Sciental Journal of Education Humanities and Social Sciences, Vol. 3. 11, (2025)
ISSN Online: 2961-0389
***Website**: https://scientaljournals.com/index.php/SJEHSS/index*

Submitted: August 10, 2025/ Accepted October 28, 2025/ Published November 08, 2025

METHODOLOGY FOR DEVELOPING STUDENTS' CREATIVE ABILITIES THROUGH PHYSICAL EDUCATION TOOLS

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Abstract:
This article provides an analytical overview of the levels and possibilities of expressing creative activity during physical movement. It emphasizes individual characteristics of motor activity and focuses on the conscious and unconscious levels of creativity in physical performance. It substantiates the development of students' creative abilities through physical movement activities.

Keywords: Motor activity, creative activity, creative method, motor creativity, intuition, imagination, complex exercises, reproductive task, imitation task, conscious level, unconscious level.

Introduction

In the current stage of global educational reforms, aligning education with modern requirements has become one of the top priorities. The *2030 Education Agenda*, adopted at the World Forum held in Incheon, South Korea, in May 2015, identified "access to quality education and the promotion of creative abilities" as key goals.

Particular attention is being paid to the development of future teachers' creative abilities, fostering creative thinking through practical exercises and innovative technologies. The implementation of STEAM education, which encourages the linkage of learners' knowledge and skills in natural and economic sciences to real life, aims to develop students' research capabilities, creativity, and interest in innovation.

International comparative studies such as IEA, TIMSS, CIVIC, PIRLS, and PISA aim to shape students' ability to understand and solve real-world problems using scientific methods, enabling them to make informed decisions based on observations and experiments. These processes necessitate the development of modern pedagogical approaches to foster students' creative abilities.

In Uzbekistan, the adoption of a National Curriculum based on international standards, which emphasizes practical work and independent student activity, underscores the need for research in this direction. Improving the quality of physical education lessons, utilizing advanced educational technologies, and organizing creativity-oriented activities are essential for

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developing students' intellectual and motor-creative abilities. Therefore, designing a holistic methodology to develop creativity during physical education classes is of particular relevance. Currently, in the theory and practice of physical education, there is still a lack of comprehensive methodological solutions aimed at developing school students' creative and motor abilities integrally. The process of forming subjective creativity during physical education classes remains under-researched.

State of the Problem. In Uzbekistan, various studies have been conducted on the methods of developing creative abilities in education. For instance:
M.B. Jumazoda has researched different methodological directions.
N.Sh. Toshpulatova has developed scientific-methodical recommendations for forming students' scientific worldview through interdisciplinary teaching of natural and exact sciences.
V.Sh. Rakhimov, Sh.V. Jalalov, K.D. Yarashov, R.S. Salomov, O.Sh. Salimov, O.F. Qambarov, and M.Kh. Mirjamolov have focused on students' physical development and health.
F.T. Masharipov, F.M. Muradov, and Ch.A. Berdieva studied differentiated approaches in physical education.
G.A. Yusupov, D.R. Norkulov examined methodology and correction of students' physical development.
B.R. Khudoyberdiev and A.E. Madaminov worked on ensuring harmony between physical and mental development.
However, psychological-pedagogical features of directing future teachers toward creative activity during the teaching of natural sciences, as well as models and pedagogical conditions for implementing innovative approaches to creativity, remain insufficiently explored. This necessitates further scientific inquiry into the pedagogical foundations of fostering students' creativity in natural science education.

Research Aim. To explore and analyze methods for developing students' creative abilities during physical education classes, and to determine their effectiveness and influence on students' motor-creative skills.

Research Tasks. To provide pedagogical conditions that actualize students' creative activity;
To implement creative ability development as a purposeful process;
To consider the step-by-step nature of developing students' creative engagement;
To justify the effectiveness of integrating mental and physical activity during physical education.

Object of the Study. The process of developing creative abilities in secondary school students during physical education lessons.

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Subject of the Study. Organizational-methodological foundations for developing students' creative abilities in physical education.

Research Methods. The study employs methods such as literature review and analysis, surveys, lesson analysis, pedagogical testing, pedagogical experimentation, observation, and statistical analysis.

Scientific Novelty. The study reveals the essence, content, and levels of manifestation of students' creative activity by prioritizing the integration of intellectual and physical activity in physical education classes.
Motivation toward physical activity is enhanced through tools and methods that support the formation of creative activity and the conditions for their use.
Practical mechanisms and methodologies for developing students' creative abilities during physical education are improved based on modern educational principles such as cognitive, personal, cultural, and competency-based approaches, while also addressing differentiation.
A classification of foundational exercises with increasing complexity, a system of creative movement activities, and criteria for assessing results are introduced, expanding the possibilities of enhancing students' physical readiness.

Practical Outcomes of the Research. A new model has been developed to organize students' movement and creative activity in an integrated way during physical education lessons.
The methodology for developing creative abilities based on students' physical readiness and forming/improving knowledge and skills has been enhanced using modern, effective approaches.
The application of creative approaches to movement-based activities improves physical preparation, movement skills, and creative abilities, and can be used in the development of relevant scientific and methodological literature.

Reliability of the Research Results. The reliability of the research findings is based on their theoretical-methodological substantiation, logical consistency, alignment of methods with research goals and objectives, thorough literature review, data analysis using modern software, and validation by authorized academic institutions.
Experimental Study on the Development of Students' Creative Activity in Physical Education Lessons

Objective of the Study
To develop and test a methodology for enhancing students' creative activity through physical education classes, using structured stages and differentiated methods.

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Table 1. Students Involved in the Experimental Study

Stage	Group Type	Girls	Boys	Total
I	Control	41	39	80
	Experimental	43	41	84
II	Control	41	32	73
	Experimental	42	35	77
III	Control	43	33	76
	Experimental	41	37	78
Total	**Control**	**125**	**104**	**229**
	Experimental	**126**	**113**	**239**

Structure of the Experiment

The experiment was conducted over **three stages**, each corresponding to a different level of creative activity development:

1. **Stage I: Reproductive Activity**
   - Students replicate learned movement skills.
   - Methods: explanation, demonstration, use of visual aids.
   - Emphasis: ability to reproduce known movements or tasks.
2. **Stage II: Normative (Regulatory) Activity**
   - Integration of creative and reproductive elements.
   - Students begin to make decisions independently and evaluate their work.
3. **Stage III: Personal Creative Activity**
   - Focus on divergent thinking, flexibility, and the ability to solve tasks in a non-standard, original way.

Teaching Approach

Classes were conducted twice a week. "Circle training" method with a **creative improvisation station**: students had to create a movement composition to match a selected music piece.

A **special evaluation card** was developed to track students' creative activity throughout the stages.

Table 2. Stage I – Assessment of Reproductive Creative Activity (Girls)

Group	Total Girls	Excellent	Good	Satisfactory	Unsatisfactory
Control	41	4	15	19	3
Experimental	43	3	17	20	3

At this initial stage, there was **no significant difference** between the groups, as most tasks were based on repeating learned movements.

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Table 4. Stage II – Evaluation Indicators (Girls)

Indicator	**Control Group**	**Experimental Group**
Number of students	43	41
Excellent	4	6
Good	15	26
Satisfactory	23	8
Unsatisfactory	1	1
Average mastery level	3.5	3.9
Mastery rate (%)	97	97
Quality indicator (%)	44	78
Chi-square value (χ^2 observed)	10.57	
χ^2 critical (df = 4, α = 0.05)	7.815	
Effectiveness indicator (%)	7.8	
KBDB – Knowledge level score (KBDB > 0)	0.4	
Student's t-test (critical T = 1.96)	2.62	
Confidence interval	3.3–3.7	3.7–4.1
Confidence level	0.03	
Accuracy (%)	97	

Conclusion:

1. The experimental group significantly outperformed the control group. The difference is statistically significant at a 97% confidence level (p = 0.03).
   Key Findings and Conclusions
2. The step-by-step approach to teaching creative activity in physical education classes significantly improved performance in the experimental group, especially during the reproductive stage.
3. In the normative stage, both boys and girls in the experimental group demonstrated higher creativity scores.
4. During the personal creative activity stage, students in the experimental group showed notably higher results compared to those in the control group.
5. Differences were also found between girls and boys in how creative activity was manifested:
   a. Girls excelled in **improvisation-based tasks**.
   b. Boys performed better in **game-based physical activities**.
6. Results show a clear need for **gender-sensitive and differentiated teaching methods** to enhance creative performance in physical education.
7. The findings highlight the necessity of **integrating creative development** into physical education and adjusting methods based on the nature of the task and the student's profile.

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