THE INFLUENCE OF SPORTS EDUCATION ON STUDENTS: CONTEMPORARY CHALLENGES

AUTHORSHIP
Larysya Yakobchuk
Professor, Doctor, Odessa Military Academy, Department of Humanities and Social Sciences and Humanities, Odessa, Ukraine.
ORCID: https://orcid.org/0000-0003-4571-5171
E-mail: mariya_1901@ukr.net

Eduard Sarafaniuk
Odessa Military Academy, Department of Humanities and Social Sciences and Humanities, Odessa, Ukraine.
ORCID: http://orcid.org/0000-0001-9805-3474
E-mail: fesanenko1@yahoo.com

Oleksandr Rozmaznin
Odessa Military Academy, Department of Humanities and Social Sciences and Humanities, Odessa, Ukraine.
ORCID: https://orcid.org/0000-0003-1968-5049
E-mail: yuvbekh@yahoo.com

Volodymyr Lukhanin
Odessa Military Academy, Department of Humanities and Social Sciences and Humanities, Odessa, Ukraine.
ORCID: https://orcid.org/0000-0003-3006-1974
E-mail: tuteseva@ukr.net

Larysa Yakobchuk
Odessa Military Academy, Department of Humanities and Social Sciences and Humanities, Odessa, Ukraine.
ORCID: https://orcid.org/0000-0003-4057-7587
E-mail: imbervika@yahoo.com

Received in: 2021.08.10
Approved in: 2021.09.05
DOI: https://doi.org/10.24115/S2446-6220.2021.173A1419p.378-384

INTRODUCTION
The development of the domestic system of education is aimed at educating a personality ready for active, creative self-realization in the space of universal human culture. Physical culture in educational institutions is presented as an educational industry, as an academic discipline and reflects a socially significant order for the formation of such universal values as health, physical and mental well-being, harmonization of the physical and spiritual unity of students. The process of motor activity, which is the main means of the holistic development of the personality of students, can be so, subject to a thorough scientific understanding of the planning of specific results, content and forms of building physical education (YUE, COLE, 1992; MILLER, MACDOUGALL, TARNOPOLSKY, SALE, 1993).

It is necessary to reorient the attitude towards physical education so that the problem of health, adherence to a healthy lifestyle of the younger generation is considered as a priority direction in the development of the education system. The problem becomes even more urgent if we pay attention to the fact that in recent years, in connection with the integration of Ukraine into the European educational space, certain issues related to the organization of the educational process in higher educational institutions of Ukraine require some clarification.

First of all, the question arises about the place and volume of teaching the discipline “Physical education” in the national education system. Considering that in the universities of the USA and Western Europe there are neither physical education departments, nor physical education classes as such, instead of them, university students have the opportunity to engage in sports sections or individually. For this, the most modern sports facilities are used and substantial funding is provided, which primarily consists of student contributions. Sports sections are not standard, but are determined according to the wishes and hobbies of students.

Considering these features, some higher educational institutions of Ukraine have decided to either reduce the teaching hours for physical education in the curriculum, or to transfer the subject of the course at the students’ choice. We consider this practice to be erroneous, because, on the one hand, it is impossible, on the one hand, to pay attention to the absence of the discipline “Physical Education” in the curricula of Western European universities, and on the other hand, not to notice the absence of a modern sports base in the best domestic universities, tenfold inferior to the existing sports facilities in Western European universities and there is almost no funding for physical education and sports in domestic universities. However, the most important thing is that in most Western European educational institutions, each student after graduating from the university receives a diploma supplement (health passport), which reflects the “real picture” of the health status and the level of preparedness of a particular student, which significantly increases the motivational incentives of students to regularly engage in sports. sections at the university and compliance with the rules of a healthy lifestyle.
The training of students for professional activity is carried out within a certain educational system. The strategy of modern higher education is adherence to such a line of development, the basis of which is reliance on personality-oriented pedagogical technologies, which make it possible to form a specialist who is able not only to reproduce the accumulated potential of knowledge, abilities and skills, but also to go beyond the limits of normative activity (YOUNG, JAMES, MONTGOMERY, 2002). This strategy characterizes the tendency for the role of the “human factor” to increase in all types of activity, including in the health sphere.

A distinctive feature of the professional training of students of higher educational institutions is the constantly growing volume of educational information with limited training periods; high neuro-emotional stress; overload of the intellectual sphere; decreased physical activity (GASTIN, 2001; KELLER, KOOB, CORAK, BORN, 2018; MATHE, VIENNOT, 2009; JANSONE, VANZE, 2009).

In recent years, the level of physical fitness of students at the stage of primary training has sharply decreased. In our opinion, scientists do not pay enough attention to this problem, and also do not reveal the directions of improving the physical fitness of cadets at the indicated stage of preparation. Achieving a high level of physical readiness at the initial stage of training is the foundation for the development and formation of military-applied skills and abilities necessary for servicemen for further service activities (PETERSON, ALVAR, RHEA, 2006; KNAPIK, HAURET, ARNOLD, 2003). Taking this into account, an important element in the development of students both at the professional and at the personal level is the formation and implementation of innovative forms of sports training.

**METHODOLOGY**

Sports activity, in contrast to other types of human activity, has the broadest possibilities for simulating conditions and situations that can be ideally used for moral and volitional training. During physical training, one has to overcome pain and fatigue, maintain self-control, regulate the emotional state, and maintain performance in adverse environmental conditions (YANCI, CASTILLO, ITURRICA-STILLO, AYARRA, NAKAMURA, 2017). In addition, during physical training, the most radical means of developing volitional qualities is loads, the level of which is regulated by the nature of the exercises. Moreover, this must be done regularly, and not from time to time, gradually increasing the load and complexity of the tasks. Exactly in a certain way, physical exercises should be considered not only a means of ensuring physical fitness, but also a method of developing volitional qualities (RICHARD, ABDULLA ALABBAS, RUNCO, 2017; FRIESKE, KRÜGER, AEHLE, BAUER, GRANACHER, 2018; KRYSHTANTNOYCH, GAVRYSH, KHOLTOBINA, MELNYCHUK, SALNIKOVA 2020).

Physical training curriculum for students is developed in accordance with educational qualification characteristics and educational and professional training programs for specialists. In higher educational institutions, the ratio of time by type of study to its total volume is determined by the department and specialization (GORDIENKO, 2018; GONZALO-SKOK, TOUS-FAJARDO, VALERO-CAMPO, BERTOSA, BATALLER, ARJOL-SERRANO, 2017). Physical training is organized and conducted in the form of training sessions, morning physical exercises, mass sports work and has a health-improving, educational and military-applied orientation (NYGAARD FALCH, GULDTEIG RADERGÅRD, TILLAAR, 2019).

The experimental program was developed on the basis of the generally accepted program for innovative forms of sports training. The specified training methodology was formed on the basis of the arrangement within one session of intense strength and functional exercises. Classes for this sports training, which were formed on the basis of a thorough analysis of specialized literature, include elements from high-intensity interval training, weightlifting, athletics, powerlifting, gymnastics, kettlebell lifting and other sports, etc (BRUGHELLI, CRONIN, LEVIN, CHAOUACHI, 2008; ASADI, RAMIREZ-CAMPILLO, 2016; OLIVER, STONE, HOLT, JENKE, JAGIM, JONES, 2017; KONTOCHRISTOPOULOS, BOGDANIS, PARADISIS, TSOLAKIS, 2019; KRYSHTANTNOYCH, KRYSHTANTNOYCH, STECHKEVYCH, IVANYTOSKA, & HUZII, 2020).
This system enables widespread use of physical activity, increases interest and efficiency of the training process. The training method is capable of harmoniously influencing all types of physical qualities of students. The structure of the author’s experimental program contains the goals, objectives of the program, means, stages and their tasks, forms of training. The program offers options for the development of physical qualities (strength, coordination, speed), which the teacher can independently select, based on the specific tasks of the training session. The advantage of the developed program is the recommendations regarding the list of exercises for the development of appropriate physical quality, the list of exercises that can be used during physical education classes.

The developed experimental program of the pedagogical experiment consists in the application of the author’s experimental program in the educational process of students. The methodological principles of the physical education program developed by us for students is the distribution of the training session into two parts. Part of the training session (70% of the total time) was spent by the cadets to perform basic tasks, and 30% of the total time of the class used CrossFit to develop strength, coordination qualities, endurance and flexibility.

Within the framework of the program, four groups of exercises have been developed. The exercises of the first group mainly use their own weight. In the second, exercises can be used both in the form of anaerobic nature (100-800 m) and aerobic (1500 m and more), both independently and as part of a set of exercises. The third and fourth groups include exercises from the arsenal of weightlifting and athleticism (Table 1).

**Table 1.** The content of the author’s program of physical training of students during the period of primary training using innovative methods of sports education

| Purpose | To prepare students for unexpected versatile loads and overloads that have to be faced in the process of training and combat activities and further work |
| --- | --- |
| Tasks | • To accelerate the adaptation of students to the conditions of professional activity.  
• Improve the functional state of students.  
• To form the necessary physical development to fulfill the tasks of combat training activities of the preparatory period of training.  
• Achieve the required level of general physical fitness of cadets for the formation of applied physical fitness. |
| Facilities | • Gymnastics (push-ups, pull-ups, handstands, triplets jumping rope, pull-ups on rings, pull-ups on rings, reverse burpees, raises on the rings, squats on one leg, double jumps on the rope, lifting force on the rings, push-ups in handstand, lifting legs to the bar, climbing stairs, lifting a roll, air squats, lifting knees to the chest, pulling out by force, walking on the arms, lifting the body, jumping on a curbstone, pulling up lying down, push-ups, climbing a tightrope, burpee, angle in support, lunges, jumps, static exercises), etc.  
• Aerobics (swimming, cycling, rowing, running, skiing, skiing)  
• Athletics (kettlebell swing, kettlebell snatch, deadlift, dumbbell snatch, bent-over row of kettlebells, exercises with medball, kettlebell pull to the chin, bench press, kettlebell push (long cycle)).  
• Weightlifting (schwung, power schwung, cluster, seated press, barbell snatch, standing press, thrusters, barbell squats, overhead squats, deadlift, barbell jog, barbell chest). |
| Time | Training sessions - 2 times 90 minutes.  
Mass sports work - 2 times for 50 minutes |
| Stages Of The Program | Initial preparation phase  
1. Check the initial level of physical fitness of cadets.  
2. Introduce crossfit exercises.  
3. Try out the training method.  
4. Adapt the body to the load.  
Individual preparation stage  
1. Performing a high-intensity complex (WOD) with your own body weight.  
2. Performing exercises using many repetitive bodyweight exercises.  
Collective preparation stage  
1. Performing training in the crew, calculation.  
2. Performing training as part of the department.  
3. Performing training as part of a platoon. |
| Organization Methods | Frontal, current, group, individual, competitive. |
| Results | General physical fitness, functional readiness. |

Source: Development by authors

The next step of our research will be an experimental verification of the physical training program formed by us in a higher institution located on the territory of Ukraine.
RESULTS
The pedagogical experiment was conducted on the basis of a higher educational institution during one semester of the academic year. The pedagogical experiment was attended by 25 students of the control group and 25 students of the experimental group. The program is characterized by the implementation of the principle of variability, which involves planning educational material in accordance with the age and gender characteristics of students, their interests, logistics of the educational process (gym, sports grounds, stadium, pool, etc.), staffing.

Analysis of the results of the study shows that at the beginning of the experiment between students of the control and experimental groups there were no significant differences (p > 0.05). During the experiment, the boys of both groups had positive changes in almost all of the studied indicators of physical fitness. However, the growth rate was different (Fig. 1).

Figure 1. Changes in physical fitness indicators in both study groups, after applying the proposed program

Source: Development by authors

So, we see that the growth rates of physical readiness indices among the students of the experimental group were significantly higher than among the students of the control group, which indicates the effectiveness of the author’s program for the development of physical qualities. Pupils of both groups have the lowest growth rates in terms of speed-strength qualities (long jump and takeoff run), speed (running 100 meters), strength endurance (running 1000 meters) and general endurance (running 3000 meters).

DISCUSSIONS
After the end of the pedagogical experiment, disagreements in the state of physical fitness of the students of the control and experimental groups were manifested to a greater extent. The students of the experimental group reliably prevailed among the students of the control group in terms of the level of development of the strength qualities of the muscles of the upper shoulder girdle and arms (pulling up on the bar, lifting on the bar by force and overturning, push-ups on the uneven bars), the strength qualities of the abdominal muscles...
The influence of sports education on students: contemporary challenges

The results of the pedagogical experiment testify that the author’s curriculum for sports education of students of a higher educational institution gave a positive training effect and contributed to the versatile physical fitness of students.

CONCLUSIONS

The forms of organization of the educational process in physical education can be different: traditional, sectional, mixed or club. The traditional system provides “template” lessons for the whole group, in accordance with the educational topic. At the end of the topic, students perform control exercises. We believe that this form of organization of the educational process is ineffective, since it does not take into account the interests of students. With the sectional form of organization of the educational process, students often cannot choose sports and health-related activities according to their interests for reasons related to the schedule of the main classes, or changes in the main schedule during the semester, which leads to overlaps of the main classes with sectional ones.

A mixed system, in our opinion, in this transition period is the most acceptable, since, on the one hand, students study according to a traditional program familiar to them from secondary school, thus there is acceptability between secondary and higher schools, on the other hand, among students with "is the choice of the sports and recreation section, the day of the week and the time of visiting this section, since the sections are planned during extracurricular hours according to the schedule of the department of physical education. Modern European educational institutions offer a club system of sports and recreation activities.

Thus, experimentally proven effectiveness of a methodological approach to the development of a physical training program for students at the stage of initial training, which combines the generally accepted means of developing physical qualities (70% of the total time in training) and the means of innovative sports education (30% of the total time of the training session).

The use of innovative sports education means during training sessions allows to optimize and diversify physical training measures. After the formation of this program, we experimentally tested this program on the students of a higher educational institution, which is located on the territory of Ukraine. As a result of the introduction of innovative methods of sports training, the passed sports standards of students have been improved.

The data obtained can be used in the development of standard programs for physical training of cadets, in teaching the theory and methods of physical education for cadets of specialized higher educational institutions.

REFERENCES

ASADI, A, RAMIREZ-CAMPILLO, R. Effects of cluster vs. traditional plyometric training sets on maximal-intensity exercise performance. Medicine; 2016, 52(1):41-5. Available at: https://doi.org/10.1016/j.medici.2016.01.001. Access: May 15, 2021.

BAER, J. The importance of domain-specific expertise in creativity. Roeper Review; 2015, 37(3), 165-178. Available at: https://doi.org/10.1080/02783193.2015.1047480. Access: May 15, 2021.

BRUGHELLI, M., CRONIN, J., LEVIN, G., CHAOUACHI, A. Understanding change of direction ability in sport. Sports Med. 2008, 38(12):1045-63.

CASTILLO-RODRÍGUEZ, A, FERNÁNDEZ-GARCÍA, J, CHINCHILLA-MINGUET, J, CARNERO, E. Relationship between muscular strength and sprints with changes of direction. J Strength Cond Res. 2012, 26(3):725-32

DEWESE B, NIMPHIUS S. Program design and technique for speed and agility training. In: Essentials of strength training and conditioning. Champaign: Human Kinetics; 2016, 521-589.
GASTIN, P. Energy system interaction and relative contribution during maximal exercise. *Sports Med*; 2001, 31(10):725-741.

GONZALO-SKOK O, TOUS-FAJARDO J, VALERO-CAMPO C, BERZOSA C, BATALLER A., ARJOL-SERRANO J. Eccentric-overload training in team-sport functional performance: constant bilateral vertical versus variable unilateral multidirectional movements. *In J Sports Physiol Perf*. 2017;12(7):951-8. Available at: https://doi.org/10.1123/ijsspp.2016-0251. Access: May 15, 2021.

GORDIENKO, O. Modern status and prospects of development of physical education of students of high schools. *Scientist*; 2018, 4(2): 37-40

YANCI, J., CASTILLO, D., ITURRICASTILLO, A., AYARRA, R., NAKAMURA, Y. Effects of two different volume-equated weekly distributed short-term plyometric training programs on futsal players' physical performance. *J Strength Cond Res*. 2017, 31(7):1787-1794.

YOUNG W, JAMES R, MONTGOMERY I. Is muscle power related to running speed with changes of direction? *J Sports Med Phys Fit*. 2002, 42(3):282-8.

YUE, G., COLE, K. Strength increases from the motor program: comparison of training with maximal voluntary and imagined muscle contractions. *J Neurophysiol*; 1992, 67(5):1114-23. Available at: https://doi.org/10.1152/jn.1992.67.5.1114. Access: May 15, 2021.

JANSONE, R., & VAZNE, Z. Individualised Physical Condition As Means To Promote Students’ Health In Long Term Period. Problems of Education in the 21st Century , *Problems of Education in the 21st Century*, 2009, 11. presented at the May/2009. Available at: http://oaji.net/articles/2014/457-1392408425.pdf. Access: May 15, 2021.

KELLER, S., KOOB, A., CORAK, D., BORN, D. How to improve change-of-direction speed in junior team sport athletes-horizontal, vertical, maximal, or explosive strength training? *J Strength Cond Res*. 2018. Available at: https://doi.org/10.1519/JSC.000000000002814. Access: May 15, 2021.

KRYSHTANOVYCH M., KRYSHTANOVYCH, S., STECHKEVYCH, O., IVANYTSKA, O., & HUZII, I. Prospects for the Development of Inclusive Education using Scientific and Mentoring Methodsunder the Conditions of Post-Pandemic Society. *Postmodern Openings*, 2020, Vol.11. No.2, 73-88. Available at: https://doi.org/10.18662/po/11.2/160. Access: May 15, 2021.

KONTOCHRISTOPOULOS, N., BOGDANIS, G., PARADISIS, G, TSOLAKIS, C. Effect of a supplementary periodized complex strength training and tapering period on postactivation potentiation of sport-specific explosive performance in adolescent national-level fencers. *J Strength Cond Res*. 2019. Available at: https://doi.org/10.1519/jsc.000000000002967. Access: May 15, 2021.

MATHE, S., & VIENNOT, L. Stressing The Coherence Of Physics: Student Journalists’ And Science Mediators’ Reactions. Problems of Education in the 21st Century , *Problems of Education in the 21st Century*, 2009, 11. presented at the May/2009. Available at: http://oaji.net/articles/2017/457-1505377865.pdf. Access: May 15, 2021.

 MILLER, A., MACDOUGALL, J., TARNOPOLSKY, M., SALE, D. Gender differences in strength and muscle fiber characteristics. *Eur J Appl Physiol Occup Physiol*. 1993, 66(3):254-62.
The influence of sports education on students: contemporary challenges

A influência da educação esportiva em estudantes: desafios contemporâneos

La influencia de la educación deportiva en estudiantes: desafíos contemporáneos

Resumo
O artigo é dedicado à comprovação da relevância da utilização dos esportes modernos em geral e do treinamento físico geral em particular no sistema de treinamento dos alunos. O artigo considera os problemas reais de melhorar a aptidão física de alunos que estudam em instituições de ensino superior militar durante o período de treinamento esportivo primário. As possibilidades de aumentar a eficácia do processo de treinamento têm sido investigadas. A análise de fontes científicas e literárias modernas permite afirmar que o sistema de treino desportivo tem um efeito positivo significativo no nível geral de bem-estar, facilitando o processo de aprendizagem e mantendo um estilo de vida saudável. O objetivo do artigo é formar e implementar formas inovadoras de educação esportiva para alunos e posterior verificação experimental do programa desenvolvido.

Palavras-chave: Educação. Estudantes. Prontidão de combate. Esportes modernos. Instituições de ensino superior.

Abstract
The article is devoted to the substantiation of the relevance of the use of modern sports in general and general physical training in particular in the training system of students. The paper considers the actual problems of improving the physical fitness of students who study at higher military educational institutions during the period of primary sports training. The possibilities of increasing the effectiveness of the training process have been investigated. The analysis of modern scientific and literary sources gives grounds to assert that the system of sports training has a significant positive effect on the general level of well-being, facilitating the learning process and maintaining a healthy lifestyle. The purpose of the article is to form and implement innovative forms of sports education for students and further experimental verification of the developed program.

Keywords: Education. Students. Combat readiness. Modern sports. Higher educational institutions.

Resumen
El artículo está dedicado a fundamentar la relevancia del uso de los deportes modernos en general y del entrenamiento físico general en particular en el sistema de entrenamiento de los estudiantes. El artículo considera los problemas reales de mejorar la aptitud física de los estudiantes que estudian en instituciones de educación militar superior durante el período de entrenamiento deportivo primario. Se han investigado las posibilidades de incrementar la efectividad del proceso de formación. El análisis de fuentes científicas y literarias modernas da motivos para afirmar que el sistema de entrenamiento deportivo tiene un efecto positivo significativo en el nivel general de bienestar, facilitando el proceso de aprendizaje y manteniendo un estilo de vida saludable. El propósito del artículo es formar e implementar formas innovadoras de educación deportiva para los estudiantes y una mayor verificación experimental del programa desarrollado.

Palabras-clave: Educación. Estudiantes. Preparación para el combate. Deportes modernos. Instituciones de educación superior.

NYGAARD FALCH, H., GULDTEIG RADERGÅRD, H. & van den TILLAAR, R. Effect of Different Physical Training Forms on Change of Direction Ability: a Systematic Review and Meta-analysis. Sports Med - Open 2019, 5, 53. Available at: https://doi.org/10.1186/s40798-019-0223-y. Access: May 15, 2021.

OLIVER, J., & STONE, J., & HOLT, C., & JENKE, S., & JAGIM, A., & JONES, M. The Effect of Physical Readiness Training on Reserve Students’ Training Corps Freshmen Cadets. Military Medicine, 2017, 182, e1981-e1986. Available at: https://doi.org/10.7205/MILMED-D-17-00079. Access: May 15, 2021.

PETerson, M., ALVAR, B., RHEA, M. The contribution of maximal force production to explosive movement among young collegiate athletes. J Strength Cond Res. 2006, 20(4):867–873.

PRIESKE, O., KRÜGER, T., AEHLE, M., BAUER, E., GRANACHER, U. Effects of resisted sprint training and traditional power training on sprint, jump, and balance performance in healthy young adults: a randomized controlled trial. Front Physiol. 2018, 9.156.

RICHARD, V., ABDULLA ALABBASI, A., RUNC0, M. Influence of Skill Level, Experience, Hours of Training, and Other Sport Participation on the Creativity of Elite Athletes. Journal of Genius and Eminence, 2017, 2. 65-76. Available at: https://doi.org/10.18536/jge.2017.04.02.01.07. Access: May 15, 2021.