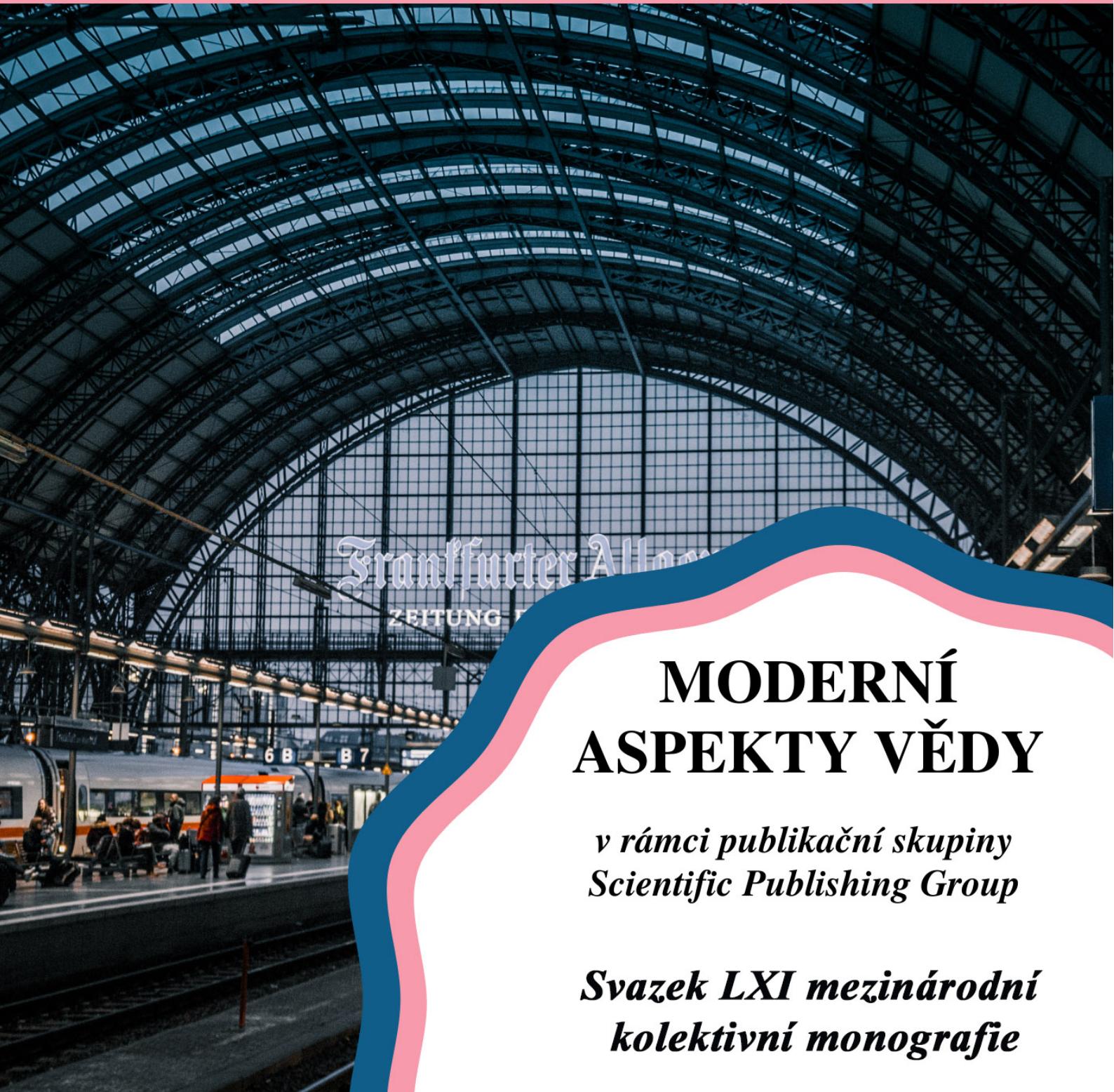




Наукові перспективи  
Видавнича група



# MODERNÍ ASPEKTY VĚDY

*v rámci publikační skupiny  
Scientific Publishing Group*

*Svazek LXI mezinárodní  
kolektivní monografie*



*Česká republika  
2025*



*Mezinárodní Ekonomický Institut s.r.o. (Česká republika)*  
*Středoevropský vzdělávací institut (Bratislava, Slovensko)*  
*Národní institut pro ekonomický výzkum (Batumi, Gruzie)*  
*Al-Farabi Kazakh National University (Kazachstán)*  
*Institut filozofie a sociologie Ázerbájdžánu Národní akademie věd*  
*(Baku, Ázerbájdžán)*  
*Institut vzdělávání Ázerbájdžánské republiky (Baku, Ázerbájdžán)*  
*Batumí School of Navigation (Batumí, Gruzie)*  
*Regionální akademie managementu (Kazachstán)*  
*Veřejná vědecká organizace „Celokrajinské shromáždění lékařů ve veřejné*  
*správě“ (Kyjev, Ukrajina)*  
*Nevládní organizace „Sdružení vědců Ukrajiny“ (Kyjev, Ukrajina)*  
*Univerzita nových technologií (Kyjev, Ukrajina)*  
*Mezinárodní poradenská společnost "Sidcon" (Kyjev, Ukrajina)*  
*Evropské lyceum "Vědecké perspektivy" (Kyjev, Ukrajina)*

*v rámci publikační skupiny Publishing Group „ Vědecká perspektiva “*

# MODERNÍ ASPEKTY VĚDY

*Svazek LXI mezinárodní kolektivní monografie*

Česká republika  
2025

*International Economic Institute s.r.o. (Czech Republic)*  
*Central European Education Institute (Bratislava, Slovakia)*  
*National Institute for Economic Research (Batumi, Georgia)*  
*Al-Farabi Kazakh National University (Kazakhstan)*  
*Institute of Philosophy and Sociology of Azerbaijan National Academy of Sciences (Baku, Azerbaijan)*  
*Institute of Education of the Republic of Azerbaijan (Baku, Azerbaijan)*  
*Batum Navigation Teaching University (Batumi, Georgia)*  
*Regional Academy of Management (Kazakhstan)*  
*Public Scientific Organization "Ukrainian Assembly of Doctors of Sciences in Public Administration" (Kyiv, Ukraine)*  
*Public Organization Organization "Association of Scientists of Ukraine" (Kyiv, Ukraine)*  
*University of New Technologies (Kyiv, Ukraine)*  
*International Consulting company "Sidcon" (Kyiv, Ukraine)*  
*European Lyceum "Scientific Perspectives" (Kyiv, Ukraine)*  
  
*within the Publishing Group "Scientific Perspectives"*

# MODERN ASPECTS OF SCIENCE

*61-th volume of the international collective monograph*

Czech Republic  
2025

ISBN 978-617-8614-19-5  
<https://doi.org/10.52058/61-2025>  
UDC 001.32: 1/3] (477) (02)  
C91

**Vydavatel:**

Mezinárodní Ekonomický Institut s.r.o.  
se sídlem V Lázních 688, Jesenice 252 42  
IČO 03562671 Česká republika  
Zveřejněno rozhodnutím akademické rady

Mezinárodní Ekonomický Institut s.r.o. (Zápis č. 197/2025 ze dne 08. srpna 2025)



*Monografie jsou indexovány v mezinárodním vyhledávači Google Scholar*

*Partnerskými akademickými mezinárodními vydavateli monografie jsou: TOJELT, Paradigm Journal a Shanlax International Journal of Education*

**Recenzenti:**

**Karel Nedbálek** - doktor práv, profesor v oboru právo (Česká republika)

**Markéta Pavlova** - ředitel, Mezinárodní Ekonomický Institut (České republika)

**Iryna Zhukova** -kandidátka na vědu ve veřejné správě, docentka (Ukrajina)

**Savvas Mavridis** - profesor na Mezinárodní řecké univerzitě v oddělení marketingu a cestovního ruchu, Veřejná instituce (Greece)

**Yevhen Romanenko** - doktor věd ve veřejné správě, profesor, čtený právník Ukrajiny (Ukrajina)

**Humeir Huseyn Akhmedov** - doctor of pedagogical sciences, professor (Azerbaijan)

**Oleksandr Datsiy** - doktor ekonomie, profesor, čestný pracovník školství na Ukrajině (Ukrajina)

**Jurij Kijkov** - doktor informatiky, dr.h.c. v oblasti rozvoje vzdělávání (Česká republika)

**Vladimír Bačíšin** - docent ekonomie (Slovensko)

**Ahmet Selcuk Akdemir** - doktor věd, profesor, Malatya Turgut Ozal University (Turecko)

**Peter Osváth** - docent práva (Slovensko)

**Oleksandr Nepomnyashy** - doktor věd ve veřejné správě, kandidát ekonomických věd, profesor, řádný člen Vysoké školy stavební Ukrajiny (Ukrajina)

**Dina Dashevská** - geolog, geochemik Praha, Česká republika (Izrael)

**Tým autorů**

C91 Moderní aspekty vědy: LXI. Díl mezinárodní kolektivní monografie / Mezinárodní Ekonomický Institut s.r.o.. Česká republika: Mezinárodní Ekonomický Institut s.r.o., 2025. str. 476

Svazek LXI mezinárodní kolektivní monografie obsahuje publikace o: utváření a rozvoji teorie a historie veřejné správy; formování regionální správy a místní samosprávy; provádění ústavního a mezinárodního práva; finance, bankovnictví a pojišťovnictví; duševní rozvoj osobnosti; rysy lexikálních výrazových prostředků imperativní sémantiky atd.

*Materiály jsou předkládány v autorském vydání. Autoři odpovídají za obsah a pravopis materiálů.*



§3.3 EFFECTIVE IMPLEMENTATION OF PHYSICAL EDUCATION LESSONS IN GENERAL SECONDARY EDUCATION INSTITUTIONS: INTEGRATION OF GENERAL PEDAGOGICAL REQUIREMENTS AND PRINCIPLES (Khrystova T., Bogdan Khmelnitsky Melitopol State Pedagogical University, Protsenko A., Bogdan Khmelnitsky Melitopol State Pedagogical University, Sopotnytska O., Volodymyr Hnatyuk Ternopil National Pedagogical University, Nepsha O., Bogdan Khmelnitsky Melitopol State Pedagogical University, Sukhanova H., Bogdan Khmelnitsky Melitopol State Pedagogical University, Kyriienko O., Bogdan Khmelnitsky Melitopol State Pedagogical University, Kyriienko M., Bogdan Khmelnitsky Melitopol State Pedagogical University).....	113
§3.4 СОЦІАЛЬНО-ПСИХОЛОГІЧНА ПРОБЛЕМАТИКА ПРОЗИ ЦАНЬ СЮЕ МОВОЮ АНІМАЛІСТИЧНИХ ТОПОСІВ (Гальчук О.В., Київський столичний університет імені Бориса Грінченка, Максимець В.О., Київський столичний університет імені Бориса Грінченка).....	123
§3.5 ІНТЕГРАЦІЯ ЦИФРОВИХ ТЕХНОЛОГІЙ У ВИКЛАДАННЯ УКРАЇНСЬКОЇ МОВИ: ВИКЛИКИ ТА ПЕРСПЕКТИВИ ПЕДАГОГІКИ ВИЩОЇ ОСВІТИ (Нагрибельна І.А., Херсонська державна морська академія).....	137
§3.6 ЗАСТОСУВАННЯ ІННОВАЦІЙНИХ ПЕДАГОГІЧНИХ ТЕХНОЛОГІЙ У КОНТЕКСТІ СУЧАСНОЇ ОСВІТИ ПРИ ПІДГОТОВЦІ ФАХІВЦІВ ФАРМАЦЕВТИЧНОЇ ГАЛУЗІ: ОГЛЯД ТА ПЕРСПЕКТИВИ (Ходаківська В.П., Житомирський базовий фармацевтичний фаховий коледж, Сен'ків Н.М., Житомирський базовий фармацевтичний фаховий коледж, Завадська Н.П., Житомирський базовий фармацевтичний фаховий коледж, Кравчук О.М., Житомирський базовий фармацевтичний фаховий коледж, Приступко О.М., Житомирський базовий фармацевтичний фаховий коледж).....	172
§3.7 МЕТОДИКА РОЗВИТКУ ФІЗИЧНИХ ЯКОСТЕЙ СТАРШО-КЛАСНИКІВ ЗАСОБАМИ ГІМНАСТИКИ (Чепелюк А.В., Дрогобицький державний педагогічний університет імені Івана Франка, Ланяк Ю.В., Дрогобицький державний педагогічний університет імені Івана Франка).....	187



**§3.3 EFFECTIVE IMPLEMENTATION OF PHYSICAL EDUCATION LESSONS IN GENERAL SECONDARY EDUCATION INSTITUTIONS: INTEGRATION OF GENERAL PEDAGOGICAL REQUIREMENTS AND PRINCIPLES** (**Khrystova T.**, Bogdan Khmelnitsky Melitopol State Pedagogical University, **Protsenko A.**, Bogdan Khmelnitsky Melitopol State Pedagogical University, **Sopotnytska O.**, Volodymyr Hnatyuk Ternopil National Pedagogical University, **Nepsha O.**, Bogdan Khmelnitsky Melitopol State Pedagogical University, **Sukhanova H.**, Bogdan Khmelnitsky Melitopol State Pedagogical University, **Kyriienko O.**, Bogdan Khmelnitsky Melitopol State Pedagogical University, **Kyriienko M.**, Bogdan Khmelnitsky Melitopol State Pedagogical University)

**Introduction.** The modern educational space is dominated by competency-based and activity-based approaches, which require teachers not only to transfer knowledge, but also to create conditions for students to actively acquire skills through independent practical activities. Thus, the quality of a physical education lesson directly depends on comprehensive adherence to general pedagogical and specific training principles, as well as on the clear methodological organisation of educational activities. The aim of our study is to analyse the key requirements and principles that ensure the high educational effectiveness of physical education lessons, as well as to determine the methodological basis for their planning and implementation, in particular, the features of formative assessment of the dynamics of students' physical fitness. Consideration of these aspects will make it possible to form a holistic view of the necessary conditions for transforming lessons into a powerful tool for the comprehensive development of schoolchildren's personalities.

**Presentation of the main material.** A lesson is the leading (main) organisational form of the educational process in physical education in general



education institutions. Effective implementation of a lesson is determined by the need to integrate a number of general pedagogical requirements, in particular: sanitary and hygienic, psychological and physiological, didactic and educational.

Effective implementation of physical education classes requires comprehensive compliance with general pedagogical requirements, which can be classified into four key areas:

1. Sanitary and hygienic requirements. Conducting a physical education lesson requires strict compliance with sanitary and hygienic requirements aimed at creating a safe and healthy educational environment. This includes maintaining proper hygiene at the place of instruction, ensuring the availability and use of only serviceable specialised sports equipment, as well as mandatory compliance by students with the rules of personal hygiene, which includes the use of special sports shoes and clothing and water procedures after completing physical activity.

2. Psychophysiological requirements. Psychophysiological requirements take into account the neurodynamic characteristics of students, which significantly affect the effectiveness of motor activity. It has been found that individuals with a predominance of excitation processes in the 'internal' balance of the nervous system have a high tolerance for fatigue, which is the neurodynamic basis for their increased endurance. This determines both an increased need for motor activity and the ability to continue activity and persevere even in conditions of fatigue. It is no coincidence that individuals with such typological characteristics show better success in the development of motor qualities and the mastery of motor skills.

3. Didactic requirements. In the context of didactic requirements, physical education lessons should implement a unity of educational, upbringing and developmental tasks. To achieve this complex goal, it is necessary to ensure the optimal choice of teaching methods and tools, which must be strictly consistent with the overall goal and specific tasks of the current lesson.



4. Educational requirements. The implementation of educational requirements in physical education lessons involves the purposeful formation of important social and personal qualities in students. Among these, the key importance is given to the development of courage, neatness (as a manifestation of responsibility and self-organisation) and sociability (as the ability to engage in effective social interaction and teamwork).

A key stage in preparation is determining the didactic goal, which involves establishing the scope of the teaching material and the desired level of its assimilation by students. In each lesson, the main content can be assimilated at all three levels:

perception, comprehension and memorisation;

application of knowledge, skills and abilities according to a model;

applying knowledge, abilities and skills in a new situation.

The effectiveness of the educational process in physical education classes is impossible without systematic adherence to fundamental pedagogical principles. These principles are divided into two categories: general pedagogical principles (didactic foundations), which regulate the learning process as a whole, and specific principles of physical education (training principles), which take into account the biological and physiological characteristics of the body's adaptation to physical exertion. The comprehensive application of these principles ensures the logicality, scientific validity, accessibility and sustainable developmental effect of the training session.

Table 1 below presents the classification and academic characteristics of the key principles that determine the quality and effectiveness of physical education lessons.



Table 1

## Principles of implementing the educational process in physical education classes [1-3]

Principle Characteristic	Principle Characteristic
General pedagogical principles (didactic principles)	
Scientific approach	Ensuring that the content of teaching corresponds to modern scientific knowledge in the field of physical culture and sport.
Systematicity and consistency	Adherence to the logical structure of teaching material and methodological consistency in the formation of motor skills.
Consciousness, activity and independence	Encouraging students to take a conscious approach to learning, cognitive activity and the ability to complete tasks independently.
Visuality	Using demonstrations, visual aids and objects to ensure effective perception of motor actions.
Thoroughness	Achieving a solid and conscious mastery of motor skills, habits and theoretical knowledge.
Connection between learning and practical activities	Focusing the educational process on the formation of essential applied skills.
Accessibility of learning and consideration of individual characteristics of students	Adapting the content and methods of teaching to the physical, psychological and age-related abilities of each student.
Emotionality of learning	Creating a positive emotional background that increases motivation and the quality of learning.
Specific principles of physical education (training principles)	
The principle of continuity	Ensuring systematic and continuous organisation of the physical improvement process.
Systematic alternation of exercise and rest	Optimal balance between physical exertion and recovery phases to achieve supercompensation and increase performance.
Gradual increase in developmental and training influences	Increasing the volume and intensity of exertion in accordance with the level of student preparedness.
Adaptive balancing of exercise dynamics	Flexible adjustment of training parameters to ensure optimal adaptation of the body to physical influences.
Cyclical structure of classes	Planning the training process in accordance with macro-, meso- and microcycles for structured improvement of fitness.
Age-appropriate physical education programmes	Ensuring that the content of physical exercises and development methods correspond to the biological age and stages of development of students.



Effective lesson planning is a crucial stage that requires clear specification of students' learning activities. The integration of modern educational paradigms, namely competence-based and activity-based approaches, plays a key role here [5].

The application of the competence-based approach involves not only the transfer of knowledge and the formation of skills, but also the development of students' ability to effectively apply the acquired experience in standard and non-standard situations. In turn, the activity-based approach requires the organisation of the educational process in such a way that the student is an active subject who acquires knowledge and skills through independent practical activity.

The design and delivery of a physical education lesson requires consideration of a number of key didactic requirements aimed at maximising educational effectiveness. The first requirement is that the lesson should not only provide an exposition of the teaching material or content, but also include tasks that require the immediate assimilation and practical application of the information received. This emphasises the need to integrate theoretical knowledge with practical motor activity.

The second important requirement concerns the organisation of independent research activities by students. A significant part of knowledge and skills should be acquired by students through independent problem solving and mastering the relevant methods of activity in the process of this search. This approach stimulates the development of critical thinking and independence.

The third requirement establishes the need for variability in the presentation of educational material. In some cases, it is advisable to provide ready-made information in the form of explanations, practical demonstrations and exercises. However, in other cases, the material should be studied by the teacher presenting a problem situation and then revealing the ways and types of educational activities required by students to solve it conclusively. This variability of methods ensures



the dynamism of the educational process and adaptation to different types of educational material.

Formative assessment is integrated with current and final forms of control through the use of a number of basic methods that ensure a comprehensive assessment of student progress.

First, the dynamics of functional status and physical development are assessed. This is achieved through a comparative analysis of the results of ongoing and final testing. The purpose of such analysis is to determine the level of achievement of individually or collectively set goals. Secondly, a key method is the assessment of the dynamics of the use of various physical exercises in different contexts: in everyday life, as well as in games and competitions.

Thirdly, the performance of educational tasks in a wide range of forms is assessed. This includes assessing activities directly during physical education lessons, participation in extracurricular forms of physical education, as well as the organisational activities of students within the educational institution. In addition, the achievement of goals set for independent study is subject to assessment. An important element is the creation of a portfolio, which may include creative developments (projects, sets of physical exercises, individual training programmes, forms of hardening, various forms of self-control). At the same time, information technologies and technological gadgets are actively used to increase the effectiveness of self-control and self-assessment [1].

The content of physical education lessons must meet a number of fundamental requirements, including: completeness (compliance with the current curriculum), scientific accuracy, close connection with life and practical activities, accessibility while maintaining a sufficient degree of complexity, as well as systematicity and consistency in the presentation of material [5].

In terms of methodology, it is advisable to use a variety of organisational forms – class, group and individual – to ensure a differentiated approach. To



maintain cognitive interest and effectiveness, it is necessary to ensure a purposeful variety of lesson structures and formats, actively use practice-oriented tasks and rational forms of teacher-student feedback. The key organisational requirements are the absence of a template, ensuring high motor density of the lesson (minimising unjustified pauses and excessive time for explanations) and saving time.

It is advisable to distinguish two components in the structure of the main part of the lesson. The first component is devoted to the means of the invariant module, which are aimed at improving the functional state and increasing the level of physical development through the performance of exercises and means of developing physical qualities. The second component of the main part is usually devoted to classes based on variable modules chosen by students. At the same time, it is critically important to take into account the direct and cross-cutting impact of these classes on the further improvement of the functional state and physical development of students.

In order to determine the initial data for effective formative assessment of students' physical fitness dynamics, it is advisable to conduct comprehensive testing of the level of development of basic physical qualities in September-October. The testing programme covers key components of physical fitness, with the selection of specific standards depending on the age and gender of the students. Test indicators of physical qualities:

1. Speed is determined by running 30 metres (seconds).
2. Endurance (assessed by the results of steady running without timing, recording the distance covered (metres).
3. Flexibility is diagnosed by bending the torso forward from a sitting position (cm).
4. Strength is measured by the number of push-ups performed (number of times).



5. Agility (coordination skills) is tested by the results of a  $4 \times 9$  m shuttle run (seconds).

6. Speed and strength qualities are assessed by performing a standing long jump (cm).

7. Specialised strength qualities are measured by throwing a small ball for distance (m) and the number of sit-ups performed in 30 seconds (number of times) [1].

The results of this initial testing serve as a reference base for further monitoring of students' progress throughout the school year.

Ongoing assessment of the dynamics of functional status and physical development test results can be carried out discretely throughout the school year, at the discretion of the teacher. The key methodological approach is to avoid psychological pressure, which means not focusing students' attention on the need to achieve a specific result «for a grade» and not setting aside separate lessons or parts of lessons specifically for testing.

Instead, the test task should be naturally integrated into the structure of the lesson, which minimises additional psychological pressure, unnecessary attention from participants in the process, and prevents a decrease in motor density due to waiting for one's turn.

The results of physical fitness tests are personalised: they are recorded in an individual comparative table or student portfolio. It is important that this data cannot be used to rank and compare students with each other, but serves solely to monitor their personal progress.

**Conclusions.** The analysis confirms that lessons are the leading form of teaching, and their effectiveness depends on the comprehensive integration of general pedagogical and specific requirements. A high-quality lesson requires compliance with sanitary and hygienic, psychophysiological, didactic and educational requirements, as well as the systematic application of general



pedagogical and training principles. The integration of competence-based and activity-based approaches stimulates independent research activity among students. A key element of control is formative assessment, which focuses on monitoring students' personal progress through integrated and stress-free testing. Thus, a high-quality physical education lesson is a methodically structured, differentiated and emotionally rich process that ensures high motor density and is aimed at forming essential competencies and the holistic physical development of each student.

### References:

1. Денисенко Н., Кліш І. Особистісно-зорієнтоване фізичне виховання в Новій українській школі. Вивчаємо модуль «Легка атлетика» (Серія 5): навчально-методичний посібник-практикум для студентів спеціальності 014. Середня освіта (Фізична культура). Луцьк : ПП Мажула Ю. М., 2023. 83 с.
2. Методичний путівник Нової української школи: фізична культура : зб. метод. матеріалів / О. А. Качан, Д. С. Кудрявець, М. О. Вольвак. Краматорськ, 2021. 62 с.
3. Москаленко Н.В., Сидорчук Т.В., Решетилова В.М., Яковенко А.В. Інновації у фізичному вихованні в закладах загальної середньої освіти: навчальний посібник. Дніпро, 2022. 70 с.
4. Москаленко Н., Сидорчук Т., Кошелева О., Демідова О. Сучасні аспекти викладання уроку фізичної культури. *Sport Science Spectrum*. 2024. № 1. С.90-96. <https://doi.org/10.32782/spectrum/2024-1-14>
5. Хома Т.В., Сивохоп Е.Е. Сучасний урок фізичної культури в умовах концепції Нової української школи. *Педагогічна інноватика: сучасність та перспективи*. 2024. №5. С.67-71.



6. Щибульська В. В., Суханова Г. П. Застосування нових форм навчання щодо реалізації змісту реформи Нової української школи. *Матеріали II Всеукраїнської науково-практичної конференції з міжнародною участю «Інтеграція українських наукових досліджень в міжнародний простір: регіональний аспект»* / Уклад.: Л. І. Полякова, В. В. Щибульська, О. В. Непша. Дніпро: «Середняк Т. К.», 2024. С. 454-459.