



# Design technology of students' sports training based on martial arts classes in physical education at the university: theoretical aspect

UDC 796



PhD, Associate Professor **A.I. Rakovetsky**<sup>1</sup>

Dr. Hab., Professor **V.V. Ponomarev**<sup>2</sup>

<sup>1</sup>Russian Timiryazev State Agrarian University, Moscow

<sup>2</sup>Krasnoyarsk State Medical University named after prof. V.F. Voyno-Yasenetsky, Krasnoyarsk

Corresponding author: [vaspon59@mail.ru](mailto:vaspon59@mail.ru)

Received by the editorial office on 21.05.2025

## Abstract

**Objective of the study** is to theoretically substantiate and develop program and methodological content of the technology for designing sports training for female students based on martial arts classes in physical education at the university and recommend it for practice.

**Methods and structure of the study.** The experimental base of the research is the Russian Timiryazev State Agrarian University.

Over the course of two years, a sociological survey and questionnaire survey of students and teachers of the university was conducted on the subject of designing a sports-specific approach to physical education of modern student youth. Also, an analysis of scientific and methodological literature on the topic of the study was carried out, factual material was formed, and the theoretical content of the experimental technology for designing sports training for female students in physical education at the university was built and filled.

The program and methodological support of the pedagogical technology of designing sports training for female university students based on martial arts classes was developed. The organizational and methodological algorithm for including sports training for female students in physical education at the university was formed.

**Results and conclusions.** Based on the preliminary theoretical study, it was revealed that only no more than 10% of students from the total number of students are involved in sports at the university, including 3% of girls. At the same time, the Government of the country has planned the need to involve up to 70% of student youth in active physical education and sports by 2030.

The conducted sociological analysis and survey showed that 80% of teachers and 90% of students are not against physical education at the university being sport-oriented. Based on the results of the conducted theoretical study, a program and methodological support for the pedagogical technology of sports training for female students based on martial arts classes in physical education at the university was developed.

Also, an organizational and methodological algorithm for the implementation of theoretical developments of experimental technology in physical education at the university has been formed.

**Keywords:** *technology, design, sports training, physical education, university, female students, martial arts, software and methodological support*

**Introduction.** Currently, one of the basic socio-educational tasks of the state is to improve the program content of physical education and sports in the country's universities. All this is due to the strategy of socio-economic development of the Russian Federation for the period up to 2030, which defines the important role of physical education and sports in the development of human potential in Russia. The inclusion of sports-oriented physical education of

students, classes in sports will contribute to the formation of a sports culture in young people, the development of individual psychophysical potential, the formation of stable motor skills and abilities for systematic classes in a chosen sport throughout their life, etc. At the same time, human life safety is of particular importance in the modern world. In state documents defining the principles of policy in the field of physical education and sports in the Russian Federation, phys-



ical education and sports are considered as one of the means not only to strengthen health and maintain high human performance, but also to form people's readiness to protect themselves and their loved ones from various forms of violence.

Recently, the number of crimes has been growing, where women, girls, children, and the elderly are the victims. The aggressor chooses females because they are less protected and are in a vulnerable position. The female body can easily be subject to violence, while only a small percentage of girls can protect themselves from criminals, since they are not prepared either physically or psychologically. All this as a whole determined the relevance and necessity of developing a technology for sports training of female students in physical education at a university.

**Objective of the study** is to theoretically substantiate and develop program and methodological content for the technology of designing sports training for female students based on martial arts classes in physical education at the university and recommend it for practice.

**Methods and structure of the study.** The experimental research base is the Russian Timiryazev State Agrarian University.

Over the course of two years, a sociological survey and questionnaire survey of students and teachers of the university was conducted on the subject of designing a sports-specific approach to physical education of modern student youth. Also, an analy-

sis of scientific and methodological literature on the topic of the study was carried out, factual material was formed, and the theoretical content of the experimental technology for designing sports training for female students in physical education at the university was built and filled.

A program and methodological support for the pedagogical technology for designing sports training for female university students based on martial arts classes was developed. An organizational and methodological algorithm for including sports training for female students in physical education at the university was formed.

**Results and conclusions.** Upon completion of the preliminary theoretical study, a pedagogical technology for the sports training of female students based on martial arts classes in physical education at the university was developed, which includes the following stages of operation:

Stage 1 (September-October) – selection and testing of first-year female students for martial arts classes;

Stage 2 (November-May) – basic sports training based on martial arts classes;

Stage 3 (second-year students, September-May) – advanced sports training;

Stage 4 (third year, September-May) – improving sports fitness;

Stage 5 (fourth and fifth years, September-May) – systematic sports training, participation in various

Table 1. Program and methodological content of support for the technology of sports training of female students at the university

No.	Contents of program sections	Time	Courses				Total hours
			I	II	III	IV-V	
I	Theoretical foundations of martial arts	4	1	2	1	-	4
	Modern types of martial arts	1	1	-	-	-	1
	Applied focus of martial arts training	1	-	1	-	-	1
	Martial arts as a means of safe human life	1	-	1	-	-	1
	Martial arts in physical development of student youth	1	-	1	-	-	1
II	Practical foundations of martial arts training	290	85	85	60	60	290
	2.1. General physical training (GPT)	110	40	30	20	20	110
	2.2. Special physical training (SPT)	130	30	40	30	30	130
	2.3. Technical training	50	15	15	10	10	50
	2.4. Psychological preparation	25	5	5	5	10	25
	2.5. Tactical training	30	-	5	10	15	30
III	Control testing of sports fitness	51	5	10	14	22	51
	3.1. General physical fitness testing	8	2	2	2	2	8
	3.2. SFP testing	12	3	3	3	3	12
	3.3. Control competitions	15	-	3	5	7	15
	3.4. Participation in competitions	16	-	2	4	10	16



student sports competitions, achieving sports categories, designing a sports culture in future social and professional life.

Table 1 presents the program and methodological content of the pedagogical technology of sports training of female students based on martial arts classes in physical education at the university.

The presented program and methodological material for the sports training of female students is consistently implemented by the years of study, where in the first year, recruitment, selection, general physical training and basic sports training are carried out; in the second year – in-depth sports training; in the third – improving sports preparedness and in the 4-5 years – participation in competitions, achieving sports categories, etc.

**Conclusions.** The conducted theoretical work allowed us to collect sufficient factual material that contributed to the development of program and methodological content to support the technology of sports training of female students based on martial arts classes in physical education at the university; to form an organizational and methodological algorithm for the implementation of the experimental technology.

All this as a whole allowed us to update and prepare a scientific and methodological base for the implementation of the theoretical idea in practice.

## References

1. Doroshenko S.A., Ponomarev V.V. Sportivno-vidovoy podhod v fizicheskom vospitanii studentov v vuze: teoreticheskie i prakticheskie aspekty: monografiya. Krasnoyarsk: SiBGTU, 2010. 178 p.
2. Rakovetskiy A.I., Ponomarev V.V., Zalivan D.O. Sportivno-prikladnoy fitnes-trening v fizicheskom vospitanii studentok v vuze. Fizicheskaya kultura: vospitanie, obrazovanie, trenirovka. 2020. No. 1. Pp. 6-7.
3. Rakovetskiy A.I. Sportivno-prikladnoy fitnes-trening na osnove zanyatiy boksom studentok v fizicheskom vospitanii v vuze: avtoref. dis. ... kand. ped. nauk. Krasnoyarsk, 2021. 24 p.
4. Rakovetskiy A.I., Osipov A.Yu., Nizhegorodtsev D.V., Tulupov A.P. Povyshenie ehffektivnosti specializirovannyh uchebnyh zanyatiy po boksu u devushek-studentok. V mire nauchnyh otkrytiy. Krasnoyarsk: Nauchno-innovacionnyy centr. (Socialno gumanitarnye nauki). 2013. No. 11.2. (47). Pp. 76-88.
5. Levitskaya A.N., Ponomarev V.V. Vliyanie specializirovannyh zanyatiy fitnes-aehtobikoy na formirovanie fizicheskoy podgotovlennosti studentok vuza. Teoriya i praktika fizicheskoy kulturey. 2018. No. 8. P. 91.