

Improving Physical Fitness Assessment through Movement Tests: Overcoming Implementation Challenges in General Educational Schools

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Authors' Contribution: A – Study design; B – Data collection; C – Statistical analysis; D – Manuscript Preparation

Abstract

Background and Study Aim The use of objective means and criteria for evaluating the educational achievements of students is crucial to improve the quality of education. Movement tests have been considered as a tool to assess the physical fitness of students in physical education classes. However, there are challenges in implementing these tests effectively. This article aims to address the problem of implementing movement tests in physical education classes in general educational institutions.

Material and Methods The study utilized publications from the Vernadskyi National Library and the Google search system. Keywords were used for the search in accordance with the topic of the study. A total of 27 sources were selected for analysis.

Results The study found that the effective implementation of movement tests in physical education classes requires an in-depth medical examination of students, consideration of each student's reaction level to physical loads, and the use of motor tests solely for evaluation purposes. The study also highlighted that motor tests can help solve complex pedagogical tasks and should meet criteria such as availability, indifference, reliability, capacity, and informativeness.

Conclusions The study concludes that joint activity between teachers and students is essential for increasing the level of physical fitness. Furthermore, teachers must exercise systematic control of students' health status and their reaction to physical exertion in class. The results of this study can provide insights to educators and policymakers in designing effective physical education programs that include movement tests as an assessment tool.

Keywords: physical education, lesson, physical culture, movement tests, criteria, selection.

Introduction

Physical education classes are designed to promote an active and healthy lifestyle among students. These classes aim to develop a range of skills such as strength, endurance, flexibility, coordination, and agility, which are essential for maintaining good physical health. One of the key components of physical education classes is movement tests, which assess a student's ability to perform various physical movements accurately and efficiently. However, implementing movement tests in physical education classes can pose significant challenges, including the lack of standardization in testing protocols, limited time and resources, and individual differences in physical abilities. In this article, we will explore the problem of implementing movement tests in physical education classes and examine potential solutions to address these challenges.

One of the biggest challenges facing modern education in general educational institutions is improving its overall quality. In order to achieve this, it is necessary to develop objective tools and criteria for evaluating students' academic achievement [1,

2]. However, the subject of physical culture presents a unique challenge, as it involves practical activities that require physical movement, making it distinct from other academic subjects.

To assess students' physical fitness and technical training in physical education classes, educational standards, control standards, and motor tests have traditionally been utilized [3, 4, 5]. Motor tests are tests that are based on motor tasks and evaluate a student's physical abilities and overall fitness. However, recent incidents of fatal accidents during physical education classes in Ukraine have led to orders from the Ministry of Education to prohibit the use of motor tests in physical education classes and exclude them from the curriculum. Despite these orders, it is crucial to recognize the importance of motor tests in evaluating the physical fitness of students [6, 7, 8, 9]. The exclusion of motor tests from physical education classes may prevent the objective assessment of a student's physical abilities and health, which could ultimately have a negative impact on their overall development.

Therefore, the purpose of this work is to determine the role and place of motor tests in the system of physical education of students in general educational institutions. By exploring the

importance of motor tests and examining potential solutions to address safety concerns, we can develop a comprehensive and effective system for evaluating students' physical fitness and promoting their overall health and wellbeing.

Methodology

This study is based on a review of relevant literature on the topic *“Improving Physical Fitness Assessment through Movement Tests: Overcoming Implementation Challenges in General Educational Schools»*. The literature review was conducted using two primary sources: the Vernadskyi National Library and the Google search system. The search criteria used specific keywords related to the topic, including Content, education, theoretical component, intellectual, practical, classification, exercise. After conducting the initial search, a total of 27 sources were selected for analysis. These sources were chosen based on their relevance to the research question and their publication dates, which ranged from 2000 to 2011. The selected sources include academic articles, books, and reports, and they were all written in English (Russian).

In order to analyze the selected sources, a qualitative approach was used. The sources were read carefully and analyzed for their content and key themes related to the topic. The results of this analysis are presented in the following section.

Results

Despite the recent orders from the Ministry of Education of Ukraine to exclude motor tests from physical education classes due to safety concerns, our research indicates that these tests play a crucial role in objectively assessing a student's physical fitness and overall health.

Firstly, motor tests provide a standardized and objective way of evaluating a student's physical abilities, such as strength, endurance, flexibility, coordination, and agility [10, 11, 12, 13]. These tests can help identify areas where a student needs improvement and can guide physical education teachers in developing targeted interventions to address these areas.

Secondly, motor tests allow for the comparison of a student's physical abilities with established norms and standards [14, 15, 16]. This comparison can help determine whether a student's physical abilities fall within expected ranges for their age and gender, or whether additional support or intervention is needed.

Finally, motor tests can motivate students to improve their physical fitness and engage in regular physical activity. When students see measurable improvements in their physical abilities through motor tests, they are more likely to continue participating in physical education classes and

develop healthy habits that can benefit them throughout their lives.

Therefore, our research suggests that excluding motor tests from physical education classes may hinder the objective assessment of a student's physical fitness and overall health. Instead, we recommend developing comprehensive safety guidelines and protocols for conducting motor tests in physical education classes to ensure the safety and wellbeing of students while allowing for the effective evaluation of their physical abilities.

The results of our research suggest that motor tests play a crucial role in the physical education of students in general educational institutions [17, 18]. The introduction of mandatory motor tests for students of all classes in 1997 and comprehensive tests in the school program since 2001 has allowed for a more objective determination of the level of development of motor qualities and physical fitness in children of grades 1-11. Motor tests have helped in comparing the preparedness of students of one age and gender, ensuring objective control of students' education, identifying the positive and negative impact of learning tools, and selecting students for a particular sport.

Our study revealed that motor tests should meet specific criteria such as validity, accessibility, indifference, reliability, capacity, and informativeness. Additionally, safety is a crucial criterion for the use of motor tests at school, and it is imperative to conduct a comprehensive medical examination of each student to ensure objective indicators of their health status.

We found that motor tests should not be included in the evaluation system as students tend to overstretch themselves, resulting in exhaustion. Instead, motor tests should be used by teachers as an instrument to identify gaps in the development of students' motor abilities and determine additional means for each student to increase their level of physical fitness. Furthermore, our study recommends using several specific tests to obtain the most complete understanding of speed development, and the test results should be used as an objective basis for planning the educational process.

The research findings also suggest that the frequency of testing can be from two to four times per year, and motor tests should be performed in a certain sequence, starting with speed and coordination of movements, then high-grade qualities and flexibility, and ending with endurance. Individual cards for each student should be drawn up and filled out from the first class, noting the change of results during school from 1 to 11th grade. This system allows the teacher to exercise constant pedagogical control over the development of the basic motor qualities of all students in school.

In addition to motor tests, our study recommends

performing tests to determine the level of physical training of students to assess the function of the cardiovascular system. Overall, our research findings suggest that motor tests play a vital role in the physical education of students and should be used as an instrument in the hands of teachers to determine gaps in the development of students' motor abilities and as the basis for determining additional means to increase the level of physical fitness of each student.

Discussion

The use of motor tests in physical education classes is a highly debated topic. On one hand, these tests can be an effective tool to measure a student's physical fitness level and identify areas that need improvement. On the other hand, concerns have been raised about the safety of these tests and their impact on students' self-esteem and motivation.

One of the main concerns about motor tests is their safety [1, 2, 4, 19, 20]. In recent years, there have been several fatal cases in physical education classes in Ukraine, which has led to the prohibition of motor tests in some schools. It is important to ensure that these tests are conducted in a safe environment and that students are properly monitored during the testing process.

Another issue is the use of motor tests as a means of evaluation. Students may feel pressured to perform well on these tests in order to receive a high grade, which can lead to overexertion and potential injuries. It is important to ensure that these tests are used only as a tool for assessment and not as a means of evaluation.

However, if used properly, motor tests can be an effective way to measure a student's physical fitness level and identify areas that need improvement [17, 21, 22, 23, 24]. They can also help to ensure that physical education classes are providing students with the necessary skills and knowledge to lead a healthy lifestyle.

To address concerns about the use of motor tests, it is important to establish clear guidelines for their use and to ensure that they are conducted in a safe and supportive environment [25, 26, 27]. Teachers should also be trained in how to properly administer and interpret the results of these tests.

In conclusion, while there are concerns about the use of motor tests in physical education classes, they can be a valuable tool when used properly. It is important to balance the benefits of these tests with the potential risks and to ensure that they are conducted in a safe and supportive environment.

Conclusions

In conclusion, motor tests play an important role in the physical education of students in general educational institutions. They help to solve complex pedagogical problems, such as determining the level of motor qualities and physical fitness, comparing the preparedness of students of one age and gender, and ensuring objective control of students' education.

However, in recent years, there have been fatal cases recorded in physical education lessons, leading to the prohibition of motor tests in some countries, including Ukraine. It is crucial to ensure that motor tests are conducted in a safe and objective manner, with the proper medical examination and monitoring of students' health during exercise.

It is also important to recognize that motor tests should not be included in the evaluation system, but rather used as a tool in the hands of the teacher to determine gaps in the development of students' motor abilities and as a basis for determining additional means to increase the level of physical fitness.

Overall, motor tests should be considered an essential part of physical education in general educational institutions, as they provide valuable information on students' physical fitness and motor abilities, which can be used to plan the educational process and ensure the improvement of the quality of education.

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