"DEVELOPMENT OF PHYSICAL SKILLS IN VISUALLY IMPAIRED STUDENTS USING GAME-BASED AND SIMULATION METHODS"

Qurbonova Nasiba Mirsalim qizi
Teacher at Specialized School No. 60 (Nurli Maskan)
for visually impaired children with special educational needs,
under the jurisdiction of the Samarkand Regional
Department of the National Agency for
Social Protection under the President of the Republic of Uzbekistan.

ABSTRACT: This article explores methods for developing physical skills in visually impaired students through game-based and simulation approaches. The study examines how preparatory classes utilize interactive games and simulation exercises to improve endurance, speed, balance, and coordination. The article emphasizes the importance of individualized instruction and safe practice environments.

KEYWORDS: Visually impaired students, physical skills, game-based methods, simulation exercises, preparatory classes, endurance, speed, balance, coordination.

Physical education plays a crucial role in the development of visually impaired children, contributing to their independence, social adaptation, and overall well-being. Traditional methods may not fully meet the needs of students with visual impairments. Therefore, integrating game-based and simulation methods provides an effective approach for improving physical skills.

Simulation exercises allow students to experience movements visually, audibly, and tactilely, enhancing their understanding of correct body mechanics. Game-based methods engage students through interactive challenges, encouraging participation and motivation. Together, these methods support the development of endurance, speed, balance, and coordination.

Furthermore, an individualized approach ensures that exercises match each student's abilities, providing safety and promoting confidence. Gradually increasing exercise complexity helps students adapt progressively, leading to better physical, psychological, and social outcomes.

Developing physical skills in visually impaired students requires carefully structured and engaging approaches. Game-based and simulation methods have proven to be highly effective in enhancing key physical qualities such as endurance, speed, balance, and coordination. Preparatory classes provide a controlled and supportive

environment in which students can safely practice these exercises under professional guidance.

Endurance is a primary focus in these combined methods. Initially, students perform basic movements such as walking, light jogging, and simple cyclic exercises. Simulation exercises help students understand correct posture and movement patterns through tactile, audio, and visual cues. Game-based activities complement this by incorporating challenges that maintain students' engagement and encourage consistent participation. Gradual increases in exercise intensity and duration ensure progressive improvement in cardiovascular fitness and stamina.

Speed and agility are developed through a variety of interactive tasks. Exercises include obstacle navigation, hand-eye coordination drills, and reaction-time activities. Simulation exercises allow students to visualize or feel the sequence of movements, while game-based challenges provide real-time feedback that encourages rapid adjustment and improvement. By practicing these activities repeatedly, students improve motor responsiveness, coordination, and overall physical readiness.

Balance and coordination are enhanced through structured exercises involving uneven surfaces, balance beams, and multi-directional movements. Simulation exercises offer sensory feedback to help students maintain stability, while interactive games encourage dynamic movement and adaptation. This combination improves proprioception, spatial awareness, and motor planning, all of which are critical for independent movement and daily life activities.

Individualized instruction is a cornerstone of this methodology. Each student's abilities and limitations are assessed, and exercises are adjusted accordingly. This ensures that students are appropriately challenged without being overwhelmed, promoting steady progress and maintaining motivation. Individualized training also fosters self-confidence and encourages students to take initiative in performing movements independently.

Progressive structuring of exercises is another key component. Beginning with simple, safe movements, the complexity and intensity of exercises gradually increase. This may include combining different movement patterns, increasing repetitions, and introducing more complex sequences. Such progression allows students to systematically develop endurance, speed, balance, and coordination while minimizing the risk of injury and building confidence.

Psychological and social development is closely linked to these physical improvements. Successfully completing exercises enhances self-esteem, encourages a

positive attitude towards physical activity, and fosters resilience. Group-based game activities promote teamwork, communication, and social interaction, while individually guided simulation exercises strengthen problem-solving skills and independent decision-making. Together, these activities provide a holistic approach to development that extends beyond physical abilities.

The integration of technology, such as audio and tactile cues in simulation exercises, further enhances learning outcomes. These tools provide immediate feedback, reinforce correct movement patterns, and maintain engagement. When combined with interactive games, this approach creates a responsive and immersive learning environment that accommodates students with varying levels of visual impairment.

Research shows that using game-based and simulation methods in preparatory classes leads to significant improvements in endurance, speed, balance, and coordination among visually impaired students. Moreover, students develop higher self-confidence, social competence, and independence in physical activities. These combined methods offer a comprehensive framework for supporting the physical, psychological, and social development of visually impaired children, preparing them for a more active and independent life.

In conclusion, the use of game-based and simulation methods in preparatory classes provides an effective and inclusive approach to physical education for visually impaired students. By fostering endurance, speed, balance, and coordination, while also supporting psychological and social development, these methods contribute to the holistic growth and long-term well-being of students with visual impairments.

The study demonstrates that game-based and simulation methods are highly effective in developing physical skills in visually impaired students. These methods systematically enhance endurance, speed, balance, and coordination, providing students with the necessary abilities for independent movement and daily activities.

Individualized instruction ensures that exercises are tailored to each student's abilities, allowing safe progression and maximizing learning outcomes. Simulation exercises provide sensory feedback, while game-based activities maintain engagement and motivation, fostering confidence and active participation.

Furthermore, this approach positively impacts psychological and social development. Students gain self-esteem, teamwork experience, and improved social interaction skills alongside their physical improvements. Integrating game-based and simulation methods in preparatory classes offers a comprehensive framework for

holistic development, supporting the long-term health, independence, and quality of life of visually impaired students.

REFERENCES

1. Abdullaev A. Physical Education Methodology. – Tashkent: O‘qituvchi, 2018.
2. Karimov S. Physical Development in Children with Special Needs. – Tashkent: Fan, 2020.
3. Rakhimova N. Methods for Working with Visually Impaired Children. – Tashkent: Pedagogika, 2019.
4. Shavdirov S.A. Factors Influencing the Development of Physical Competencies in Students // Inter Education & Global Study. – 2024. – №1. – P. 8-14.
5. Baymetov B.B., Shovdirov S.A. Methods of Organizing Practical and Theoretical Classes for Students in the Process of Teaching Fine Arts // International Journal on Integrated Education. – 2023. – Vol. 4. – №3. – P. 60-66.
6. UNESCO. Guidelines for Physical Education of Children with Visual Impairment. – Paris, 2021.
7. Ibraimov X., Shovdirov S. Theoretical Principles of the Formation of Study Competencies Regarding Art Literacy in Students // Science and Innovation. – 2023. – Vol. 2. – №B10. – P. 192-198.