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Overview of The Use of The National Student Fitness Test in Schools

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Abstract

The National Student Fitness Test is an evaluation instrument developed by the Ministry of Youth and Sports (Kemenpora) to assess the physical fitness levels of Indonesian students. However, its implementation in schools still faces several challenges, particularly the lack of optimal integration with physical education learning. This study aims to describe the implementation of The National Student Fitness Test in schools. This research uses a quantitative descriptive methods. The sample used in this research was physical education teachers in Lembang sub-district. Data analysis used descriptive statistics to present percentage distributions. The results indicate that most teachers (70.6%) have implemented national student fitness test, and its overall application is categorized as good, especially in terms of preparation (85.48%) and assessment accuracy (82.24%). Nevertheless, the main challenges were found in administrative procedures (65.48%) and in the utilization of assessment results (68.60%). In addition, teachers expressed very high expectations regarding the development of a digital-based national student fitness test system (90.80%). The study concludes that the implementation of national student fitness test in schools has been adequate in terms of preparation and assessment accuracy, but it still faces obstacles related to administration and the use of assessment outcomes. The strong expectation for national student fitness test digitalization highlights the need for a more efficient and accurate system to support the management of fitness data. Strengthening teacher competence and developing an integrated digital platform are therefore essential steps to optimize the role of national student fitness test in evaluating and planning physical education learning in schools.

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INTRODUCTION

Physical education plays a fundamental role in supporting the holistic development of students, encompassing physical, cognitive, social, and emotional aspects. Through a variety of structured activities, physical education provides learning experiences that enable children and adolescents to develop psychomotor skills, cognitive understanding, as well as the social and emotional competencies needed to lead physically active lives (UNESCO, 2015). Various studies that have been conducted also show that involvement in regular physical activity through physical education learning provides a variety of significant health benefits, including increased fitness, mental health, contributing positively to academic performance, and quality of life of students (white et al., 2024; naufal et al., 2024; nuryadi et al., 2018; gill et al., 2016). To ensure that the benefits of physical activity through physical education learning are achieved optimally, accurate measurement is needed. In a global context, the measurement of student physical fitness is seen as an important instrument to monitor the effectiveness of physical education while also being an indicator of public health in school-age communities (Zhang et al., 2024). Therefore, although physical education learning provides many benefits, standardized physical fitness measurements in schools are needed to monitor students› physical condition objectively and provide appropriate health recommendations, including obesity prevention and the formation of an active lifestyle throughout life (Yuksel et al., 2020). In line with this, several countries have developed technology-based student fitness assessment systems (Angosto et al., 2020). The system allows teachers to conduct formative and summative assessments with accurate digital data and provide individual feedback to students and parents (Ortega et al., 2023).

Meanwhile, in Indonesia, the government through the Ministry of Youth and Sports launched the National Student Fitness Test as a national standard instrument. According to the guidebook, it is designed to measure the physical fitness condition of students at various levels of education with aspects of physical fitness components of scientific parameters that include endurance, strength, agility, and flexibility (Kemenpora, 2022). The results of the national student fitness test are expected to be the basis for measuring and monitoring the level of physical fitness of students, identifying superior athletes, and becoming the basis for designing effective sports programs in schools for planning physical education learning programs and student health policies (Saputro et al., 2025). However, the implementation of the national student fitness test in the field based on the results of several studies shows that it has not been fully implemented due to various factors such as physical education teachers not understanding the diagnostic function of the national student fitness test and how to use the results in learning planning, fitness measurements are only carried out at certain times so that they have not been systematically integrated in learning, and the implementation of fitness tests with limited time so that the implementation of measurements does not run according to standards (Darumoyo et al., 2025; Destriana et al., 2023; Fauzi et al., 2023; Fajaryanto et al., 2022).

Developed countries have proven that digital management of fitness data contributes directly to improving national fitness and the effectiveness of physical education interventions (Carraro et al., 2023)This means that physical fitness measurement functions not only as an evaluation tool, but also as a means of reflective and promotive learning for student health. It is hoped that the results of physical fitness tests for each student can be obtained directly and simultaneously contribute to becoming a Physical Fitness database in Indonesia (Bayu et al., 2023). In addition, research conducted by Didik Cahyono et al., (2023) explains that the use of technology in the development of fitness applications is still relatively new so teachers need intensive assistance to apply it effectively in the fitness evaluation process.

Overall, this study aims to describe the implementation of the National Student Fitness Test in schools, including aspects of test preparation, assessment accuracy and objectivity, implementation and administrative ease, the benefits and impact of the test, and expectations for developing digital-based assessments. This research offers a new contribution by showing the shift in the national student fitness tes practices from traditional manual methods toward an emerging digital platform approach.

METHOD

This research uses a descriptive method with a quantitative approach. The descriptive method aims to depict or describe phenomena, events, or conditions as they exist, while the quantitative approach collects data in the form of scores or numbers, which can then be analyzed

statistically (Fraenkel et al., 2012).

The population used in this study were physical education teachers at public elementary and secondary schools in lembang subdistrict. Based on basic data public elementary and secondary schools (Dapodik) in lembang district consist of **Tabel 1**.

Tabel 1. Data on Public Schools

School Level	Sum
Elementary School	56
Junior High School	6
Senior High School	2
Total	74

Source : Dapodik

In this study, the sample determination used a non-probability sampling technique, a type of saturated sampling. This sampling technique was used because the population size was relatively small, so the entire population was sampled to obtain data that represented the actual conditions (Sugiyono, 2013).

Based on Table 1, of the 74 schools visited by the study, only 30 respondents were willing to complete the researcher's questionnaire completely and submit their answers. To maintain the validity and quality of the data, this study applied response rate analysis as a non-response bias control procedure. The response rate has played a key role in measuring the risk of non-response bias (Wagner, 2012). The questionnaire distribution period was conducted from November 3-10, 2025.

The instrument used in this study was a questionnaire adapted from the CIPP (Context, Input, Process, Product) model (Stufflebeam, 2003). The questionnaire was structured based on a Likert scale developed by the researcher, ensuring that the resulting indicators met the researcher's needs. Descriptive statistics were used as a data analysis technique in this research, and the results were presented as percentage distributions to describe respondents' answers in each aspect of the questionnaire.

RESULTS AND DISCUSSION

The data processing in this study used the Statistical Package for the Social Sciences (SPSS) version 22 software. The data analysis used descriptive statistics to describe the data and draw conclusions that are not causal generalizations. The results of the data analysis can be seen in the following **Table 2.**

Table 2. Characteristics of Respondents by Gender

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Male	24	80.0	80.0	80.0
	Female	6	20.0	20.0	100.0
	Total	30	100.0	100.0	

Table 2 presents the distribution of respondent characteristics by gender among the 30 samples involved in this study. The majority of respondents were male, totaling 24 individuals (80%), while 6 respondents (20%) were female. This distribution indicates that the participation of male teachers in this study was higher than that of female teachers.

Table 3. Characteristics of Respondents by Age

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	22-27 Years	5	16.7	16.7	16.7
	28-33 Years	17	56.7	56.7	73.3
	34-39 Years	5	16.7	16.7	90.0
	40-45 Years	3	10.0	10.0	100.0
	Total	30	100.0	100.0	

Table 3 presents the distribution of respondent characteristics by age among the 30 samples involved in the study. There were 5 respondents (16.7%) aged 22–27 years, 17 respondents (56.7%) aged 28–33 years, 5 respondents (16.7%) aged 34–39 years, and 3 respondents (10%) aged 40–45 years. The largest proportion of respondents fell within the 28–33 year age group, totaling 17 individuals (56.7%), indicating that this age group dominated the study sample.

Table 4. Characteristics of Respondents by Educational Unit

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Elementary School	15	50.0	50.0	50.0
	Junior High School	9	30.0	30.0	80.0
	Senior High School	6	20.0	20.0	100.0
	Total	30	100.0	100.0	

Table 4 presents the distribution of respondent characteristics based on educational level

among the 30 samples involved in this study. There were 15 respondents (50%) elementary school physical education teachers, 9 respondents (30%) junior high school physical education teachers, and 6 respondents (20%) senior high school physical education teachers. The largest proportion of respondents consisted of elementary school physical education teachers, accounting for 15 individuals (50%) of the total sample. This difference is attributable to the higher number of elementary schools in Lembang Subdistrict.

Table 5. Characteristics of the Use of the National Students Fitness Test

		Freq	Percent	Valid Percent	Cumulative Percent
Valid	Yes	22	73.3	73.3	73.3
	Not	8	26.7	26.7	100.0
	Total	30	100.0	100.0	

Table 5 presents the distribution of characteristics related to the use of the national students fitness test instrument by physical education teachers from 30 samples. A total of 22 respondents (73.3%) had used the instrument to measure students' physical fitness, while 8 respondents (26.7%) had not used the instrument for this purpose. This distribution indicates that the majority of physical education teachers in schools in Lembang Sub District, namely 22 individuals (73.3%), have implemented the instrument in measuring students' physical fitness. Meanwhile, 8 respondents (26.7%) reported not using the instrument due to various factors.

Table 6. Frequency of Questionnaire Responses on the Use of the National Students Fitness Test Instrument

Indicators	N	Mean	Percent	Std. Deviation
Test Preparation and Execution	30	21.63	80.52	3.000
Assessment Accuracy and Objectivity	30	20.50	82.0	2.726
Implementation and Ease of Administration	30	16.53	66.12	2.515
Benefits and Impact of the Test	30	17.23	67.82	1.736
Expectations for the Development of Digital Based Tests	30	22.73	90.92	1.964
Valid N	30			

Table 6 presents the frequency distribution of questionnaire results based on the achievement level of each indicator. The percentage score for each indicator was calculated by comparing the mean score with the maximum possible score using the formula (mean ÷ maximum score) × 100%. This conversion provides an overview of respondents' achievement levels and is consistent with Likert scale analysis procedures (Creswell, 2018; Fraenkel et al., 2012; Sugiyono, 2013).

The results of the statistical descriptive analysis showed that in the aspect of preparation for the implementation of the test for achieving a score of 86.52%, it was concluded that the teacher had been able to prepare and carry out the physical fitness test procedure. Aspects of accuracy and objectivity achievement score of 82.00% interpreting the assessment mechanism has been carried out in accordance with the guidelines for the implementation of the national students fitness test. However, some aspects show a decrease in scores. The aspects of implementation and ease of administration of 66.12% interpreted that teachers still face administrative obstacles, both in filling in the form, recording data, and managing implementation time. Similarly, in the aspect of the benefits and impact of the pen test, a score of 68.23% interpreted the results of the National Student Fitness Test that had not been fully utilized as a basis for decision making in learning and monitoring student fitness. Meanwhile, in the aspect of expectations for the development of digital-based National Student Fitness Test, the achievement of a score of 90.92% interprets the needs and expectations of teachers for digitalization stems that are able to simplify administrative processes, improve data accuracy, and analyze results more effectively.

The findings of this study indicate that the implementation of the national student fitness test in schools still requires particular attention, especially regarding administrative processes and the utilization of test results. Although several aspects of the implementation have been carried out adequately, some indicators reveal that record-keeping, data processing, and follow-up actions based on fitness outcomes have not been conducted optimally. This suggests that the national student fitness test has not yet been fully employed as a foundation for instructional planning or for designing interventions aimed at improving students' physical fitness (Pillsbury et al., 2013). Research conducted by Matelot et al., (2025) highlighted the need to strengthen the competencies of physical education teachers so that fitness evaluations are used effectively in instructional

practice and contribute to improvements in student health.

One approach considered relevant to addressing this issue is the development of a digital platform-based fitness assessment system (Guo et al., 2025). The questionnaire results showed a high percentage of respondents focused on this aspect of digital platform development, indicating a strong need for a more practical and integrated assessment system. Such a system would streamline administrative procedures, improve assessment accuracy, and expedite test result analysis. With technological support, the national student fitness test implementation has the potential to become more efficient and provide rapid feedback to both students and schools (Kusumawardhani et al., 2024).

However, this research has several limitations that should be considered. First, the research scope focused on a specific geographical area limits the generalizability of the findings regarding administrative challenges and the potential for national student fitness test digitalization. Second, although the number of respondents meets the basic requirements for descriptive analysis, the relatively limited sample size may not fully represent the diversity of actual conditions in the field. Therefore, further studies involving broader regional coverage and larger samples are needed to obtain a more comprehensive understanding of national student fitness test implementation nationwide and to evaluate the effectiveness of digital-based national student fitness test practices within the context of physical education. Despite these limitations, this research offers a novel contribution by highlighting a shift in national student fitness testing practices from traditional manual methods toward emerging digital platform–based approaches.

CONCLUSION

This research shows that the implementation of the nusantara student fitness test in schools has gone quite well, especially in the aspect of preparation and accuracy of assessments, but still faces obstacles in the aspects of administrative implementation and utilization of assessment results. The data also revealed that teachers have a very high need for the digitization of the nusantara student fitness test as an effort to improve the efficiency of recording, analysis accuracy, and integration of test results in learning planning. Overall, these findings confirm that although the nusantara student fitness test has the potential to be a powerful assessment instrument in supporting evidence based physical education learning, increasing teacher competence and developing integrated digital platforms are still important prerequisites for optimizing its implementation in schools. Further research is recommended to involve a wider sample and cover a more diverse area and evaluate the effectiveness of the implementation of digital based the nusantara student fitness test in the context of physical education.

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