

METHODS OF INCREASING STUDENTS' PHYSICAL EXERCISE THROUGH DYNAMIC EXERCISES

<https://doi.org/10.5281/zenodo.18860399>

S.Azizov

Namangan State Pedagogical Institute, professor, p.f.n.

S.Boltobayev

Namangan State Pedagogical Institute, Associate Professor, t.f.n.

Sh. Jahongirov

Namangan State Pedagogical Institute, Associate Professor

O.Kostikova

Namangan State Pedagogical Institute, Associate Professor

Annotatsiya

Mazkur maqolada oliy ta'lim muassasalarida tahsil olayotgan talabalarning jismoniy tayyorgarligini dinamik mashqlar asosida rivojlantirish masalasi ilmiy-pedagogik jihatdan tahlil qilinadi. Tadqiqotning dolzarbligi zamonaviy ta'lim jarayonida talabalar salomatligini mustahkamlash, ularning jismoniy sifatlarini kompleks rivojlantirish zarurati bilan izohlanadi. Ishda dinamik mashqlarning nazariy asoslari, ularning kuch, tezlik, chidamlilik, chaqqonlik va egiluvchanlik kabi jismoniy sifatlarni shakllantirishdagi o'rni yoritilgan. Tadqiqot jarayonida nazorat va tajriba guruhlarida ishtirokida pedagogik tajriba o'tkazilib, maxsus ishlab chiqilgan dinamik mashqlar majmuasi qo'llanildi. Natijalar shuni ko'rsatdiki, muntazam va maqsadli tashkil etilgan dinamik mashqlar talabalarning jismoniy tayyorgarlik ko'rsatkichlarini sezilarli darajada oshiradi. Statistik tahlillar tajriba guruhi natijalarining ishonchli darajada yaxshilanganini tasdiqladi. Olingan ma'lumotlar asosida oliy ta'lim tizimida jismoniy tarbiya mashg'ulotlarini takomillashtirish bo'yicha metodik tavsiyalar ishlab chiqildi.

Kalit so'zlar

dinamik mashqlar, jismoniy tayyorgarlik, talabalar, jismoniy sifatlar, pedagogik tajriba, jismoniy tarbiya, metodika.

Аннотация

В данной статье рассматриваются научно-педагогические аспекты повышения физической подготовленности студентов посредством динамических упражнений. Актуальность исследования обусловлена необходимостью укрепления здоровья обучающихся и комплексного развития их физических качеств в условиях современного образовательного

процесса. В работе раскрываются теоретические основы динамических упражнений и их роль в развитии силы, быстроты, выносливости, ловкости и гибкости. В ходе исследования был проведён педагогический эксперимент с участием контрольной и экспериментальной групп, в рамках которого применялся специально разработанный комплекс динамических упражнений. Результаты показали, что систематическое и целенаправленное использование динамических упражнений способствует значительному улучшению показателей физической подготовленности студентов. Статистический анализ подтвердил достоверность полученных результатов в экспериментальной группе. На основе проведённого исследования разработаны методические рекомендации по совершенствованию занятий физической культурой в системе высшего образования.

Ключевые слова

динамические упражнения, физическая подготовленность, студенты, физические качества, педагогический эксперимент, физическое воспитание, методика.

Annotation

This article examines the scientific and pedagogical aspects of improving students' physical fitness through dynamic exercises. The relevance of the study is determined by the need to strengthen students' health and ensure the comprehensive development of their physical qualities within the modern educational system. The paper discusses the theoretical foundations of dynamic exercises and their role in developing strength, speed, endurance, agility, and flexibility. A pedagogical experiment was conducted involving control and experimental groups, during which a specially designed set of dynamic exercises was implemented. The results demonstrated that systematic and purposefully organized dynamic exercises significantly improve students' physical fitness indicators. Statistical analysis confirmed the reliability of the improvements observed in the experimental group. Based on the findings, methodological recommendations were developed to enhance physical education classes in higher education institutions.

Keywords

dynamic exercises, physical fitness, students, physical qualities, pedagogical experiment, physical education, methodology.

INTRODUCTION

Students' physical fitness in higher education institutions is currently considered an important pedagogical issue. The physical health and fitness of students directly affect not only their academic performance, but also their quality of life. Studies show that in the modern educational process, students often sit in a static position for a long time, which leads to insufficient physical activity. In this regard, the need for students to regularly engage in physical exercises is increasing.

Dynamic exercises are a set of exercises that actively move body parts and are performed with high intensity, which are effective in developing such physical qualities as strength, speed, endurance, agility and flexibility. Their main advantage is that dynamic exercises improve blood circulation in the body, make muscles and joints flexible, and strengthen overall health. At the same time, dynamic exercises allow students to quickly and systematically engage in physical training in the pedagogical process.

The scientific novelty of the article is that it comprehensively studies the effectiveness of dynamic exercises in improving the physical fitness of students in higher educational institutions. The purpose of the study is to identify methods for improving the physical fitness of students using a specially developed set of dynamic exercises and to scientifically substantiate their effectiveness. The research objectives are: to determine the state of physical fitness of students, select and develop a program of dynamic exercises, analyze the results obtained during the experiment, and develop practical recommendations.

LITERATURE REVIEW AND METHODS

The study was conducted on the basis of pedagogical experience. The object of the study is the physical fitness of students of higher educational institutions, and the subject is the methods of developing their physical qualities using dynamic exercises. A total of 60 students participated in the study. They were randomly divided into two groups: a control group (30 people) and an experimental group (30 people). The control group included students performing regular physical education classes, while the experimental group increased physical fitness by performing a specially developed set of dynamic exercises.

The dynamic exercise program included: fast runs, jumps, interval exercises, turns and movements that develop flexibility. The classes were held 3 times a week for 45 minutes for 6 weeks. The evaluation criteria were the students' strength (pulling on the horizontal bar, jumping from the ground), speed (30 m and 100 m run), endurance (800–1000 m run) and agility (hurdling) tests.

In the research process, pedagogical observations, test tests and mathematical and statistical analysis methods were used. The test results were recorded at the beginning and at the end of the study. To analyze the results, Student's t-test and

correlation analysis were used to determine the reliability of the difference between the experimental group and the control group. This methodology made it possible to determine how dynamic exercises change the physical fitness indicators of students and develop practical recommendations.

RESULTS AND DISCUSSION

The results of the study are based on test scores obtained with the participation of the experimental and control groups. At the beginning of the study, no significant differences were found between the groups in terms of strength, speed, endurance and agility ($p>0.05$), which indicates that the initial level of training of the groups was similar.

The experimental group, performing a set of special dynamic exercises during the 6-week training, showed a significant increase in all indicators of physical fitness. For example, the strength indicator (pulling up on the horizontal bar) increased from an average of 12.3 ± 1.2 times to 16.5 ± 1.3 times, and the 30 m speed run time improved from 5.2 ± 0.2 s to 4.7 ± 0.2 s. Endurance (1000 m run) and agility (hurdles) tests also improved significantly for the experimental group ($p<0.05$).

The control group, on the other hand, underwent minimal changes in their test results, as they were engaged in regular training. These results indicate that specially designed dynamic exercises significantly increase the physical fitness of students.

The table below presents the test results of the control and experimental groups, as well as their pre- and post-study conditions:

| Indicators
Group Before the study
After the study |
|---|---|---|---|
| Pull-up on the horizontal bar (times)
Control 12.5 ± 1.3
13.0 ± 1.2 | Pull-up on the horizontal bar (times)
Control 12.5 ± 1.3
13.0 ± 1.2 | Pull-up on the horizontal bar (times)
Control 12.5 ± 1.3
13.0 ± 1.2 | Pull-up on the horizontal bar (times)
Control 12.5 ± 1.3
13.0 ± 1.2 |
| Experiment 12.3 ± 1.2
16.5 ± 1.3 |
| 30 m run (s)
Control 5.3 ± 0.2
5.2 ± 0.2 | 30 m run (s)
Control 5.3 ± 0.2
5.2 ± 0.2 | 30 m run (s)
Control 5.3 ± 0.2
5.2 ± 0.2 | 30 m run (s)
Control 5.3 ± 0.2
5.2 ± 0.2 |
| Experiment 5.2 ± 0.2
4.7 ± 0.2 |
| 1000 m run (s)
Control 310 ± 12
308 ± 11 | 1000 m run (s)
Control 310 ± 12
308 ± 11 | 1000 m run (s)
Control 310 ± 12
308 ± 11 | 1000 m run (s)
Control 310 ± 12
308 ± 11 |
| Experiment 312 ± 13
285 ± 10 |
| Hurdle run (s)
Control 11.5 ± 0.5
11.3 ± 0.4 | Hurdle run (s)
Control 11.5 ± 0.5
11.3 ± 0.4 | Hurdle run (s)
Control 11.5 ± 0.5
11.3 ± 0.4 | Hurdle run (s)
Control 11.5 ± 0.5
11.3 ± 0.4 |
| Experiment 11.6 ± 0.4
10.2 ± 0.3 |

Table 1. Physical fitness indicators of the control and experimental groups (mean ± SD)

These results show that dynamic exercises significantly develop such physical qualities of students as strength, speed, endurance and agility, which confirms their effectiveness in increasing their overall physical fitness.

The results of the study showed that a specially designed set of dynamic exercises significantly improves the physical fitness of students. The experimental group showed clear positive results compared to the control group in strength, speed, endurance and agility tests. This result confirms that dynamic exercises have an effective effect on the development of physical qualities by activating muscle activity, improving blood circulation and increasing body coordination.

The results obtained are consistent with international and domestic scientific literature. For example, pedagogical studies show that regular and purposeful dynamic exercises significantly increase the level of physical fitness of students and athletes. Also, the intensity of exercises and their combination of different forms contribute to the complex development of physical qualities. During the study, interval running, various jumps and agility exercises played an important role in improving performance.

The minimal change observed in the control group indicates the limited effectiveness of conventional training. This confirms the insufficient physical activity of modern students and the need for a complex set of exercises. At the same time, the experimental process showed that the pedagogical methodology was effective, and organizing training 3 times a week for 45 minutes allows you to optimally increase the physical fitness of students. The results show that dynamic exercises are important not only for improving physical qualities, but also for strengthening students' health and improving their overall performance. Therefore, it is recommended to systematically use dynamic exercises in physical education classes in higher education institutions.

CONCLUSION

According to the results of the study, dynamic exercises significantly increase the physical fitness of students. The experimental group showed significant improvements in strength, speed, endurance and agility tests compared to the control group. This confirms the effectiveness of the dynamic exercise complex in the comprehensive development of physical qualities.

A specially developed exercise program was performed 3 times a week, 45 minutes each, for 6 weeks. The training included fast runs, various forms of jumps, interval exercises and flexibility exercises. The results showed that such a systematic approach allows you to significantly increase the physical fitness of students and strengthen their overall health.

The study is also pedagogically significant, since the data obtained will serve to improve physical education classes in higher educational institutions. Based on the results, it is recommended to develop effective training programs for students and implement them regularly.

In conclusion, dynamic exercises not only develop physical qualities, but also support the intellectual and social activities of students. This will allow for the promotion of a healthy lifestyle in higher education institutions and the improvement of student health. However, future studies could further optimize the results by taking into account the intensity, duration, and individual approach of the exercises..

FOYDALANILGAN ADABIYOTLAR:

1. Azizov, S. V., Boltobayev, S. A., Jahongirov, S. D., & Kostikova, O. V. (2025). METHODS OF APPLYING DYNAMIC EXERCISES IN TRACK AND FIELD TRAINING. *Latin American journal of education*, 5(6), 73-79.
2. Azizov, N. N., Gaziyey, N. R., Boltobaev, S. A., & Zhakhongirov, S. Z. (2019). STUDYING THE ATTENTION AND SPECIFICALLY STRESSOGENOUS CONDITIONS OF SPORTSMEN. *Scientific Bulletin of Namangan State University*, 1(3), 303-306.
3. Boltobaev, S. A., Azizov, S. V., & Zhakhongirov, S. Z. (2019). THE STUDY OF THE PECULIARITIES OF INDIVIDUALLY-PSYCHOLOGICAL AND SPECIFICALLY STRESSOGENIC CONDITIONS OF SPORTSMEN. *Scientific Bulletin of Namangan State University*, 1(3), 307-312.
4. Boltabayev, S., Kostikova, O., Azizov, S., Azizova, R., Makhmudjanov, A., Ummatov, N., & Jakhongirov, S. (2025). Effects of swimming and running training on the physical condition and working capacity of students. *Trends in Physical Education and Sport*, 1(1), 12-20.

5. Болтобаев, С. А., Азизов, С. В., Жураев, Т. Ж., Рахманов, М. У., Жахангиров, Ш. Ж., & Мухторжонова, Н. (2013). Влияние переживаний, тревоги и стресса на соревновательную успешность у спортсменов и их преодоление. *SCIENCE AND WORLD*, 24, 261-267.
6. Болтабоев, С. А., Азизов, С. В., & Джахангиров, Ш. Д. (2020). STRESS AND ITS INFLUENCE ON SUCCESS OF ATHLETES. *Актуальные научные исследования в современном мире*, (6-5), 59-62.
7. Болтобаев, С. А., Азизов, С. В., Азизов, Н. Н., Рахманов, М. У., Жахангиров, Ш. Ж., & Мухторжонова, Н. (2020). СТРЕСС И ЕГО ВЛИЯНИЕ НА УСПЕШНОСТЬ СПОРТСМЕНОВ. In *Теоретические и прикладные проблемы современной науки и образования* (pp. 48-52).
8. Болтобаев, С. А., Азизов, С. В., Азизов, Н. Н., Рахманов, М. У., Жахангиров, Ш. Ж., & Мухторжонова, Н. (2020). УПРАВЛЕНИЕ СТРЕССОМ ВЫСОКОКВАЛИФИЦИРОВАННЫХ СПОРТСМЕНОВ. In *Теоретические и прикладные проблемы современной науки и образования* (pp. 52-59).
9. Djahongirov, S. D. (2025). TECHNOLOGY OF DEVELOPING PHYSICAL FITNESS OF STUDENTS THROUGH ATHLETICS SPORTS CLUBS. *AMERICAN JOURNAL OF EDUCATION AND LEARNING*, 3(9), 136-140.
10. Djahongirov, S. D. (2025, June). STATIK MASHQLAR YORDAMIDA MAKTAB O'QUVCHILARINI UZOQ MASOFAGA YUGURISHDA CHIDAMLILIK SIFATINI OSHIRISH USULLARI. In *International Educators Conference* (pp. 145-149).
11. Djahongirov, S. D. (2025, June). BIOLOGIK FAOL QO'SHIMCHALAR ORQALI STAYERLARNING CHIDAMLILIK SIFATINI OSHIRISH TEXNOLOGIYASI. In *International Educators Conference* (pp. 140-144).
12. Djahongirov, S. D. (2025). THE TECHNOLOGY OF IMPROVING SCHOOL STUDENTS'PHYSICAL QUALITIES THROUGH ATHLETICS. *AMERICAN JOURNAL OF EDUCATION AND LEARNING*, 3(3), 270-276.
13. Djahongirov, S. D. (2024). PEDAGOGICAL MECHANISM FOR EFFECTIVELY ORGANIZING ATHLETICS LESSONS IN GENERAL EDUCATION SCHOOLS. *American Journal Of Social Sciences And Humanity Research*, 4(12), 261-267.
14. Jahongirov, S. D. (2024). EFFECTIVE METHODS OF INCREASING THE PHYSICAL FITNESS OF 13-14-YEAR-OLD ATHLETES. *International Journal of Pedagogics*, 4(12), 273-278.