po 2091 gg. (I etap) // Naukovij chasopis NPU imeni M. P. Dragomanova. Seriya № 15. «Naukovo-pedagogichni problemi fizichnoyi kulturi. Kiyiv: NPU imeni M. P. Dragomanova,. Vipusk 4 (59). S.15-22. [in Ukrainian].

2. Ganchar A. I. Ocenivanie dinamiki pokazatelej vystupleniya silnejshih komand-plovcov na chempionatah Mira po vodnym vidam sporta s 1994 po 2013 gg. (II etap). Nauka i osvita: Psihologiya i pedagogika: naukovo-praktichnij zhurnal PNPU imeni K. D. Ushinskogo. 2015. Vipusk 4 (CXXXIII). S. 49-56. [in Ukrainian].

3. Ganchar A. I., Ganchar I. L. (2015). Programmnoe obespechenie rejtinga komand v plavanii na chempionatah Mira po vodnym vidam sporta s 1973 po 2013 gg.(I-II etapy). Psihologichni, pedagogichni ta mediko-biologichni aspekti fizichnogo vihovannya i sportu: Mater. VI mizh. nar. zaochnoyi nauk.-prakt. konf. 20-24-kvitnya 2015 roku/ red. O. P. Romanchuka. Odesa, Bukaev V. V. S. 17-24. [in Ukrainian].

4. Ganchar A. I., Ganchar I. L. (2015). Obobshennaya ocenka dostizhenij komand plovcov na chempionatah Mira po vodnym vidam sporta s 1973 po 2013 gg. «Olimpijskij sport i sport dlya vseh» HIH Mezh. nauch. kongr., materialy kongressa. Erevan, 4-7 oktyabrya 2015 g. Erevan: Armyanskij GUFK,. S. 294-297. [in Ukraine]

5. Ganchar A. I. (2015). Monitoring pokazatelej vystupleniya silnejshih komand-plovcov na chempionatah Mira po vodnym vidam sporta s 1994 po 2013 gg. (II etap). Nauka i osvita: Psihologiya i pedagogika: naukovo-praktichnij zhurnal PNPU imeni K. D. Ushinskogo. № 5 (CXXXIII). S. 9-16. [in Ukrainian].

6. Ganchar A. I. (2017). Parametry gendernyh otlichij urovnej formirovaniya navykov plavaniya u silnejshih komand plovcov na XVII Chempionate Mira po vodnym vidam sporta v Budapeshte-2017. Pedagogichnij almanah: zbirnik naukovih prac. Herson: KVNZ «Hersonska akademiya neperervnoyi osviti». Vipusk 35. S. 232-239. [in Ukrainian].

7. Ganchar O., Terentieva N., Ganchar I. (2018). Swimming skill assessment based on swimmers` achievements at the XVII World Aquatics Championship in Budapest-2017. Published online: June 30, (Accepted for publication May 11, 2018) DOI:10.7752/ jpes. 2018.02.106 Journal of Physical Education and Sport ® (JPES), 18(2), Art .106 pp.725 - 730, 2018.

8. Ганчар Іван, Ганчар Олексій, Шевченко Руслан, Пенязенко Вадим, Єгошин Юрій, Кузнєцов Олександр, Костишов Олександр. (2023). Дослідження відмінності рівня сформованості навичок плавання у плавців-призерів чоловіків та жінок на XX Чемпіонаті Світу з водних видів спорту (Фукуока-2023). Збірник наукових праць НПУ імені М.П. Драгоманова. Серія № 15. Випуск 12 (172). С. 52-58. doi.org/ 10.31392/UDU. [in Ukrainian].

9. Ganchar Ivan, Ganchar Oleksey, Shevchenko Ruslan, Constantin Ciorba, Medynskyi Serhii, Pylypko Olha, Bliznyuk Yuriy, Pylypko Alina, Lyashenko Andriy, Tomescu Gabriela. (2023). Monitoring the difference in the level of formation of swimming skills among swimmers-winners of men and women at the XIX World Aquatics Championships in Budapeest-2022. Science, Movement and Health, Vol. XXIII, ISSUE 2 Supplement, 2023. Constanta, September, 23 (2): 387-393.

10. Ivan Ganchar, Aleksey Ganchar, Constantin Ciorba, Serhey Medynskyi, Andrej Protsenko,Victoria Tsybulska, Oleksandr Kyriienko, Hanna Sukhanova, Vladimir Potop. (2025). Monitoring the state of differences in the level of development of swimming skills among men and women medalists at the XXI World Aquatics Championships: Doha 2024. Journal of Physical Education and Sport ® (JPES), Vol. 25 (issue 4), Art 99, pp. 912 - 921, April © JPES. Scopus. DOI:10.7752/jpes.2025.04099.

11. Korop Yu.A., Kononenko Yu.A. (1983). Women's swimming: Features and prospects. K.: Health, 112 p. [in Ukrainian].

12. Platonov V. N. (2004). Olimpijskij sport: informaciya, statistika. T. III. K.: Olimpijskaya literatura, S. 312-351. [in Ukrainian].

2. 13. Maglischo Ernest W. (2003). Swimming fastest. Human Kinetics. 791 p.

14. Hannula Dick, Thornton North. (2001). Swim Coaching Bible: Endorsed by World Swimming Coaches Association. Human Kinetics, 376 p.

15. Schubert M. (1990). Sports illustrated competitive swimming: techniques for champions. M. Schubert. New York. 238 p.

Стаття надійшла до редакції / Received 06.05.2026
Прийнята до друку / Accepted 25.06.2026
Опубліковано / Published 03.07.2026

DOI: https://doi.org/10.31392/UDU-nc.series15.2026.06(206).33

Chekhovska Anna
Senior Lecturer at the department of health and sports technologies, Faculty of Biomedical Engineering, National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute", Kyiv, Ukraine.
https://orcid.org/0000-0002-0675-5004

METHODOLOGY FOR INDEPENDENT PHYSICAL EDUCATION CLASSES FOR STUDENT YOUTH IN THE CONTEXT OF DISTANCE LEARNING: ADAPTATION OF STUDENT SPORTS DEVELOPMENT ISSUES AND SOLUTIONS TO THE WAR IN UKRAINE

In the context of distance learning in state-funded professional educational institutions, the following objective has been identified: introducing additional physical education classes for student youth. Research into independent physical education methods in the context of distance learning and the reduction of mandatory weekly instructional hours is relevant and necessary for maintaining the health of student youth. Based on the studies of the authors listed above, the aim and objectives of this study were determined for distance learning. The aim of the study was to determine the most optimal form of

physical activity for students in a distance learning setting. Research objectives: 1. To define the basic principles of independent study and their rationale. 2. To determine the most optimal form of physical activity for independent study. 3. To determine the optimal physical activity regimen during independent exercise. 4. To determine the main types of self-control. 5. To determine the physiological basis for the impact of physical exercise on improving students' physical and mental performance and mental state. The main goal of physical education and sports is to develop individual fitness, prepare for

professional activity and maintain and improve health. Scientists in the fields of human physiology and sports physiology recommend physical education classes for the 17-18 age group, at a rate of 10-14 hours per week. Assuming physical education classes are held for two hours per week, students' physical activity deficit is determined to be 8-10 hours per week. Therefore, independent training at home offers an alternative. When conducting independent training, the following principles must be considered: matching the physical load to the participant's level of physical fitness. Gradual increase in physical load. Systematic exercise. Only through regular training can the preconditions for increasing physical load and exercise difficulty be created.

Key words: *health, physical activity, intensity, self-control, physical activity, performance.*

Чеховська Анна. Методика самостійних занять фізичною культурою студентської молоді в умовах дистанційного навчання та адаптація проблем розвитку студентського спорту та шляхи їх вирішення в умовах війни в Україні. *У контексті дистанційного навчання у державних професійних навчальних закладах визначено наступну мету: впровадження додаткових уроків фізичного виховання для студентської молоді. Дослідження методів самостійного фізичного виховання в контексті дистанційного навчання та скорочення обов'язкових щотижневих навчальних годин є актуальним та необхідним для збереження здоров'я студентської молоді. На основі досліджень перелічених нижче авторів було визначено мету та завдання цього дослідження для дистанційного навчання. Метою дослідження було визначити найоптимальнішу форму фізичної активності для студентів в умовах дистанційного навчання. Завданням дослідження є: 1. визначити основні принципи самостійного навчання та їх обґрунтування; 2. визначити найоптимальнішу форму фізичної активності для самостійного навчання; 3. визначити оптимальний режим фізичної активності під час самостійних занять; 4. визначити основні види самоконтролю; 5. визначити фізіологічні основи впливу фізичних вправ на покращення фізичної та розумової працездатності та психічного стану студентів. Основною метою фізичного виховання та спорту є розвиток індивідуальної фізичної підготовки, підготовка до професійної діяльності, збереження та покращення здоров'я. Вчені в галузі фізіології людини та фізіології спорту рекомендують заняття з фізичного виховання для вікової групи 17-18 років з розрахунку 10-14 годин на тиждень. Якщо припустити, що заняття з фізичного виховання проводяться протягом двох годин на тиждень, дефіцит фізичної активності студентів визначається на рівні 8-10 годин на тиждень. Тому самостійні тренування вдома пропонують альтернативу. Під час проведення самостійних тренувань необхідно враховувати такі принципи: відповідність фізичного навантаження рівню фізичної підготовки студента. Поступове збільшення фізичного навантаження. Систематичні фізичні вправи. Тільки завдяки регулярним тренуванням можна створити передумови для збільшення фізичного навантаження та складності вправ.*

Ключові слова: *здоров'я, руховий режим, інтенсивність, самоконтроль, фізичне навантаження, працездатність.*

Formulation of the problem in general form. The principle of awareness. Increased attention increases the excitability of the cerebral cortex. Correctly visualizing movement and mentally reproducing it leads to the development of connections between the sensory areas of the premotor and motor cortex. To improve performance and relieve fatigue and exhaustion, many authors recommend including cyclic sports such as walking, running, cycling, and swimming in independent exercise programs. These sports have a positive effect on the development of aerobic endurance. These exercises should be performed for at least 15 minutes three times a week. During exercise, the heart rate (HR) should be 60-80% of the maximum (220 minus age). This is the most optimal HR for aerobic exercise. When performing independent aerobic exercise, it is necessary to consistently adhere to the following load zones: zero intensity zone (compensatory). Low-intensity physical activity with a heart rate less than 75% of its maximum (HRmax) is up to 130 beats per minute. Training zone 1 (aerobics). Maintenance physical activity with a heart rate of 75-85% of HRmax, performed in an aerobic energy supply mode, is 130-150 beats per minute.

Analysis of literary sources. Ukrainian scientists are actively conducting research in the field of physical education and its specific area, "Independent Physical Exercise." Based on their research, the authors: Abramov S.A., Nazimok V.V. [1], Novytskyi Y.V., Zhuravlev S.O., Luskan O.Yu., Mykhailenko V.M., Kuzmenko N.V. [2], Soga S.M., Mykhailenko V.M., Dobrovolskyi V.E. [3], Uskova S.M. [4]: highly evaluate the effectiveness of independent exercise among students. The authors provide recommendations on choosing the type of physical activity, planning classes, physical exercise regimes, types of self-monitoring, and recovery measures.

Review of previously unsolved parts of the overall problem. The program was tested by a Physical Education teacher at the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute." When conducting independent physical education classes, it is necessary to master basic self-observation and self-monitoring techniques. There are subjective and objective indicators of self-monitoring.

The purpose of the study. Subjective indicators include mood, well-being, appetite, sleep, desire to exercise, exercise tolerance, sweating, and disruptions to the exercise regimen. Objective indicators include resting heart rate, heart rate during exercise, respiration, blood pressure, physical performance, and exercise tolerance. It is recommended that a program

of independent aerobic exercise includes posture-building exercises: with apparatus (gymnastic stick, hula hoop, resistance band); without apparatus (exercises strengthening the muscles of the back, abdominals, glutes, legs, and arms). General developmental exercises: with apparatus (ball, dumbbells, resistance band); without apparatus. For the effectiveness and success of independent exercise, it is necessary to implement primary and secondary rehabilitation measures. [3].

Presentation of the main research material. To ensure the effectiveness and success of independent exercise, it is necessary to implement both primary and secondary recovery measures. Primary recovery measures include maintaining a healthy daily routine (alternating work and rest, sleep and wakefulness, and eating on time). Secondary measures include hydrotherapy (showers, contrast showers), self-massage, and massage, as well as ionized air. Physical activity has a positive effect on the body during stressful situations. When stressful situations arise, the body mobilizes its resources to cope with the threat. When the body mobilizes, the amount of adrenaline (an adrenal hormone) in the blood increases. Adrenaline has a vasoconstrictive effect on the blood vessels of the skin, kidneys, spleen, and digestive tract, and a vasodilatory effect on the blood vessels of the brain and muscles. The heart's work accelerates and intensifies, increasing its excitability and the conduction of impulses through the cardiac muscle. Adrenaline increases oxygen transport to tissues and muscles. Adrenaline accelerates the breakdown of glycogen in the liver, increasing the flow of glucose into the blood. Rapidly depleted reserves during intense muscle work are restored to normal. Under these conditions, stress has a positive effect the body's reserve mobilization mechanisms are trained. The negative impact of stress occurs when a person is unable to utilize their muscle reserves. Muscle work (brisk walking, running) can prevent the negative impact of stressful situations on health [2; 3].

Based on the literature reviewed, the following were determined: the basic principles of independent study and their rationale; the most optimal type of independent study; optimal modes of independent study; primary and auxiliary types of self-monitoring; the physiological rationale for the impact of physical exercises on improving students' physical and mental performance and mental state. Aerobic classes, including general developmental exercises (with and without equipment), are an effective form of independent physical education classes. Increasing the role and effectiveness of physical activity in public educational institutions is key to a healthy lifestyle for students. This is especially necessary given the rapidly changing environmental, psychological, and physical conditions on the planet. Complex curricula, a constant stream of information, and a lack of time for even minimal physical activity make students' work more intense and stressful, often leading to a decline in their overall health. Prolonged sedentary behavior weakens the body's resilience, yet the reality today is that the curriculum is reducing the time allocated for physical education.

This problem is also related to another reason: regulations. Overall, the time allocated to physical education classes is decreasing, and public educational institutions are striving to provide students with all the necessary information as comprehensively as possible [4]. Like other trends, sport requires time for everyone to become actively involved. It is important to note that the number of young people regularly participating in sports has increased significantly. A survey of physical education students and teachers revealed the following problems and solutions. The main problem in the development of student sports is the lack of sports facilities and equipment. Most Ukrainian universities were built during the Soviet era, and their buildings are regularly used for sports. Academic buildings built during the Soviet era are regularly renovated. However, most sports universities require basic equipment: balls, dumbbells, and weights of various weights [2, 5]. Moreover, few universities in our country have gyms with exercise equipment. They are primarily located in large cities, while regional universities are far from fully equipped**.**

Another problem affecting the quality of sports education is low student motivation. Due to the lack of technical equipment at universities, most students prefer to attend fitness centers or work out with a personal trainer. This lack of motivation makes young people reluctant to attend physical education classes. Another identified problem is the lack of sufficient professionals and a shortage of specialists. Physical education teachers are responsible for the development of youth sports at universities. Physical education teachers are specialists in the field of physical education. Since it is physically impossible to teach sports and fitness, this task is most effectively performed by several specialists from different fields of sport. Thus, a number of problems currently hinder the development of physical education [1]. Recently, regular physical activity has increased young people's interest in sports. For this reason, it is safe to assume that in the near future, more students will lead a healthy lifestyle and, as a result, more physical education teachers will show a keen interest in their profession. To attract more students to university sports, it's necessary to continually update the list of existing youth departments through student surveys. Disadvantages that prevent students from participating in sports include: the schedule is very inconvenient: physical education is usually the first period, and students have to go straight to school afterward. The main source of dissatisfaction is the inability to take a necessary shower, especially in hot weather. Some say the classes are boring. They would like to add some variety by adding new exercises and games [2; 3].

Encouraging a healthy lifestyle is essential for improving student health and reducing illness. This includes improving sports and fitness programs, organizing positive leisure activities, and combating harmful habits. The first priority in this effort is physical education and sports. According to the data obtained, high school graduates do not fully understand the importance of physical activity for student health. They also lack knowledge about the importance of physical activity for maintaining the necessary productivity and performance at school. Students we interviewed confirmed that physical exercise at school and at university is the same, and that physical exercise at university is the same, the only difference being the duration of classes [2; 6]. Physical education at university cannot compensate for students' lack of physical activity, restore their mental performance, or prevent diseases that develop due to chronic fatigue. Fatigue accumulates throughout the year. At least four to six hours of physical activity per week are necessary.

Physical education at a university cannot compensate for students' lack of physical activity, restore their mental performance, or prevent illnesses that develop due to chronic fatigue. Fatigue accumulates throughout the year. At least four to six hours of physical activity per week are necessary. Faced with the problem of a sedentary lifestyle, we decided to directly

contact physical education teachers and ask them for recommendations for students on maintaining and improving their health if they do not choose sports at a university. Without exception, all teachers named running. Jogging is a powerful form of exercise, one of the most accessible and highly effective means of physical education. Running strengthens joints and the cardiovascular system, has a beneficial effect on the nervous system, normalizes body weight, increases endurance, and improves physical performance. According to teachers, another effective form of running is swimming. Swimming is one of the most valuable forms of physical exercise. Water has a beneficial effect on the human body. Water has high thermal conductivity, which helps the body's heat-regulating mechanisms develop effectively. Swimming students tend to have stronger immune systems. They are less likely to suffer from colds and are less susceptible to adverse weather, drafts, and hypothermia [1;3].

The foundations of state policy in the field of student sports must be established by clarifying the levels of authority of the federal government, various federal subjects, local authorities, and the universities themselves. It is also necessary to create a system in which university rectors would find it profitable, interesting, and prestigious to develop sports and achieve results. In this system, universities would have their own traditions, and those who wish to develop sports could grow and continue their work. Therefore, the development of student sports and athletes is one of the main tasks of educational institutions in our country and a top priority for our educational institutions. After all, physical education classes are now mandatory in every educational institution. Free clubs for various sports and activities exist. All students can participate, which increases interest in sports. Furthermore, there are currently no sports competitions, but everyone is looking forward to the return of peace so that every student, and even faculty, can participate in competitions and be motivated to achieve better results [4].

Sport is an effective means of physical development and health improvement, but it also influences other aspects of everyday life, such as the development and formation of mental skills and qualities. Students represent a special social group. The key activity of a student is educational work, the preparation for which has become a labor-intensive and intense mental endeavor. Systematic training plays a significant role in personal development, the development of physical and moral qualities, and the achievement of high results in various areas of life. Physical education is one of the most effective means of enhancing students' performance in the educational process and their social involvement [1].

Physical fitness needs are the primary motivating, guiding, and regulating force behind individual behavior. They range widely: the need for movement and physical activity; communication, contacts, and spending free time with friends; games, entertainment, relaxation, and sensory release; self-affirmation, strengthening the position of the personal self; learning; aesthetic enjoyment; improving the quality of physical education and sports activities, comfort, and more. These needs are directly linked to emotions experiences, sensations of pleasant and unpleasant, pleasure or displeasure [2; 4]. Throughout the day, students experience intense and prolonged activity of their central nervous system. Physical activity is essential for students, as long periods of class deprive the brain of oxygen and increase the risk of various illnesses. It is safe to say that students who regularly engage in sports find it much easier to endure exam periods, as they react less painfully to the stress of studying.

Conclusions. Physical education at university cannot compensate for students' lack of physical activity, restore their mental performance, or prevent illnesses that develop due to chronic fatigue. Fatigue accumulates throughout the year. At least four to six hours of physical activity per week are necessary. Various sports provide excellent opportunities for developing social skills. Maintaining and improving health, fostering physical fitness and a healthy lifestyle, developing spiritual qualities and abilities, and other personal cultures, while organizing leisure, recreation, entertainment, and social interactions contributes to positive human development. Modern sport also plays an important symbolic role in social relations, demonstrating the possibilities and advantages of a peaceful model of competition. At the same time, this human potential of sporting activity in modern sport is far from fully realized. To achieve this, it is necessary to establish a foundation for state policy in the field of university sports.

Physical culture is an integral part of a healthy lifestyle. Its absence in the lives of students is a very big problem for the physical and mental health of a young organism, which is just beginning its adult journey in life. Physical activity is the key to health, good mobility of joints, muscles and the entire musculoskeletal system. Without movement there is no normal life, there is no stress resistance and harmony in all spheres of life. Through education, people develop their personalities and develop aptitude for various sports. Physical education can help in various areas of a person's life.

Reference

1.Abramov S.A., Nazimok V.V. (2024). Physical culture is the main component of the mental and physical development of modern youth and students. Scientific journal of the Mykhailo Dragomanov Ukrainian State University. Series 15, 5(178), 235–238. https://doi.org/10.31392/UDU-nc.series15.2024.5(178).47

2.Novytskyi Y.V., Zhuravlev S.O., Luskan O.Yu., Mykhailenko V.M., Kuzmenko N.V. (2023). Modern problems of forming a healthy lifestyle of youth. Scientific journal of the Mykhailo Dragomanov Ukrainian State University. Series 15, 12(172), 9-12p. https://doi.org/10.31392/UDU-nc.series15.2023.12(172).01

3.Soga S.M., Mykhailenko V.M., Dobrovolskyi V.E. (2024). Ways to optimize the motor activity of student youth. Scientific Journal of the Mykhailo Dragomanov Ukrainian State University. Series 15, 1(173), 137-139p. https://doi.org/10.31392/UDU-nc.series15.2024.1(173).30

4.Uskova S.M. (2024). Adaptive mechanisms involved in the body of students for recovery after physical exertion. Scientific Journal of the Mykhailo Dragomanov Ukrainian State University. Series 15, 5(178), 245–247p. https://doi.org/10.31392/UDU-nc.series15.2024.5(178).50

Стаття надішла до редакції / Received 07.05.2026
Прийнята до друку / Accepted 26.06.2026