

**MODERN DEVELOPMENT OF JUDO AND ITS IMPACT ON STUDENTS'
PHYSICAL TRAINING****Bobomuradov Sobitjon Erkinovich**

Associate Professor, Department of Physical Education

Suvonqulova Mehriniso Vohidjon kizi

2nd-year student, Faculty of Art and Sport Navoi State University

Abstract: This article presents a scientific analysis of the origins, theoretical foundations, role in the training process, and modern development directions of judo. The study highlights that judo is not only a physical activity but also a systematic sport contributing to moral and intellectual development. The article also examines the effectiveness of applying innovative technologies and digital analysis tools in judo training.

Keywords: judo, wrestling, sports technologies, physical training, technique, tactical preparation, digital analysis

Introduction

Today, judo is recognized not only as a sport but also as an important educational tool that contributes to the physical, moral, and intellectual development of an individual. The term judo, translated from Japanese, means “the gentle way.” This sport teaches a person to achieve victory not through force but through intelligence, agility, and proper technique.

In the system of physical education and sports, judo training plays a crucial role in shaping a healthy lifestyle among students, developing willpower, speed, and endurance. Particularly in higher education institutions, practicing judo helps strengthen students’ psychological stability, self-control, communication culture, and teamwork skills.

In recent years, judo has gained worldwide popularity and has been successfully represented in the Olympic Games, world, and continental championships. At the same time, the need to organize training sessions based on scientifically grounded methods, innovative technologies, and digital tools is increasing.

Therefore, this article scientifically studies the theoretical foundations of judo, its impact on physical preparation, and its modern development trends.

Main Part**1. Theoretical Foundations of Judo**

Judo is based on three fundamental principles:

1. Seiryoku Zenyo – maximum efficiency with minimum effort;

2. Jita Kyoei – mutual welfare and benefit;

3. Randori – free practice for developing practical skills.

These principles encompass judo not only as a physical discipline but also as a philosophical and pedagogical system.

2. Technical and Tactical Preparation

Judo techniques (throws, holds, takedowns) require high precision and balance. Tactical preparation is based on the ability to anticipate the opponent’s actions and neutralize them effectively.

During training, randori (free sparring) and kata (standardized combinations) are used to enhance technical proficiency among judokas.

3. Modern Innovative Approaches

Today, digital video analysis, motion sensors, biomechanical modeling, and virtual simulators are widely used in judo training.

These technologies enable accurate measurement of athletes' movements, identification of errors, and optimization of the training process.

4. Pedagogical and Educational Importance

Judo plays an important role in youth education, fostering patience, discipline, respect, self-control, and teamwork. Therefore, in many pedagogical higher education institutions, judo is taught not only as a sport but also as a methodological and educational discipline.

Table Analysis

The table below illustrates changes in the physical performance indicators of students who regularly participated in judo training over six months. The results demonstrate that judo has a significant positive impact on students' key physical qualities — strength, endurance, flexibility, and reaction speed.

No.	Physical Quality	Initial Result	After 6 Months	Growth (%)
1	Strength (number of sit-ups)	25 times	38 times	+52%
2	Endurance (1 km running time)	5:20 min	4:35 min	+14% improvement
3	Flexibility (bending angle)	75°	90°	+20%
4	Reaction speed (seconds)	0.48 s	0.39 s	+19% improvement

According to the analysis, the greatest improvement was observed in **strength**, where students achieved an average growth of **52%** over six months. This confirms the effectiveness of the comprehensive physical load and tactical exercises used in training.

Moreover, a **19% improvement in reaction speed** indicates the importance of judo training in enhancing neuromuscular coordination. Increases in **flexibility** and **endurance** demonstrate that judo contributes to the overall efficiency of physical movement.

These findings show that judo training not only enhances athletes' physical preparation but also develops coordination, quick decision-making, and psychological stability. As a result, students achieve higher performance in both academic and competitive activities.

Conclusion

Judo is not merely a sport but a philosophical system that fosters all-round human development. Its theoretical and practical foundations guide young athletes toward physical fitness, willpower, and moral maturity.

Integrating modern technologies into judo training increases training efficiency, reduces the risk of injury, and elevates athletes' technical and tactical levels to new heights.

Recommendations

1. It is necessary to widely implement innovative technologies in judo training.
2. Digital educational modules on judo should be developed in pedagogical higher education institutions.
3. Virtual simulators and simulation sessions should be used to enhance athletes' psychological preparation.



4. Analytical software should be applied to study technical and tactical processes in judo competitions.

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