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MARKING MOMENTUM
FOR INNOVATION AND TECHNOLOGICAL TRANSFER

National Recovery and Resilience Plan
OF THE REPUBLIC OF BULGARIA

Research Group: SWIMMING EDUCATION FOR CHILDREN WITH SPECIAL EDUCATIONAL NEEDS
Research field: Swimming

Head of the research group
Assoc.Prof. Bilyana Rangelova
Members of the group
assistant Krasimira Desheva

METHODOLOGICAL FRAMEWORK AND STRUCTURE OF AN ADAPTED TRAINING AND EDUCATIONAL MODEL IN SWIMMING FOR STUDENTS WITH SPECIAL EDUCATIONAL NEEDS

Introduction

The training and educational process in swimming for children with special educational needs (SEN) is complex and requires flexibility, taking into account both individual and group characteristics. Unlike compulsory physical education, swimming as an additional activity allows greater pedagogical autonomy and opportunities for differentiated and targeted skill development.
The process is based on strategic planning with clearly defined aims, adapted to participants' abilities, facilities, and training duration. Ideally, groups should be relatively homogeneous, enabling the application of an individualised and adaptive methodology.
The instructional process is structured into three stages: preparatory, main, and concluding.

Preparatory Stage.
This stage establishes the motor and functional foundation through exercises for flexibility, coordination, strength, and endurance. It also focuses on adaptation to the aquatic environment, body positioning, and breathing control, which are particularly challenging for children with SEN.

Main Stage.
The main stage focuses on the acquisition and automatisation of swimming techniques, following the principle of progressive complexity. Key elements include leg and arm movements in all four strokes, coordinated swimming with breathing, dives and turns. Skills are developed through phases of learning, reinforcement, and application.
Special attention is given to developing sport thinking through interactive and game-based activities, as well as to applying an individual approach that supports motivation, confidence, and personal progress.

Concluding Stage.
The concluding stage ensures recovery, stabilisation of workload, and reflection. It includes relaxation exercises and feedback, which are essential for maintaining motivation and improving the learning process.

Developing a Thematic Curriculum for Swimming Instruction for Students with SEN

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Designing a thematic curriculum for swimming instruction for children with SEN requires a clearly structured content aligned not only with the age and physical characteristics of the students but also with their specific impairments, interests, motivations, and initial skill levels.
The main objective of such a plan is to organise the training process in a way that ensures systematic progression and efficiency in mastering technical elements across the four swimming strokes.
The development of the curriculum is guided by several key principles:
Didactic sequencing — learning progresses from simple to complex skills, from isolated swimming elements to integrated coordination.
Methodological progression — reflecting the gradual transition from technical mastery to competitive application.
Motivational engagement — achieved through the inclusion of game-like situations, competitive elements, and dynamic exercises that sustain attention and enthusiasm.
Flexibility and adaptability — allowing for adjustments based on group progress, individual needs, or circumstantial factors (such as absences or limited facilities).
The *thematic plan* covers a defined number of sessions corresponding to the duration of the training programme. Each session lasts approximately **40–45 minutes** and contains a specific topic, clearly formulated objectives, core content, methodological guidelines, and indicators for assessing mastery.

Defining Objectives
The objectives of the training must be educational, formative, and health-oriented:
Educational: mastering swimming techniques and movement coordination;
Formative: developing discipline, responsibility, and teamwork;
Health-oriented: strengthening the musculoskeletal system, improving coordination and endurance.

Differentiation of Thematic Units
The educational process is divided into introductory, main, and final thematic units.
Each focuses on distinct aspects of training:
The *introductory unit* establishes foundational skills — preparatory exercises, diagnostics of initial abilities, basic elements such as adaptation to the aquatic environment, breathing control, and initial stroke movements.
The *main unit* involves intensive technical development — consolidation and refinement of swimming elements, coordination of strokes, dives, and turns.
The *final unit* comprises summarising lessons, peer games, progress assessments, and final diagnostics.

Methods and tools

Priority is given to *game-based, practical*, and *competitive methods* — both on land and in water — applied through dynamic drills, partner work, small-group activities, and individual swimming practice. At the end of each thematic unit, *formative assessment* can be implemented through observation, practical tests, independent or pair work, and, in the final phase, a summarising evaluation using standardised testing or games with objective scoring criteria.

Assessment of Results and Effectiveness of Swimming Education
Assessment in the process of swimming instruction for children with special educational needs (SEN) is not merely a tool for recording achievements; it represents a complex pedagogical mechanism that performs regulatory, diagnostic, stimulating, and guiding functions. It is particularly important that the assessment aligns with the realities of adapted education, where the principles of voluntariness, intrinsic motivation, and self-improvement prevail. Consequently, the approach to evaluation must be positive, constructive, and oriented not towards comparing learners with each other, but rather towards individual progress and engagement. The main goal of assessing sport-technical skills within the group context is to determine the degree of mastery of key technical elements and to trace the dynamics of individual and functional development among students.

Scale for Performance Evaluation of ...

Criteria	Maximum
Correct starting position	1 pt
Correct body position	2 pts
Correct breathing technique	4 pts
Correct legs kicking	2 pts
Correct arm movements	2 pts
Poper coordination between arms and legs	4 pts
Correct dive	1 pt
Correct turn	1pt

After summation: 12–17 pts – Excellent (Grade 6); 10–12 pts – Very good (Grade 5); 7–9 pts – Good (Grade 4); 5–6 pts – Satisfactory (Grade 3); Below 5 pts – Insufficient (Grade 2)

Tools and Forms for Current and Final Performance Control

Monitoring and measuring achievement in swimming education for SEN groups represent an essential pedagogical process, establishing the connection between objectives, methods, and real outcomes. For this process to be meaningful and pedagogically valid, suitable tools must be employed to encompass both formative (ongoing) and summative (final) assessment stages.
Evaluation should address not only sport-technical mastery but also individual progress, participation, and motivation.
Current (Formative) Control
The purpose of formative control is to monitor the dynamics of learning throughout the process and provide timely feedback to both students and instructors.
Its primary role is regulatory, allowing adaptation of the methodology, intensity, and complexity according to observed results.
Methods include: *Direct observation; Practical drills with control objectives; Game-based control situations; Self- and peer-assessment; Surveys and verbal feedback*
Formative control must be applied regularly but unobtrusively, perceived as an organic part of learning rather than external enforcement. Its main contribution lies in creating a developmental context where mistakes are viewed as learning opportunities rather than failures.
*Final Control:*Final control is conducted at the end of the instructional cycle (for example, at the end of a term or programme) and serves a summative function. It evaluates both the final level of sport-technical mastery and the overall progress relative to the initial diagnostics.
Summative assessment must be objective, structured, and multidimensional, combining practical testing and reflective self-assessment.
The following tools are particularly suitable: *Practical tests; Competitive simulations; Satisfaction survey; Comparative analysis; Learner portfolios*

Conclusion

An effective training and educational process in swimming for children with SEN requires the integration of scientifically grounded methodology and adaptive pedagogy.
Structured thematic planning, phased skill development, and systematic assessment are key factors for achieving sustainable improvement in both sport-technical and personal development.
This concept promotes not only physical strengthening but also social integration, self-confidence, and teamwork among children with SEN.

Findings
The structured training-educational process in swimming for children with SEN leads to significant progress in both technical performance and social adaptation; The phased approach (preparatory, main, concluding) ensures effective mastery of movements and adaptation to the aquatic environment; Individualised instruction and differentiated tasks stimulate intrinsic motivation and active engagement; Systematic assessment with clearly defined criteria facilitates progress tracking and enables pedagogical correction; The inclusion of game and competitive elements increases engagement and reduces anxiety, which is often present among children with SEN.

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