

**IMPROVING THE TEACHING METHODOLOGY OF HAMMER THROW
TECHNIQUE FOR UNIVERSITY STUDENTS**

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Abstract

The effectiveness of athletics training in higher education largely depends on the application of scientifically grounded teaching methodologies. Hammer throw is one of the most technically complex events in track and field, requiring high levels of coordination, strength, and technical precision. However, traditional teaching approaches used in universities often fail to ensure effective mastery of hammer throw technique.

The purpose of this study was to develop and experimentally substantiate an improved teaching methodology for hammer throw technique among university students. The research employed pedagogical observation, experimental methods, technical performance testing, and statistical analysis.

The results demonstrated that students trained using the improved methodology showed significantly greater improvements in technical execution and performance indicators compared to those trained using traditional methods. The findings confirm the effectiveness of the proposed methodology and its applicability in higher education physical education programs.

Keywords: hammer throw, teaching methodology, athletics, technical training, university students, physical education.

Introduction

In recent years, the modernization of physical education systems in higher education institutions has emphasized the need for scientifically justified training methods aimed at improving students' sports skills and physical preparedness. Athletics, as a fundamental sport discipline, plays a crucial role in developing strength, coordination, and motor abilities among students.

Hammer throw, in particular, is characterized by its complex biomechanical structure and high coordination demands. Mastery of the technique requires not only strength development but also precise synchronization of movements, balance control, and spatial orientation. Despite its importance, the teaching methodology of hammer throw in universities remains insufficiently developed and often relies on outdated instructional approaches.

Previous studies highlight that ineffective methodological organization leads to technical errors, low performance outcomes, and decreased student motivation. Therefore, improving the teaching methodology of hammer throw technique for university students is a relevant scientific and pedagogical task.

The aim of this study is to develop and experimentally verify an improved methodology for teaching hammer throw technique to university students.

2. Methods

Participants

The study involved undergraduate students majoring in physical education and sports at a higher education institution. A total of 40 students participated in the research and were divided into an experimental group ($n = 20$) and a control group ($n = 20$). All participants had basic knowledge of athletics techniques and no medical contraindications for physical activity.

Research Design

A pedagogical experiment was conducted over one academic semester. The control group followed a traditional hammer throw teaching program, while the experimental group was trained using the improved methodology developed by the author.

Research Methods

The following methods were used:

- analysis of scientific and methodological literature;
- pedagogical observation;
- pedagogical experiment;
- testing of technical preparedness and performance indicators;
- mathematical and statistical analysis.

Description of the Improved Methodology

The improved teaching methodology was based on a phase-by-phase approach to technical learning. It included:

- gradual mastery of hammer throw phases (preliminary swings, turns, release);
- biomechanical optimization of movement structure;
- individualization of training loads;
- use of auxiliary exercises to improve coordination and balance;
- continuous feedback and error correction.

3. Results

The results of the pedagogical experiment revealed significant differences between the experimental and control groups. Students in the experimental group demonstrated a notable improvement in technical execution accuracy and throwing distance.

Statistical analysis showed that the average performance indicators of the experimental group increased significantly ($p < 0.05$), while improvements in the control group were less pronounced. These results confirm the positive impact of the improved methodology on students' technical preparedness.

4. Discussion

The findings of this study support previous research emphasizing the importance of systematic and phased technical training in athletics. The improved methodology facilitated better understanding of movement mechanics and enhanced coordination abilities among students.

Unlike traditional methods, which focus primarily on repetition, the proposed approach emphasized movement awareness, individual correction, and biomechanical efficiency. This contributed to reduced technical errors and improved performance outcomes.

5. Conclusion

The improved teaching methodology of hammer throw technique significantly enhances technical preparedness and performance of university students. The experimental results confirm its effectiveness compared to traditional teaching approaches.

The proposed methodology can be recommended for implementation in physical education and sports training programs at higher education institutions.

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