

# MENTAL ENLIGHTENMENT SCIENTIFIC – METHODOLOGICAL JOURNAL



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### INFLUENCE OF “POLYATHLON” ELECTIVE DISCIPLINE ON FORMATION OF STUDENTS’ PHYSICAL FITNESS OF “PHYSICAL CULTURE AND SPORT” EDUCATIONAL PROGRAM

**Yelena Pavlovna Skvortsova**

*North-Kazakhstan university named after M. Kozybayev*

[Kvortsova1@list.ru](mailto:Kvortsova1@list.ru)

*Petropavlovsk, Kazakhstan*

#### ABOUT ARTICLE

**Key words:** polyathlon, “Physical culture and sport” educational program, physical fitness, training aids, motor abilities.

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**Abstract:** The article considers the problem of the development of physical abilities of students of the “Physical culture and sport” educational program. The author proposes a solution to this problem by incorporating the “Polyathlon” discipline into the students’ curriculum. It was revealed how multi-round training affects the process of forming students’ sports readiness.

**Introduction.** The reforms taking place in the higher education system expanded the managerial independence of higher education institutions. Having received academic freedom, universities are empowered to independently determine the content of programs that improve the quality of education and the ability to independently develop educational programs, with a focus on the training of highly professional and competitively capable specialists in the field of physical culture and sport.

Having studied modular educational programs 6B01401 “Physical culture and sport” of various universities of the Republic of Kazakhstan and in particular Non-profit limited company “Manash Kozybayev North Kazakhstan university”, we have identified a key competence that says that a graduate of this program has the skills of comprehensive and harmonious development of physical qualities and physical fitness of students in the process of physical culture and sports activities [1]. In several studies [2,3,4], the effectiveness of the impact of

complex all-around events on the comprehensive physical development of students was proved, this also applies to such a sport as polyathlon [2].

Purpose and objectives of the study: To determine the impact of polyathlon training tools on the development of the physical abilities of first-year students (young men) of the “Physical culture and sport” educational program.

**Research methods and organization.** The study of the formation of first-year students’ physical abilities of the “Physical culture and sport” educational program was carried out based on the North Kazakhstan University named after M. Kozybayev, during 1 academic semester (15 weeks). The experiment involved 76 young men, additionally, the subjects were divided into groups in accordance with their sports specialization. For the study, a method of analyzing literary sources, a pedagogical experiment, testing, and a method of mathematical statistics were used.

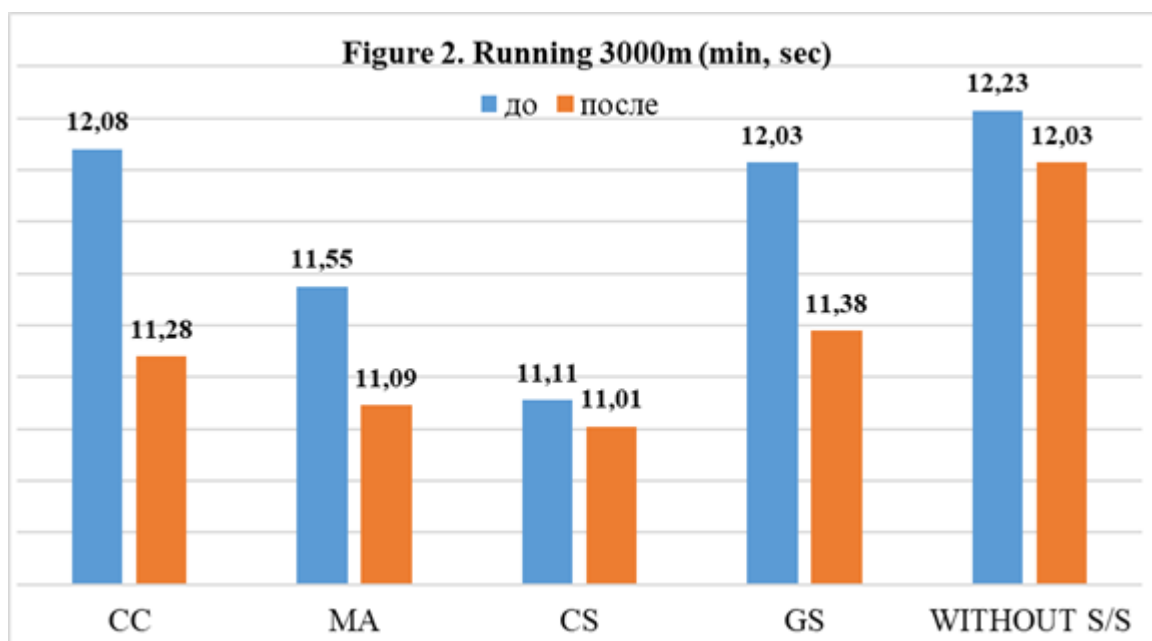
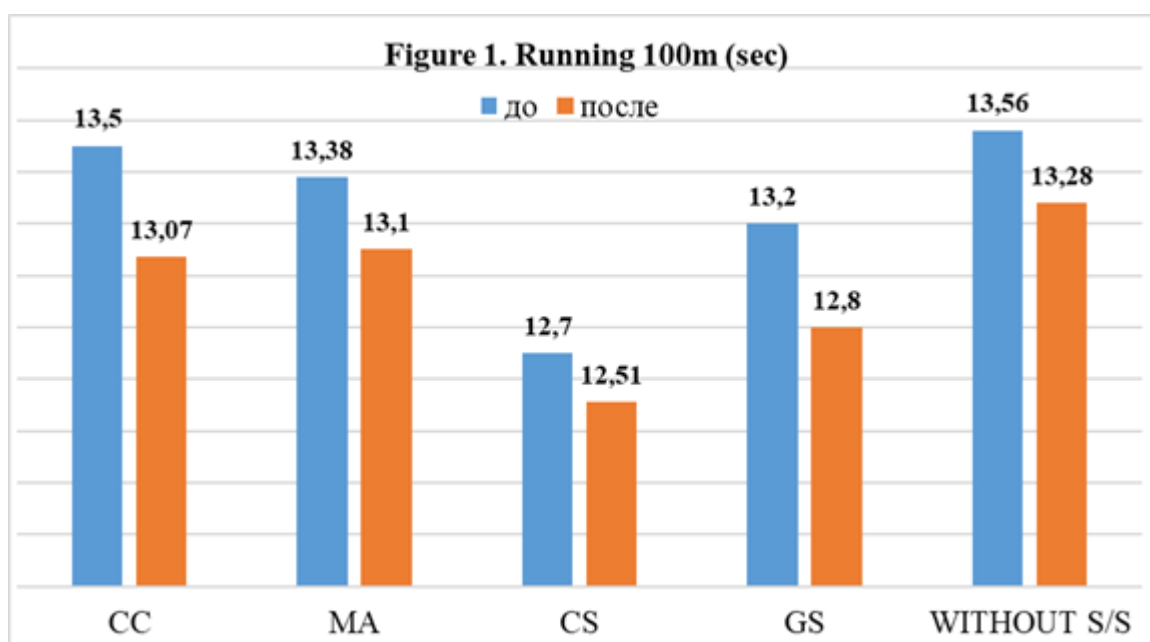
**Study results and discussion.** The curriculum of the bachelors of “Physical culture and sport” educational program is one of the fundamental educational documents. It regulates the main content and general direction of training of future specialists. Elective disciplines included in the curriculum of students reflect the specificity of the “Physical culture and sport” educational program. Their introduction to the curriculum is focused on the effective implementation of professional activities, as well as on mastering by students mastering certain knowledge, abilities, and skills that correspond to the declared competencies of the bachelor of the “Physical culture and sport” educational program.

Today, the number of academic hours allotted for the study of general education disciplines prevails over basic disciplines. In this connection, the “Polyathlon” discipline was introduced into the curriculum of 1-year students studying on 6B01401 “Physical culture and sport” educational program, the purpose of which was to form a comprehensive physical fitness (high-speed power, speed-power abilities, endurance, flexibility) and subsequently contributing to the achievement of the results of training disciplines of the sports and subject block.

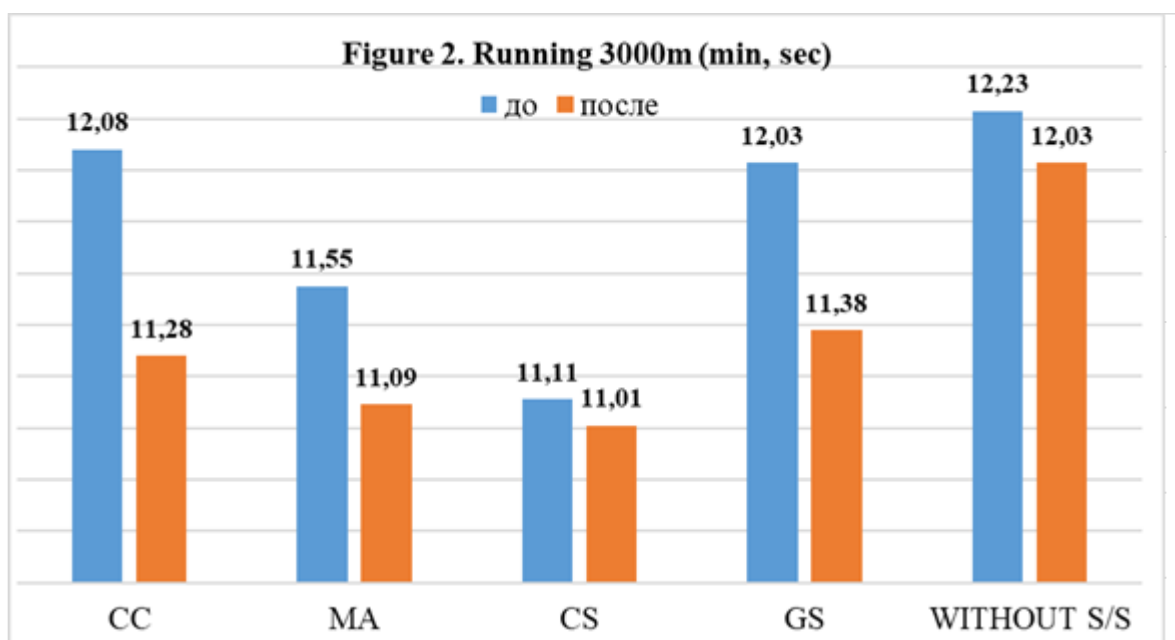
Polyathlon, as a sport, includes three diverse disciplines: cyclic types - endurance running, sprint running, skiing, swimming, throwing; strength gymnastics - pulling up on the crossbar for young men and pushing up in the rest of the lying down for girls, as well as shooting [3]. Therefore, we suggested that the development of the “Polyathlon” subject should positively affect the indicators of the physical fitness of students.

Control exercises reflecting the development of motor qualities were taken as assessment tools. The results obtained at the beginning and at the end of the study (before and after mastering the “Polyathlon” discipline) are presented in Figures 1-6.

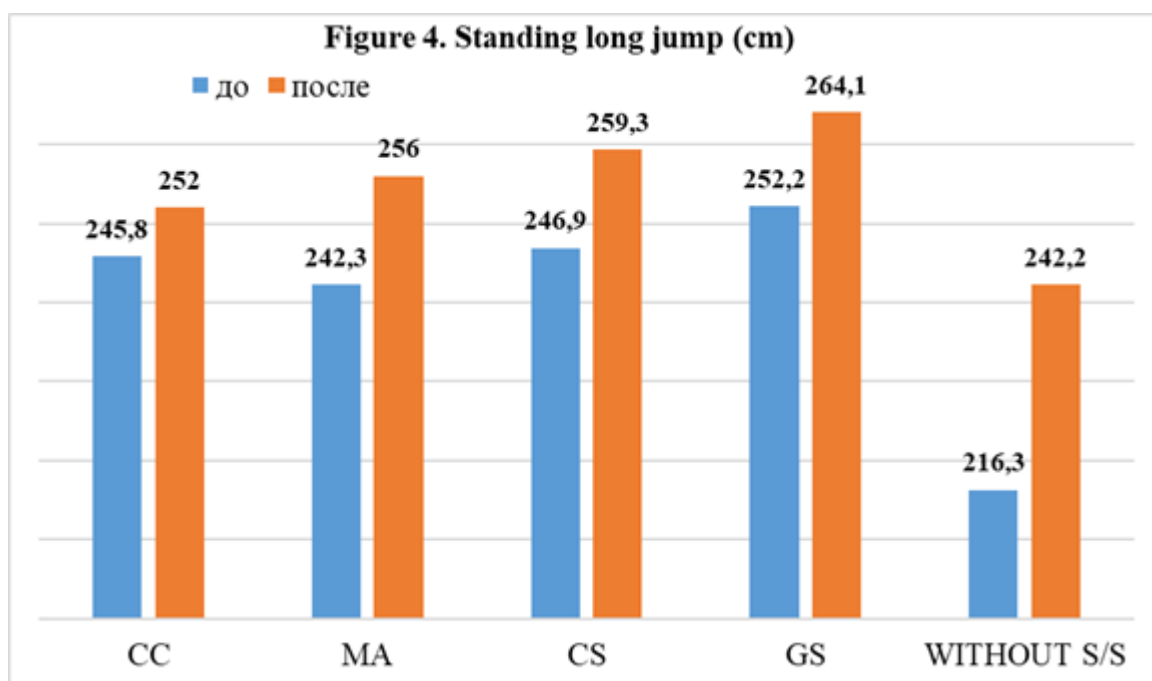
Note: Further on the figures are the following designations: students specializing in sports: CC-complex coordination, MA-martial arts, CS-cyclic sports, GS-game sports, WITHOUT S/S-without sports specialization.



So, at the beginning of the experiment, cyclic sports athletes demonstrate the highest results in running sprint and stayer distances, showing an excellent level of formation of speed abilities and endurance. Also, martial artists show a good ability to work long-term (Fig. 1,2).

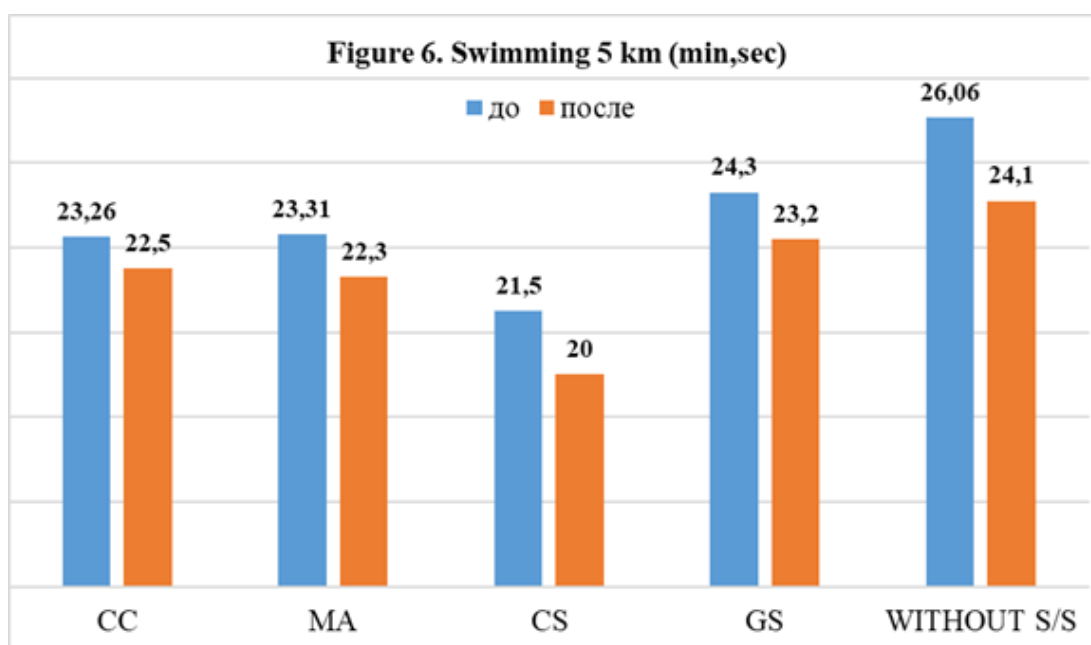
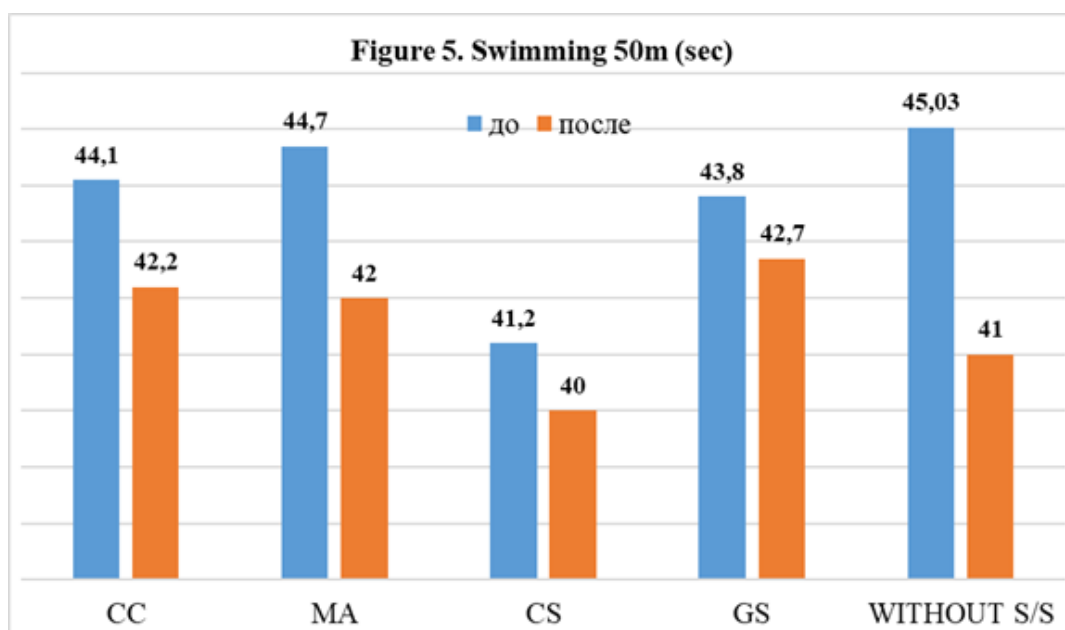


Pronounced strength before the experiment is observed in athletes of complex coordination sports (Fig. 3). In all groups, there is a positive trend in the indicators of tightening on the crossbar. The largest increase was recorded in students of game sports (GS) and without sports specialization, which indicates their high sensitivity to the applied training effects. Students with a higher baseline (CC, MA, CS) also showed an increase, but to a lesser extent, which is explained by the “plateau” effect when reaching a certain level of physical fitness.



Students of game sports in this type of test, reflecting explosive force, performed best (Fig. 4). The data obtained indicate the general positive dynamics of the development of strength in students of all study groups. The greatest increase is observed in students of game

sports (GS) (+ 4.2 pull-ups) and in students without sports specialization (WITHOUT S/S) (+ 4 pull-ups), which may indicate a high potential for their physical adaptation to the proposed training loads. For students with a higher baseline level of fitness (CC, MA, CS), the increase was less pronounced.



In the exercise swimming and skiing, the performance of which also indicates the development of human endurance, the best results are in representatives of cyclic sports; these indicators are obvious, since these tests also require technical abilities (Fig. 5.6). Students who did not decide on sports specialization showed worse results in the formation of physical

qualities. And in some control exercises before studying the “Polyathlon” subject, they did not even reach the standard corresponding to a satisfactory assessment.

In general, looking at the results of students reflected in the graphs, we see how significantly the indicators characterizing the development of certain physical qualities among representatives of various sports differ, which indicates their narrow orientation and requires comprehensive and high-quality training.

During the 15 weeks of the academic semester, students were engaged in multi-branch training as part of the development of the “Polyathlon” elective discipline. It consists of 5 credits (150 hours), of which 60 hours are allotted for practical exercises, 60 hours for independent work of students, 15 hours for students’ independent work with a teacher, and 15 hours for passing an exam.

The content of the methodical and practical training sessions of the “Polyathlon” subject includes the following exercises from different sports: sprint running (speed training), cross-country training (development of endurance), strength gymnastics (development of strength endurance), throwing, long jump (development of explosive force), swimming (development of speed capabilities), ski training (development of endurance). Simultaneously with the development of motor abilities, training in these types of polyathlon was also carried out [4].

At the end of the study of the “Polyathlon” subject, a final experiment was carried out to determine the effect of multi-body training on the formation of students’ motor abilities.

A comparative analysis of the results obtained showed a statistically significant increase level of physical fitness of students of various sports specializations in each test ( $P < 0.05$ ).

So, if, at the beginning of the experiment, students demonstrate high indicators characterizing the formation of motor abilities only in the tests necessary for their chosen sport in which they specialize, then at the end of the study of the “Polyathlon” discipline, we observe an increase in the standards of exercises that are not specific to representatives of certain sports.

The performance of students of various sports specializations has significantly improved in the standards, the results of which were “weak” before the experiment.

Separately, it is worth noting the achievements of students who do not have sports specialization. Before the start of the experiment, their indicators in most tests did not correspond to a positive assessment. At the end of the experiment, they demonstrated an increase in physical abilities and a satisfactory result of mastering the discipline.

**Conclusions.** The inclusion of the “Polyathlon” discipline in the curriculum has proven its effectiveness in shaping the physical fitness of students in the “Physical culture and sport”

educational program. The development of motor abilities by means of polyathlon significantly influenced the increase in performance in those types of exercises that are not specific for students of certain specialties and initially had a low level. Students who have not yet decided on a sports specialization and have low values in almost all tests have significantly changed the level of their physical abilities. In the future, we can also expect technical skills in those subjects of the curriculum in which the disciplines of all-around are suppressed.

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