

Assessment of Physical Fitness Learning Objectives Using the Indonesian Student Fitness Test Instrument for Phase D Students

Muhammad Soleh Fudin*¹

¹Physical Education Health and Recreation, STKIP PGRI Trenggalek, Trenggalek Regency, Indonesia

*Corresponding author: fudinbanimustaram@gmail.com

Abstract

The aims of this research include 1) to find out the physical fitness level of Phase D students at SMPN 2 Tugu; 2) to find out the results of the assessment of the physical fitness learning objectives of Phase D students at SMPN 2 Tugu; 3) to find out what the percentage of completion is and how to follow up on the results of the assessment of the physical fitness learning objectives of Phase D students at SMPN 2 Tugu. This research is quantitative research with descriptive methods. The sample for this research is phase D students at SMPN 2 Tugu. The sample for this research was determined using a purposive sampling technique so that the research sample totaled 503 students. The data collection instrument used the Indonesian Student Fitness Test phase D. Meanwhile, the analysis technique uses descriptive statistics. The results of this research include the level of physical fitness of phase D students at SMPN 2 Tugu, namely 1.39% in the very good category, 15.31% in the good category, 41.95% in the fair category, 35.59% in the poor category, and 5.76% in the very poor category. From these results, the physical fitness level of phase D students at SMPN 2 Tugu is mostly in the fair and poor categories, because most students have not carried out the physical fitness test to the maximum. The results of the assessment of physical fitness learning objectives carried out for the most part have not achieved completeness. Completeness in assessing learning objectives depends on the value interval determined by the teacher or educational unit. The results of completing learning objectives as a follow-up process to improve the learning process and evaluate learning objectives.

Keywords: *assessment; learning objectives; physical fitness; the indonesian student fitness test*

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INTRODUCTION

The implementation of learning in the independent curriculum must implement the concept of independent learning which focuses on freedom and critical thinking. The independent curriculum provides quality, critical, expressive, varied, progressive, and applicable learning that students are expected to develop according to their potential and abilities (Rahayu et al., 2022). Implementation of the independent curriculum in physical education, sport, and health learning at the SMP/MTs/Package B level, namely the elements and learning outcomes of phase D. At the end of phase D, students can demonstrate the ability to apply certain movement skills through correct knowledge analysis; carry out physical exercise and fitness for health by exercise principles; demonstrate socially and personally responsible behavior; and maintaining the values of physical activity (Pemerintah RI, 2022).

According to Mashud (2019), physical education, sport and health consists of three parts: 1) improving health and fitness, 2) improving physical skills, and 3) increasing students' understanding of the principles of movement and how they can be applied in real

life. This is in line with Husaini's (2023) statement that physical education, sport and health in learning utilizes physical activity to improve the overall quality of life. Meanwhile, according to Ranti et al. (2020), physical education is expected to give students a personal impression of various experiences that enable them to be creative, innovative, skilled, and fun, and improve their physical fitness. So, teachers as teachers and educators must be able to facilitate students' needs based on their characteristics with creativity, innovation, guidance, and motivation to achieve learning goals. One of the learning outcomes of physical education, sport and health is doing physical activity and fitness for health according to the principles of exercise. Physical fitness is the physical and spiritual ability of the body to carry out daily activities without experiencing significant fatigue and still being able to fill free time with useful activities (Agus & Sepriadi, 2021). In addition, physical fitness functions as the main characteristic, driving force and source of strength to move physical development and growth in a better direction, which allows for better achievements in other aspects (Sudiana, 2014). From this statement, by achieving physical fitness, students can carry out daily activities, including participating in learning at school, in a healthy and active condition. Additionally, during school breaks, engaging in physical activity can increase fitness levels and improve academic achievement (Zhang et al., 2023). Students who have good physical fitness can carry out the learning process well (Wijayanto, 2012) and increase their learning abilities and motivation (Hakim et al., 2020). That's why physical education, sport and health is usually said to be the basis for implementing learning in other subjects at school.

But in reality, according to Darmawan (2017), students at school have poor fitness levels due to the lack of student movement activity, so they easily get tired when exercising and are overweight, which makes them weak and unable to carry out heavy physical tasks. This is in line with the statement of Suhartoyo et al. (2019) that junior high school students now spend more time with passive activities than physical activities. Encouraging an active lifestyle has become an important public health need to improve overall health and quality of life (Ricardo Festa et al., 2023). In adolescence, physical activity is vulnerable to influence (Kostamo et al., 2019; Martins et al., 2015). Apart from that, there is a statement by Sulistiono (2014) that male students have better physical fitness than female students. In connection with this statement, male students engage in more physical activity than female students daily. Physical activity is one of the factors that influences students' physical fitness levels. According to the Indonesian Ministry of Health in Bryantara (2016) age, gender, genetics, body mass index status and level of physical activity are several factors that

influence a person's fitness level. Apart from that, healthy lifestyle habits are also a factor that influences a person's level of physical fitness. One of the best ways to prevent and manage non-communicable diseases and overall health is to participate in regular physical activity or exercise (Verboven & Hansen, 2021). These factors are taken into consideration by teachers, especially physical education, sport, and health teachers, to guide students to improve their physical fitness in learning so that they can support increased achievement. This is in line with the statement of Alamsyah et al. (2017) that the physical fitness of children and adolescents is very useful for supporting their physical work capacity, which in the end is expected to improve their performance. According to Sulistiono (2014), the process of education and cultivation to increase and maintain regular and targeted physical fitness is part of a developing lifestyle.

In the learning objective of carrying out physical activity and fitness for health by the principles of student training, physical education, sport, and health teachers must pay attention to process standards in learning. The process standards in the Republic of Indonesia Government Regulation Number 57 of 2021 concerning National Education Standards include learning planning, learning implementation, and assessment of the learning process (Pemerintah RI, 2021). Based on these regulations, physical education, sport and health teachers must plan, implement, and assess learning appropriately and by learning objectives. The assessment of learning outcomes is divided into two, namely formative and summative assessments. In the Republic of Indonesia Government Regulation Number 57 of 2021 concerning National Education Standards, the purpose of formative assessment is to track and improve the learning process and evaluate learning objectives (Pemerintah RI, 2021).

In schools, quite a few physical education, sport, and health teachers, when assessing learning outcomes, especially formative assessments, have not fully determined the appropriate assessment procedures and are by learning objectives, so the assessment result data is less valid. Apart from that, in assessing physical fitness, quite a few physical education, sport and health teachers do not consistently carry out physical fitness tests on their students and the data is not published. One of the assessment procedures is the selection and/or development of assessment instruments. There are many physical fitness test instruments, including TKJI, Rockport, ICSPFT, ACSPFT, and TKSI. Teachers in selecting instruments for assessing physical fitness learning objectives must be appropriate and appropriate to the characteristics of students. Apart from that, according to Fudin & Hariyadi (2022), the implementation of tests and measurements must be in accordance with the operational procedures of the test instrument.

According to Kemdikbud RI (2023), in implementing the Indonesian Physical Fitness Test, several teachers stated several problems including unavailability of facilities and equipment, complicated procedures, an unbalanced ratio of students and teachers, which caused the test not to be completed in one meeting, physical education sports and health teachers in Indonesia need a physical fitness test that is valid, effective, and practical. Of the several existing physical fitness tests, the Indonesian Student Fitness Test is more effective, practical and in accordance with the characteristics of students as a physical fitness test instrument in schools. This is because the Indonesian Student Fitness Test focuses on instruments for testing students' physical fitness in schools which are adjusted to the phase levels in the current curriculum, namely the independent curriculum. Test items in the Indonesian Student Fitness Test phase D include the hand and eye coordination test, sit up test, standing broad jump test, t test and beep test (Muhajir et al., 2021).

Based on the results of searching articles in journals in Indonesia, many people use the Indonesian Physical Fitness Test as an instrument for testing students' physical fitness at school. This is in line with relevant research by Arifandy et al. (2021) entitled Survey of Physical Fitness Levels of Middle School Students using the Indonesian Physical Fitness Test where the research subjects were 64 students. Apart from that, relevant research by Mustafa et al. (2019) aims to evaluate how the assessment of physical education, sports and health knowledge and skills is carried out in Malang City State Junior High Schools. This research uses the discrepancy model evaluation method. The results can be said to be good regarding the implementation of knowledge and skills assessment. However, the material in the learning implementation plan may not be the same as the assessment document.

The importance of this research in the use of assessing physical fitness learning objectives using the Indonesian Student Fitness Test instrument in schools includes 1) there has been no research on assessing physical fitness learning objectives for phase D students using the Indonesian student fitness test instrument; 2) as a reference for teachers in assessing physical fitness learning objectives for students more effectively and practically; 3) as a medium for socialization, the Indonesian student fitness test instrument is a test and measurement instrument for physical fitness that is valid and reliable according to the characteristics of students in each phase; 4) is an example of assessing physical fitness learning objectives as an implementation of the independent curriculum.

The aims of this research include 1) to find out the physical fitness level of Phase D students at SMPN 2 Tugu; 2) to find out the results of the assessment of the physical fitness learning objectives of Phase D students at SMPN 2 Tugu; 3) to find out what the percentage

of completion is and how to follow up on the results of the assessment of physical fitness learning objectives for Phase D students at SMPN 2 Tugu.

METHOD

This research is quantitative research with descriptive methods. According to Nugroho (2018) quantitative research is a systematic, planned and structured type of research. Meanwhile, descriptive research methods are used to identify the existence of independent variables (Sugiyono, 2017). Data collection for this research was carried out in October 2023 at SMPN 2 Tugu. The population of this research is all phase D students at SMPN 2 Tugu totaling 555 students consisting of 268 male students and 287 female students. Meanwhile, the research sample was determined using a purposive sampling technique. According to Sugiyono (2018), the purposive sampling technique is collecting samples using several special considerations according to the desired criteria to determine the number of samples to be studied. The research sample was determined with the following considerations: 1) students who took and completed all test and measurement items; 2) students are in good health at the time of the test and measurement. So, the sample size for this research is 503 students consisting of 249 male students and 254 female students.

The data collection method for this research uses a test method and data collection instruments use physical fitness test procedures. The instrument for collecting physical fitness data uses procedures for implementing the Phase D Indonesian Student Fitness Test (Kemdikbud RI, 2023). The Phase D Indonesian Student Fitness Test uses 5 tests including 1) hand and eye coordination test; 2) sit-up test; 3) standing broad jump test; 4) t test; 5) multi-stage fitness test. The data analysis technique used is descriptive statistical analysis technique. In analyzing research data using software on the Indonesian Student Fitness Test website <https://tksi.kemdikbud.go.id/>. In the data analysis of the Indonesian Student Fitness Test, there are 5 test items, including the following:

1) hand and eye coordination test with a validity test value of 0.706 based on the $r_{count} > r_{table}$ value with alpha = 0.05 and a reliability test value of 0.701. Meanwhile, the hand and eye coordination test norms are presented in table 1 as follows:

Table 1. Hand and Eye Coordination Test Norms

Male	Female	Score	Category
≥ 21	≥ 14	5	Very Good
15 - 20	8 - 13	4	Good
9 - 14	4 - 7	3	Fair
4 - 8	1 - 3	2	Poor
≤ 3	≤ 0	1	Very Poor

2) sit-up test with a validity test value of 0.740 based on the $r_{\text{count}} > r_{\text{table}}$ value with $\alpha = 0.05$ and a reliability test value of 0.698. Meanwhile, the sit-up test norms are presented in table 2 as follows:

Table 2. Sit-Up Test Norms

Male	Female	Score	Category
≥ 30	≥ 24	5	Very Good
21 - 29	18 - 23	4	Good
18 - 20	12 - 17	3	Fair
9 - 17	6 - 11	2	Poor
≤ 8	≤ 5	1	Very Poor

3) standing broad jump test with a validity test value of 0.766 based on the $r_{\text{count}} > r_{\text{table}}$ value with $\alpha = 0.05$ and a reliability test value of 0.695. Meanwhile, the standing broad jump test norms are presented in table 3 as follows:

Table 3. Standing Broad Jump Test Norms

Male	Female	Score	Category
≥ 224	≥ 178	5	Very Good
195 - 223	153 - 177	4	Good
165 - 194	129 - 152	3	Fair
136 - 164	104 - 128	2	Poor
≤ 135	≤ 103	1	Very Poor

4) t test with a validity test value of 0.795 based on the $r_{\text{count}} > r_{\text{table}}$ value with $\alpha = 0.05$ and a reliability test value of 0.692. Meanwhile, the t test norms are presented in table 4 as follows:

Table 4. T Test Norms

Male	Female	Score	Category
$\leq 00.10.00$	$\leq 00.11.83$	5	Very Good
00.12.37 - 00.10.01	00.11.84 - 00.13.64	4	Good
00.13.17 - 00.12.38	00.13.65 - 00.15.46	3	Fair
00.14.75 - 00.13.18	00.15.47 - 00.17.29	2	Poor
$\geq 00.14.76$	$\geq 00.17.30$	1	Very Poor

5) multistage fitness test with a validity test value of 0.744 based on the $r_{\text{count}} > r_{\text{table}}$ value with $\alpha = 0.05$ and a reliability test value of 0.697. Meanwhile, the multi-stage fitness test norms are presented in table 5 as follows:

Table 5. Multistage Fitness Test Norms

Male	Female	Score	Category
$> L7 B7$	$> L4 B5$	5	Very Good
L4 B4 - L7 B7	L3 B3 - L4 B5	4	Good
L2 B2 - L4 B3	L2 B1 - L3 B2	3	Fair
L1 B2 - L2 B1	L1 B2 - L1 B7	2	Poor
$< L1 B2$	$< L1 B2$	1	Very Poor

Keterangan: L = levels; B = come back

Then, to determine the level of physical fitness of students based on the overall test results, they are categorized based on the assessment criteria for the Indonesian Student Fitness Test from Muhajir et al. (2021) as follows:

Table 6. Indonesian Student Fitness Test Assessment Categories

Value Range	Category
22 - 25	Very Good
18 - 21	Good
14 - 17	Fair
10 - 13	Poor
≤ 9	Very Poor

Meanwhile, to determine the assessment of physical fitness goals using the Indonesian Student Fitness Test instrument stage D of 5 test items. There are 5 assessment criteria, namely the category of very poor with a score of 1, poor score of 2, medium score of 3, good score of 4 and very good score of 5 as stated on the Indonesian Student Fitness Test website <https://tksi.kemdikbud.go.id/>. Each student from the 5 test items carried out, gets a maximum of 25 points. The criteria for assessing physical fitness goals are as follows:

Table 7. Physical Fitness Learning Objectives Assessment Criteria

No	Assessment Criteria	Very Poor (1)	Poor (2)	Fair (3)	Good (4)	Very Good (5)
1	Hand and eye coordination test					
2	Sit up test					
3	Standing broad jump test					
4	T test					
5	Multi-stage fitness test					

After the values are collected, then determine the assessment using the percentage technique from Arikunto (2021) with the following formula:

$$P = \frac{F}{n} \times 100\%$$

Information: *P* = Percentage of student scores

F = The number of scores obtained by students

n = Maximum number of values

Then, to determine the completeness of the physical fitness learning objectives, use a value interval approach. Apart from determining the completeness of learning objectives, it can also be used as a follow-up to the assessment carried out in accordance with the description of each value interval. Educators and/or educational units are given the freedom to determine appropriate value intervals (Anggraena et al., 2022). Educators must first determine the value interval and follow-up that will be carried out for students. So, the value

interval and description of completion along with the follow-up used are determined as follows:

Table 8. Value Intervals and Completeness Descriptions

Value Interval	Description of Completeness
≤ 40 %	Not yet achieved completeness, remedial on all test items
> 40 % - 60 %	Having not yet reached completeness, remedial tests for some tests that are not yet in the minimum moderate category
> 60 % - 80 %	Having reached completion, there is no need for remedial work
> 80 %	Having reached completion, it needs enrichment or more challenges

Meanwhile, to find the percentage of students who achieve complete physical fitness learning objectives, use the percentage technique from Arikunto (2021) with the following formula:

$$P = \frac{F}{n} \times 100\% \quad (1)$$

Information: P = Total percentage of students' completion

F = The number of students meets the completeness criteria

n = Total number of students

RESULTS

Based on the data analysis that has been carried out, the results of this research are divided into 3 parts. The first research result was the physical fitness level of phase D students at SMPN 2 Tugu. The physical fitness level of phase D students at SMPN 2 Tugu, which is divided into classes VII, VII and IX, is shown in table 9 as follows:

Table 9. Physical Fitness Level of Phase D Students at SMPN 2 Tugu

Phase D Class	Category	Number of Students			Percentage
		L	P	Amount	
Grade VII	Very Good	0	0	0	0%
	Good	7	2	9	6%
	Fair	43	30	73	45%
	Poor	40	30	70	43%
	Very Poor	1	9	10	6%
Number of Class VII Students		91	71	162	100%
Grade VIII	Very Good	0	1	1	1%
	Good	19	6	25	16%
	Fair	41	18	59	38%
	Poor	11	47	58	37%
	Very Poor	1	12	13	8%
Number of Class VIII Students		72	84	156	100%
Grade IX	Very Good	3	3	6	3%
	Good	35	8	43	23%
	Fair	42	37	79	43%
	Poor	11	40	51	28%
	Very Poor	0	6	6	3%
Number of Class IX Students		91	94	185	100%

Phase D Class	Category	Number of Students			Percentage
		L	P	Amount	
Fase D	Very Good	3	4	7	1,39%
	Good	61	16	77	15,31%
	Fair	126	85	211	41,95%
	Poor	62	117	179	35,59%
	Very Poor	2	27	29	5,76%
Number of Phase D Students		254	249	503	100%

The second research result is the assessment of physical fitness learning achievements using the Indonesian Student Fitness Test Phase D physical fitness test instrument. The value of the physical fitness learning objectives for phase D students at SMPN 2 Tugu is based on the value interval determined previously, the results obtained are as follows:

Table 10. Value of Physical Fitness Learning Objectives for Phase D Students at SMPN 2 Tugu

Phase D Class	Value Interval	Number of Students
Class VII	> 80 %	0
	> 60 % - 80 %	43
	> 40 % - 60 %	103
	≤ 40 %	16
Number of Class VII Students		162
Class VIII	> 80 %	4
	> 60 % - 80 %	52
	> 40 % - 60 %	76
	≤ 40 %	24
Number of Class VIII Students		156
Class IX	> 80 %	11
	> 60 % - 80 %	71
	> 40 % - 60 %	88
	≤ 40 %	15
Number of Class IX Students		185

The third research result is the percentage and criteria for completion of the assessment of physical fitness learning achievements of phase D students at SMPN 2 Tugu. Based on the scores obtained by students with predetermined score intervals, percentages and criteria for completing the physical fitness learning objectives, the following results were obtained:

Table 11. Percentage and Criteria for Completion of Physical Fitness Learning Objectives for Phase D Students at SMPN 2 Tugu

Phase D Class	Completion Percentage	Completeness Criteria
Class VII	10%	Not yet achieved completeness, remedial on all test items
	64%	Having not yet reached completeness, remedial tests for some tests that are not yet in the minimum moderate category
	27%	Having reached completion, there is no need for remedial work
	0%	Having reached completion, it needs enrichment or more challenges
Class VIII	15%	Not yet achieved completeness, remedial on all test items
	49%	Having not yet reached completeness, remedial tests for some tests that are not yet in the minimum moderate category

Phase D Class	Completion Percentage	Completeness Criteria
	33%	Having reached completion, there is no need for remedial work
	3%	Having reached completion, it needs enrichment or more challenges
Class IX	8%	Not yet achieved completeness, remedial on all test items
	48%	Having not yet reached completeness, remedial tests for some tests that are not yet in the minimum moderate category
	38%	Having reached completion, there is no need for remedial work
	6%	Having reached completion, it needs enrichment or more challenges

DISCUSSION

The physical fitness test that is often used by physical education, sport and health teachers in Indonesia is the Indonesian Student Fitness Test instrument. This is proven in many journal articles in Indonesia in conducting physical fitness tests in schools using the Indonesian Student Fitness Test instrument. In fact, several teachers stated that several problems included unavailability of facilities and equipment, complicated procedures, an unbalanced ratio of students and teachers, which caused the test to not be completed in one meeting and since it has been used for 38 years, the Indonesian Student Fitness Test instrument has never been revalidated (Kemdikbud RI, 2023). Therefore, the Ministry of Education and Culture developed Indonesian Student Fitness Test as a physical fitness test that is valid, reliable, easy to apply and can process data digitally. So it is hoped that physical education, sport and health teachers will use the Indonesian Student Fitness Test instrument to determine physical fitness or to assess the physical fitness learning objectives of their students.

According to Darmawan (2017), students at school have poor fitness levels due to the lack of student movement activity, so they easily get tired when exercising and are overweight, which makes them weak and unable to carry out heavy physical tasks. This statement is in line with the results of this research that of the 503 phase D students at SMPN 2 Tugu, the level of physical fitness was 1% in the very good category, 15% in the good category, 42% in the medium category, 36% in the poor category and 6% in the very poor category. This happened according to Suhartoyo et al. (2019) because junior high school students now spend more time with passive activities than physical activities. According to Alamsyah et al. (2017) if the level of anxiety and body mass index increases then the level of physical fitness will decrease and if the level of physical activity increases then the level of physical fitness will increase and vice versa. This is a factor that influences the ups and downs of a person's physical fitness. Based on observations by researchers in the field, most of the students at SMPN 2 Tugu have not carried out maximum physical fitness tests. Apart

from that, the test time is based on class hours, so the conditions in the field for each student in each class are different. This is an obstacle in carrying out tests, which influences the results of the tests carried out.

In schools, quite a few physical education, sport, and health teachers, when assessing learning outcomes, especially formative assessments, have not fully determined the appropriate assessment procedures and are in accordance with learning objectives, so that the assessment result data is less valid. This is in line with the results of Darmawan's research in Mustafa et al. (2019) in the assessment aspect, that teachers have not assessed physical education, sport and health learning with standard assessments. Apart from Fathoni's statement in Mustafa et al. (2019) the skills assessment rubric created by teachers does not yet have indicators that can indicate high or low levels of student ability. The use of one of the assessment components, namely the selection of appropriate and standard assessment instruments, will influence the results of the learning process evaluation. As with the use of the assessment instrument used in this research, namely the Indonesian Student Fitness Test instrument, which is valid, reliable and practical to determine the level of physical fitness and can also be used to assess physical fitness learning objectives. Where the results of the assessment of physical fitness learning objectives in this research were from 503 phase D students of SMP Negeri 2 Tugu, namely class VII scores, mostly 103 students obtained a score interval of 41 – 60 out of 162 students, many class VIII scores were 76 students. obtained a value interval of 41 – 60 and 52 students obtained a value interval of 61 – 80 from 156 students, and many class IX scores, namely 88 students obtained a value interval of 41 – 60 and 71 students obtained a value interval of 61 – 80 from 185 participants educate.

The results of this assessment can be used to evaluate and follow up on the learning process carried out. As stated by Ani (2014), teachers must pay attention that the assessment instruments used consistently must track the process, progress and improvement of student learning outcomes. The results of the evaluation and follow-up on the physical fitness learning objectives in this research include that most of the learning completeness of class VII students has not yet reached completeness, namely 64% of 162 students with remedial follow-up, some of the tests have not been completed, at least in the fair category, the learning completeness of class VIII students most of them have not reached completeness, namely 49% of the 156 students with remedial follow-up for some of the tests which have not been completed, at least in the fair category, and most of the learning completion of class VII students has not reached completeness, namely 48% of the 185 students with remedial

follow-up for some of the tests. those who have not completed are at least in the fair category.

CONCLUSION

The conclusions in this research include that the physical fitness level of phase D students at SMPN 2 Tugu is mostly in the poor category because most of the students have not carried out the maximum physical fitness test. The results of the assessment of the physical fitness learning objectives carried out, the majority have not achieved completeness with remedial follow-up, some of the tests have not been completed, at least in the fair category. Completeness in assessing learning objectives depends on the value interval determined by the teacher or educational unit. The results of completing learning objectives as a follow-up process to improve the learning process and evaluate learning objectives.

Suggestions for physical education, sport and health teachers in conducting physical fitness tests include: 1) determining a valid, reliable and practical physical fitness test instrument such as the Indonesian Student Fitness Test; 2) pay attention to the time of the physical fitness test; 3) provide an introduction or understanding regarding the procedures and importance of the physical fitness test before carrying out the test. Suggestions for physical education, sport, and health teachers in assessing learning objectives include: 1) before the assessment, formulate the assessment objectives; 2) select and/or develop valid, reliable and appropriate assessment instruments for the assessment objectives; 3) carrying out the assessment objectively.

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