

# METHODOLOGICAL SUPPORT OF SENIOR SCHOOL STUDENTS IN THE PROCESS OF TEACHING BASKETBALL (ON THE EXAMPLE OF PHYSICAL EDUCATION CLASSES)

R. Sh. Isakov

Acting Professor Andijan State Institute of Foreign Languages

E-mail: rrrrrr.iiiiii.1979@mail.com

## Abstract

This article analyzes the provision of methodological support for basketball teachers working with 11th-grade students. It highlights the importance of physical education classes, the development of a healthy lifestyle, and the formation of students' physical strength and volitional qualities. Experimental research was conducted involving physical education teachers, including the application of individual and group approaches, the development of methodological support materials, as well as the design and implementation of a monitoring system to assess students' acquisition of knowledge and skills.

**Keywords:** Students, physical education, basketball, methodological support, physical fitness, skills and abilities, educational process.

## Introduction

Educating young people in the spirit of national values requires special attention to their physical and mental health, as well as to the development of a healthy lifestyle. Physical education and sport, as effective educational tools, should be actively used to develop moral qualities, humanism, and an active attitude toward life in the younger generation.

The development of physical education and sport is an important factor in achieving Uzbekistan's strategic goals: joining the ranks of developed countries, building a legal democratic state, and transitioning to a market economy. This requires the introduction of new educational methods, the development of sports science, the creation of public health programs, and, of course, the advancement of physical education and mass sport.

The impact of sport on the human body is diverse; in particular, basketball demonstrates a wide variety of movements. Modern basketball is a game that requires quick reactions, rapidly changing tactics, constant contact with opponents, and limited time for decision-making. The fast pace of the game and the need to respond quickly to changing situations place high demands on players' physical fitness, technical skills, and tactical thinking.

Basketball is an excellent means of improving health. It engages multiple muscle groups, enhances metabolism, and has a positive effect on the respiratory and cardiovascular systems. The advantage of basketball lies in its dynamic nature: periods of intense exercise alternate

with rest, allowing muscles to recover more quickly. Basketball plays an important role in the physical development of children and adolescents.

A key factor determining the importance of basketball in physical education is its comprehensive nature. This game simultaneously develops motor skills, physical abilities, as well as moral and volitional qualities. Various game situations also have an intensive impact on the visual, motor, and vestibular systems.

Due to its emotional intensity and excitement, basketball has a beneficial effect on the human body. The game's dynamics, strong emotions, changing environment, and freedom of movement, however, make it difficult to objectively and accurately control the physical load applied. Despite this, basketball is not as popular as a means of physical development. This is due to widespread misconceptions about the high risk of injury and the lack of necessary infrastructure. In fact, physical activity in basketball is significantly higher than in many other team sports.

The diversity of technical and tactical components of basketball, as well as the nature of game activity itself, has unique characteristics that contribute to the development of basic skills and abilities in secondary school students, as well as to their comprehensive physical and mental development. Motor actions learned in basketball and related physical exercises are effective means of maintaining and improving health and can be used throughout life as independent physical training activities.

A well-structured educational and training process is the foundation for health and the development of all body systems. Therefore, it is important to study physical education alongside academic achievement, since its goal is to develop an effective physical education teaching system that enables 11th-grade students to achieve high results in basketball, which in turn has a positive effect on their overall educational level.

A review of scientific and methodological literature identified the following problems that negatively affect the physical education process of students:

Analysis of Table 2 shows that in the CG, students improved their results in the “Acceleration from defensive stance” test (from  $25.6\pm2.1$  sec to  $22.8\pm1.8$  sec) and in the “Mid-range free throws” test (from  $5.1\pm0.2$  to  $6.9\pm0.6$ ). However, in the “Dribbling with change of direction” test, participants showed hesitation, which affected their results. By the end of the experiment, the improvement was only 0.2 seconds ( $t=0.92$ ,  $P>0.05$ ), which was statistically insignificant. At the same time, the EG demonstrated clear positive changes in test results. In the “Acceleration from defensive stance” test, a statistically significant improvement was recorded (2.9 sec;  $t=2.91$ ,  $P\le0.05$ ). In the “Dribbling with change of direction” test, improvement reached 1.8 seconds ( $t=2.02$ ,  $P\le0.05$ ). In the “Mid-range free throws” test, performance increased by 4.8 times, indicating a statistically significant improvement ( $t=2.59$ ,  $P\le0.05$ ), which is a strong result for this group.

At the initial stage of learning to shoot the ball into the basket, all students made mistakes. Analysis showed that these errors were related to insufficient knowledge of basketball techniques and rules. Within the pedagogical experiment, teachers focused on correcting these errors through individual and group approaches, emphasizing one-handed overhead shooting from a stationary position, which led to positive results.

Thus, studying psychological and pedagogical materials related to methodological support of physical education teachers in general education schools contributes to the high-quality acquisition of knowledge, skills, and abilities in physical education and sport, as well as to the formation of a healthy and safe lifestyle and the improvement of students' health.

The inclusion of a "Basketball" module tailored to the individual needs of 11th-grade students in the physical education curriculum led to a significant increase in theoretical and practical basketball knowledge among secondary school students, which was reflected both in their health indicators and in their academic performance in other subjects.

despite the need to train physically fit students, there is a lack of educational materials for physical education classes in general education schools;

despite the need to improve learning outcomes in physical education, there is insufficient methodological support for an individual approach.

Methodological support for teachers is a system of activities aimed at helping teachers solve problems that arise in the course of their professional activities. This process includes identifying relevant problems, searching for and analyzing solutions, and providing consultations on developing individual educational pathways. It is important to distinguish between methodological support and methodological provision, which includes the supply of ready-made methodological materials and tools.

Methodological provision is a comprehensive process that includes the creation, implementation, and improvement of educational materials and methods. It involves developing programs, manuals, and other methodological materials, organizing collaborative work among teaching staff, testing new approaches, supporting teachers' professional development, and disseminating best practices. The goal is to make teaching more effective and modern.

The research was conducted with 11th-grade students of Secondary School No. 2 in the city of Andijan. Twelve adolescents from each class were selected and divided into a control group (CG) and an experimental group (EG).

The amount of theoretical material in physical education was mastered by 7 students. Tests were used in the EG to assess knowledge acquisition. At the beginning of the study, most students in both groups (10–12 students) showed good results on tests, correctly answering questions from the "Basketball" section. The overall level of knowledge was equally low in both groups. Only a few students (2–3) in each group answered the test questions correctly. At the end of the pedagogical experiment, a final test was conducted. In the CG, a slight improvement was observed: the number of students who answered correctly increased.

After assessing the theoretical knowledge of senior school students in both groups participating in the pedagogical experiment, their physical fitness was tested during the academic year (Table 1).

Table 1 Dynamics of test indicators for control and experimental group students at the beginning, middle, and end of the pedagogical experiment ( $\bar{X} \pm \delta$ )

Stages	«Standing vertical jump height (cm)		Throwing the ball against the backboard		Standing long jump with two feet (cm)	
	NG,(n=12)	TG,(n=12)	NG (n=12)	TG (n=12)	NG (n=12)	TG (n=12)
<b>At the beginning of the pedagogical experiment</b>						
( $\bar{X} \pm \delta$ )	25,1±0,8	26,3±1,3	15,8±0,8	16,5±1,3	183,2±2,8	182,7±1,3
<b>In the middle of the pedagogical experiment</b>						
( $\bar{X} \pm \delta$ )	26,8±1,3	29,8±0,2	16,3±1,9	18,2±0,8	185,2±1,8	188,7±1,8
Increase (%)	6,8%;	13,3%	3,9%;	10,9%	1,1%;	3,3%
<b>At the end of the pedagogical experiment</b>						
( $\bar{X} \pm \delta$ )	28,3±1,3	32,1±0,8	17,1±0,4	21,6±0,9	189,2±2,1	201,1±2,1
Increase (%)	12,7%;	22,0%	8,9%;	31,7%	3,3%;	10,0%

The results of the CG and EG are noteworthy. Although test results were almost identical at the beginning of the experiment, significant differences appeared in the middle and especially at the end.

For example, in the EG, the increase in the “Standing vertical jump height” test was 22.0%, “Throwing the ball against the backboard” increased by 31.7%, and “Standing long jump with two feet” by 10.0%. Students in the CG also improved their scores by the end of the academic year, but to a lesser extent: 12.7%, 8.9%, and 3.3%, respectively.

Pedagogical observations conducted throughout the academic year showed that students in the EG, with methodological support from physical education teachers, improved not only their theoretical knowledge but also their level of physical fitness. This was reflected in their increased interest in basketball during physical education classes and in their overall academic performance.

To assess basketball-related skills, pedagogical observations tested the CG and EG using three control exercises (Table 2).

Table 2 Basketball skill indicators of control and experimental group students at the beginning and end of the pedagogical experiment ( $\bar{x} \pm \delta$ )

T/r	Tests	Ng,(n=12)		t	P	TG,(n=12)		t	P
		Beginning	End			Beginning	End		
1	Acceleration from defensive stance (sec)	25,6±2,1	22,8±1,8	2,02	≤0,05	23,5±2,1	21,6±2,1	2,91	≤0,05
2	Dribbling with change of direction (“snake”), 2×15 m (sec)	12,0±1,7	11,8±1,7	0,92	≤0,05	10,2±2,0	9,4±2,0	2,02	≤0,05
3	Mid-range free throws (60 sec, number)	5,1±0,2	6,9±0,6	1,68	≤0,05	5,8±1,1	10,6±1,9	2,59	≤0,05

Analysis of Table 2 shows that in the CG, students improved their results in the “Acceleration from defensive stance” test (from 25.6±2.1 sec to 22.8±1.8 sec) and in the “Mid-range free

throws" test (from  $5.1\pm0.2$  to  $6.9\pm0.6$ ). However, in the "Dribbling with change of direction" test, participants showed hesitation, which affected their results. By the end of the experiment, the improvement was only 0.2 seconds ( $t=0.92$ ,  $P>0.05$ ), which was statistically insignificant. At the same time, the EG demonstrated clear positive changes in test results. In the "Acceleration from defensive stance" test, a statistically significant improvement was recorded (2.9 sec;  $t=2.91$ ,  $P\leq0.05$ ). In the "Dribbling with change of direction" test, improvement reached 1.8 seconds ( $t=2.02$ ,  $P\leq0.05$ ). In the "Mid-range free throws" test, performance increased by 4.8 times, indicating a statistically significant improvement ( $t=2.59$ ,  $P\leq0.05$ ), which is a strong result for this group.

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