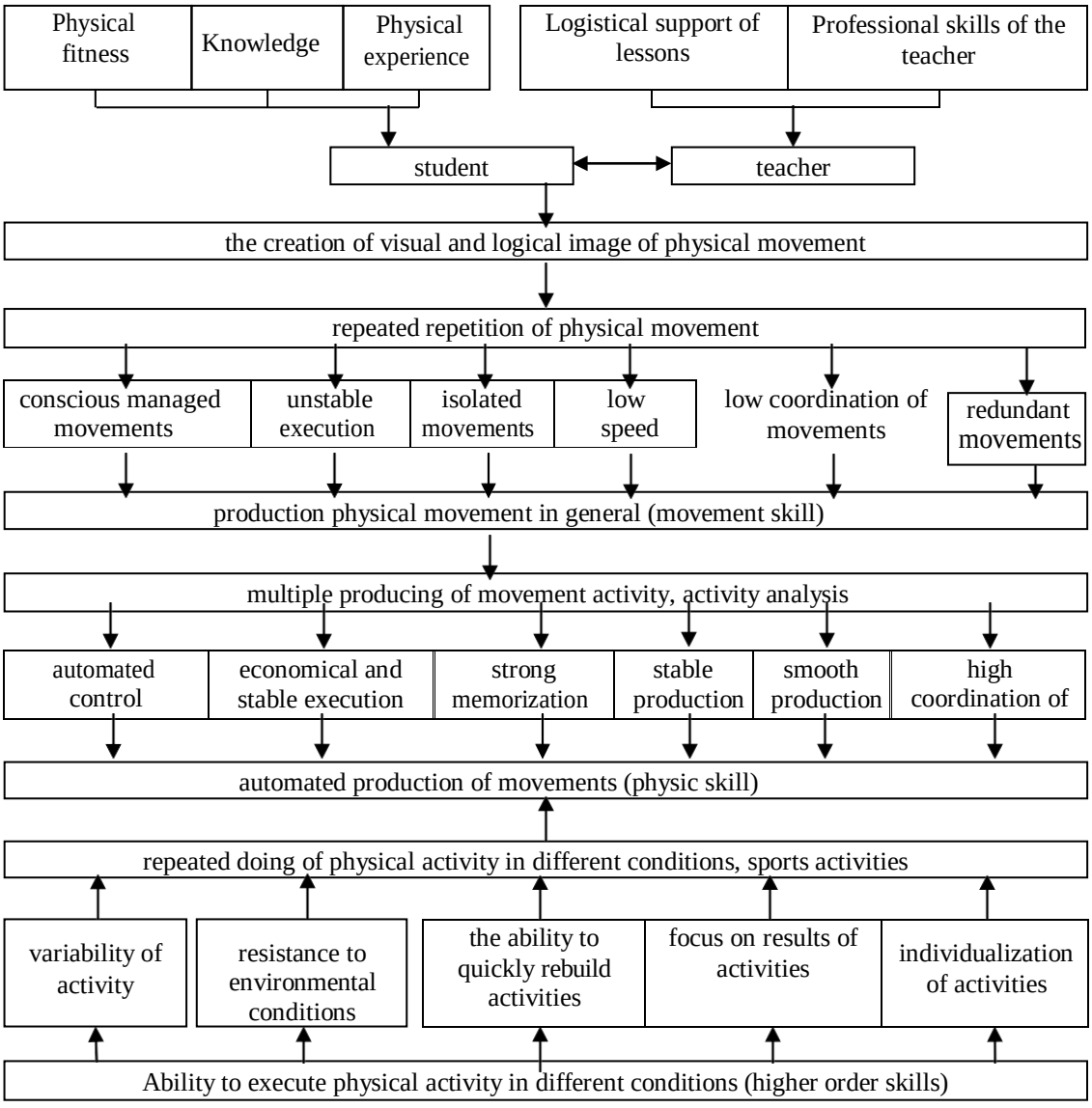
The highest level of mastering motor activity is determined by the skill of higher order. Indicative signs of higher order skills: variability of activity, resistance to environmental conditions, ability to quickly rebuild activities, individualization of activities, concentration of attention on the result of activities (Picture 3).

Physical movements are highly reliable and can be performed under various unfavorable conditions - influence of the environment, negative psycho emotional state of the athlete. A characteristic feature of this level of possession of technology is variability, that is, the ability to apply physical movements in various conditions with a slight change in shape, but without a significant reduction in effectiveness.



Pic. 3. *Technological scheme of higher order skills*

Discussion. The formation of skills to perform physical movements, their transformation into skills, combining skills into higher order skills is a long and difficult process. In the construction of the learning process, each physical movement can be divided into a series of relatively completed stages that correspond to certain stages in the formation of physical skills and abilities (Picture 4).



Pic. 4. *Structure of student's formation of physical skills and abilities*

The process of formation of physical movements, is distinguished by three stages that differ from each other both in pedagogical tasks and in the methods of instruction. At the first stage, on the basis of the creation of the visual and logical image of the movement, an initial study of the technique of physical action occurs. It corresponds to the stage of the formation of the ability to reproduce the technique of action in a common "rough" form. The second stage is characterized by an in-depth and detailed study. As a result, at this stage, there is a refinement of the physical skill, so it partially turns into abilities. On the third stage of, fixing and improvement of physical action the ability of higher order is formed as a result. The athletic result consists of the ability to perform a specific combination of movements to achieve a specific goal, as well as knowledge of when it is necessary to perform. The main tasks of technical training are mastering the technical techniques of individual and collective equipment, improving technology, taking into account the individual characteristics of athletes, improving physical fitness. Training of individual and collective sports equipment is carried out by:

- improving the physical fitness of students;
- wide usage of imitation, underwater, special and competitive physical exercises;
- optimizing the structure of movements in implementing techniques;
- increasing the accuracy and speed of the result at the moment technical methods,;
- increasing the arsenal of variants for techniques and methods, the formation of the ability to freely move from one movement to another;
- the stable and effective implementation of techniques for avoiding the factors that interfere with the exercise or in an active counteraction of an opponent;
- using of high efficiency technical devices against fatigue or high mental stress;
- the formation of individual techniques in accordance with the morphofunctional and psychic peculiarities of students;
- the use of techniques in sports activities in accordance with gaming and tactical tasks.

For solving the problems of formation of technical training students use various physical exercises:

- exercises that are performed in facilitated conditions without active resistance;
- physical actions that are structurally or physically close to a competitive exercise;
- combined exercises that are done in difficult conditions with active resistance;
- the exercises that are done in conditions close to the game and competitions.

The use of a set of physical exercises in accordance with the individual characteristics of students, the stage of athletic training and playing role creates favorable prerequisites for proper sports training.

Conclusions. Formation of skills to perform physical actions, their transformation into skills, the combination of higher order abilities and skills in the is a long and complex process. In the learning process of each physical action, it is possible to single out a series of relatively completed stages, corresponding to certain stages in the formation of physical skills and abilities. The system of sports training is based on many years of preparation as a set of relatively independent and simultaneously interrelated stages as well as cyclic loads.

Training of technical reception was done in accordance with the pedagogical tasks and stages of training. At the first stage, on the basis of the creation of the visual and logical image of the movement occurs, an initial study of the technique of physical action occurs, to which the stage of the formation of the ability to reproduce the technique of action in a general form. The second stage is characterized by an in-depth detailed study. Correspondingly there was a refinement of the physical skill, which turned into ability. At the third stage, the fixation and improvement of the physical action is ensured, resulting in the formation of physical skills and higher-order skills.

At the following extracurricular lessons of physical exercises the formation of the physical skills and abilities of students is carried out by: improving the physical fitness of students; wide usage of imitation, underwater, special and competitive physical exercises; optimizing the structure of movements by using specsal techniques; increasing the accuracy and speed of the result of using technical methods; increasing the arsenal of variants for techniques and methods, the formation of the ability to freely move from one movement to another; the stable and effective implementation of techniques in time of the impact of factors that interfere with the exercise or in an active counteraction of an opponent; using of technical devices with

high efficiency against fatigue or high mental stress; the formation of individual technology in accordance with the morphofunctional and psychic peculiarities of students; the use of techniques in sports activities in accordance with gaming and tactical tasks.

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