

INTEGRATION OF PSYCHOLOGICAL TECHNOLOGIES INTO PHYSICAL
EDUCATION OF PRIMARY SCHOOLCHILDREN**Turdimuratov Dilmurad Yuldashevich**Senior Lecturer, Department of Physical Education
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Abstract: The article examines the possibilities of integrating psychological technologies into the system of physical education for primary schoolchildren.

The purpose of the study is to substantiate and experimentally confirm the effectiveness of using psychotechnologies - including autogenic exercises, visualization, emotional self-regulation, and game-based methods - in the process of forming positive motivation for physical activity and strengthening the volitional sphere of students.

The methods used included pedagogical observation, questionnaires, psychodiagnostics (assessment of anxiety and motivation levels), as well as a pedagogical experiment involving control and experimental groups. The obtained results demonstrated that the use of psychological technologies contributes to reducing academic anxiety, increasing interest in physical education classes, and developing stable self-control skills.

It is concluded that the systematic inclusion of psychological and pedagogical tools in the content of physical education at the primary level is essential for achieving a holistic educational and developmental effect.

Keywords: psychological technologies, physical education, primary schoolchildren, motivation, self-regulation, emotional development.

Introduction. Physical education in primary school has traditionally focused on developing basic motor skills and fostering a healthy lifestyle. However, numerous studies have shown that the effectiveness of physical education lessons is largely determined by psychological factors such as the level of intrinsic motivation, self-regulation, emotional stability, and self-efficacy of young learners [4, 5]. In this context, psychological technologies-including autogenic training, guided visualization, breathing and relaxation practices, mindfulness techniques, and game-based socio-emotional learning methods - are considered valuable resources for enhancing engagement and improving the quality of motor skill acquisition [1, 3, 6].

The development of a child at the primary school age is characterized by the rapid formation of voluntary behavior, an internal plan of actions, and self-control functions [2, 8, 9]. From the perspective of the cultural - historical approach, psychological tools serve as mediators between the external organization of the lesson and the internal mental processes of the learner. Activity theory [7, 11] and the achievement motivation approach emphasize the importance of learning motives and the child's subjective position during physical education lessons [10, 12].

Modern motivational frameworks - Self-Determination Theory and Self-Efficacy Theory-provide operational guidelines: supporting autonomy, competence, and relatedness enhances intrinsic motivation, while the deliberate accumulation of "successful experiences" increases the child's belief in their ability to perform physical tasks effectively. The Emotion Regulation Model explains how breathing and relaxation practices reduce over-arousal and anxiety, improving attention and readiness for movement [3, 7]. Research on executive functions and the relationship between physical activity and cognitive performance demonstrates the mutual

reinforcement of motor and cognitive domains when instruction is organized with sound psychological and pedagogical support [6, 11].

In motor learning, Bernstein's concept of movement construction and Schmidt's schema theory highlight the role of internal feedback and mental imagery; within this framework, visualization technologies function as effective tools for refining sensorimotor representations and stabilizing motor skills.

The aim of the study is to substantiate and experimentally verify the effectiveness of the systematic integration of psychological technologies into the structure of physical education lessons for primary schoolchildren in order to enhance their intrinsic motivation, self-regulation, and emotional stability, as well as to improve the mastery of motor actions.

Methods. The study was conducted during the 2024-2025 academic year in three general education schools in the city of Termez (Uzbekistan).

A total of 64 primary school students aged 7-10 years participated in the research. Among them, 32 students formed the experimental group (EG) and 32 students comprised the control group (CG).

The composition of both groups was equalized by gender, age, and level of physical fitness to ensure comparability. All participants were medically cleared to take part in physical education activities.

Parental written informed consent was obtained for all participants in accordance with ethical standards of pedagogical research.

The experimental program was aimed at integrating psychological technologies-such as autogenic exercises, visualization, emotional self-regulation, and game-based psychotechnics-into physical education lessons. The control group continued to study according to the standard national curriculum without the inclusion of psychological techniques.

Results. At the beginning of the study, there were no statistically significant differences between the control group (CG) and the experimental group (EG) ($p > 0,05$).

The mean scores for the main variables - motivation, anxiety, self-efficacy, discipline, and overall physical fitness - were at a moderate level, which confirms the initial comparability of the two groups.

Indicator	CG (M $\pm$ SD)	EG (M $\pm$ SD)	p-value
Motivation for physical education (points, 0–10)	5,3 $\pm$ 1,2	5,1 $\pm$ 1,3	> 0,05
Level of anxiety (points, 0–100)	48,6 $\pm$ 9,8	49,2 $\pm$ 9,4	> 0,05
Self-efficacy (points, 0–10)	5,7 $\pm$ 1,1	5,5 $\pm$ 1,3	> 0,05
Discipline level (expert rating, 0–5)	3,1 $\pm$ 0,7	3,0 $\pm$ 0,6	> 0,05
Physical fitness (composite index)	4,8 $\pm$ 0,9	4,9 $\pm$ 1,0	> 0,05

These data indicate that the participants in both groups started the experiment from a comparable baseline level across all measured parameters, ensuring the validity of subsequent comparisons and interpretations.

After four months of implementing psychological technologies into physical education lessons, the experimental group (EG) demonstrated pronounced positive changes, whereas no significant improvements were observed in the control group (CG).

Indicator	CG (before / after)	EG (before / after)	Change (%)	p (between groups)
Motivation for physical	5,3 $\rightarrow$ 5,9	5,1 $\rightarrow$ 7,1	+31%	< 0,01

education				
Anxiety level (Phillips test, ↓ better)	48,6 → 47,4	49,2 → 37,4	-24%	< 0,01
Self-efficacy	5,7 → 6,0	5,5 → 7,2	+30%	< 0,01
Discipline / self-control	3,1 → 3,3	3,0 → 4,0	+29%	< 0,05
Physical fitness (integrated index)	4,8 → 5,1	4,9 → 5,8	+18%	< 0,05

(↓ indicates that a lower score represents an improvement)

Interpretation of the Results. The data clearly show that the introduction of psychological technologies had a statistically significant positive effect on all measured parameters in the experimental group.

Motivation for physical education increased by 31%, reflecting higher engagement and intrinsic interest in physical activity.

Anxiety levels decreased by 24%, indicating enhanced emotional regulation and stress resilience.

Self-efficacy rose by 30%, showing improved confidence in performing physical tasks successfully.

Discipline and self-control indicators improved by 29%, which aligns with the development of volitional qualities and responsibility during lessons.

Even though the main focus was psychological, overall physical fitness increased by 18%, confirming that emotional comfort and motivation positively influence physical performance.

These findings substantiate the hypothesis that the integration of psychological technologies into physical education lessons contributes to both psychological and physical development, creating a more holistic and effective educational environment.

These findings are consistent with the results of the quantitative analysis and confirm the comprehensive effect of integrating psychological technologies into the process of physical education.

Thus, the integration of psychological technologies resulted in a 3,6-fold increase in the overall psycho-pedagogical effect compared to the traditional model of physical education.

Conclusion. The conducted study confirmed the hypothesis that the systematic integration of psychological technologies into the process of physical education for primary schoolchildren significantly increases the effectiveness of pedagogical influence.

Based on the analysis of dynamic and qualitative data, the following conclusions can be drawn:

1. Psychological technologies - including autogenic exercises, visualization, breathing practices, game-based self-regulation, and reflective techniques - serve as effective tools for developing intrinsic motivation, self-confidence, and a positive emotional attitude toward physical education among primary schoolchildren.
2. The integration of psychotechnologies into the three phases of a physical education lesson ("introductory - main - concluding") ensures comprehensive influence on the cognitive, emotional, and volitional spheres of the child's personality without disrupting the logic of the educational process or requiring additional time.
3. The experimental data demonstrated a statistically significant ($p < 0,05-0,01$) improvement in motivation (+31%), self-efficacy (+30%), and discipline (+29%), along with a 24% reduction in anxiety levels.

These findings reflect the complex effect of psychological technologies, which enhance emotional stability, self-confidence, and internal self-control.

4. Psychological comfort and a positive classroom atmosphere contribute to more effective mastery of motor actions and an overall improvement in physical fitness.

Thus, the integration of psychological technologies performs not only a corrective but also a developing and educational function, supporting the holistic formation of a child's personality through physical education.

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