PHYSICAL FITNESS IMPROVEMENT EFFORTS ON LOWER CLASS STUDENTS OF ELEMENTARY SCHOOL THROUGH PLAY-BASED APPROACH ON PHYSICAL EDUCATION SUBJECT

By:
Yustinus Sukarmin
Faculty of Sport Science, Yogyakarta State University, Indonesia
E-mail: yustinussukarmin@yahoo.com

Abstract

Background: This research arises from the low physical fitness issue on lower class students (III) of Elementary School (SD) in SDN Nanggulan, which is caused by the lack of the physical activity. This lack of physical activity is due to the technology advances, which make students prefer to use technology rather than man power and the students' interest towards physical education subject is declining. The objective of this research is to improve the quality of physical education teaching-learning process using play-based approach to improve the third grade of the students' physical fitness of SDN Nanggulan. **Methods:** the method of the research is classroom action research (CAR) Hopkins model with collaborative and integrative pattern conducted in two cycles. The subjects of the research are the third grade students of SDN Nanggulan, odd semester 2012/2013, for six weeks. The data collection technique used is observation and test. Data collection instruments are observation sheets and Physical Fitness Test for 6-9 years old. Data analysis technique uses descriptive comparative. **Results:** The result of the research shows the improvement on students' physical fitness status on the third grader of SDN Nanggulan from 9 students (30 %) becomes 14 students (46.67 %) marked by the improving enthusiasm from 3.3 (66 %) becomes 4.3 (86 %), excitement from 3,4 % (68 %) becomes 4,3 (86 %), discipline 3,2 (64 %) becomes 4,1 (82 %), and totality from 3,3 (66 %) becomes 4,3 (86 %). **Conclusion:** This can be concluded that the application of the play-based approach to physical education teaching-learning process can improve physical fitness status of the third grade students of SDN Nanggulan.

Keywords: physical fitness, lower class, play-based approach, physical education

INTRODUCTION

This research starts from the issue on the low physical fitness of elementary school (SD) lower class (III) students at Nanggulan elementary school, which is caused by the lack of physical activity. This condition confirms the National Education Ministry research result cited by Mutohir (2009) who states that elementary school students' physical fitness is low. The students' lack physical activities are due to technology advances, which make the students prefer to use machine rather than manpower. Furthermore, physical education subject seems to be no longer interesting for the students.

Students' low physical activity status has a wide impact, including almost every aspect of human life: social, economy, politics, and culture are influenced. Students with low physical fitness status are susceptible to degenerative disease. If a person was sick—health cost grows—life becomes less productive. Lutan (2001: 3) states that health treatment cost in Netherlands has gone up to 2.5 %, in Canada 6 %, and 8 % in the USA.

The finding on the low physical fitness of Nanggulan elementary school of the third grade students becomes a heavy blow to all physical education teachers. Physical education teacher is

considered as the one who knows the most and responsible to develop and preserves students' physical fitness through physical education and other physical activity. Therefore, they have duty to change from passive life style to active life style. In this matter, physical education teacher has a very strategic role and becomes one of the essential parts in forming the attitude and active life habit (Lutan, 2001: 26).

One of the alternatives that can be done by physical education teacher to overcome the third grade students' low physical fitness problem in Nanggulan elementary school is by improving the physical education's teaching-learning process. The improvement can be started by applying the play-based approach to physical education teaching-learning process. Play-based approach is the implementation of physical education teaching-learning process in Nanggulan elementary school of the third grade using games as a means to deliver movement task in relation to physical fitness material for the students to improve their physical fitness.

Why should play? Playing gives more "freedom" to the students to express movement, therefore they prefer playing to practicing (Graham, 2008: 93). The researcher believes that play-based approach in physical education subject slowly but surely will become a magnet for the students to love physical education, which is no longer interesting for the students these days. If the students were happy during the subject, hopefully they will also like to do other physical activities, which in turn will improve their physical fitness.

NASPE (2005) cited by Metzler (2005: 6) states that physically educated person has these characteristics: (1) has the physical ability needed for everyday life, (2) actively participating in physical activity, (3) has a good physical fitness, (4) knows the implication and benefit of physical activity, and (5) knows the values of physical activity and its contribution to a healthy lifestyle.

Physical fitness becomes a very important part in physical education subject, which became one of the targets to be sought to achieve for the students during the teaching-learning process through physical activities and chosen sports (KTSP, 2006: 143). Healthy lifestyle and physical fitness need to be maintained for a lifetime. Physical fitness or physical freshness or physical awareness—the term physical fitness is used in this study—literary means physical ability. A person is fit for a task when he is able to do the task efficiently, without being excessively exhausted and able to quickly recover from the state that occurs as the result of doing the task. Corbin et al. (2007: 9) state that physical fitness is the ability of the body systems to work together efficiently. According to Wikgren (2010, 22), physical activity is a way to measure body's capability to do physical activity from moderate to heavy activity without being excessively exhausted.

According to 2006 School Based Curriculum, physical education at school has some objectives for the students to be able to: (1) develop self-management skill in the development and maintenance of physical fitness and healthy lifestyle through various physical activities and chosen sports, (2) improve physical growth and psychological development, (3) improve ability and basic movement skill, (4) laid the foundation of strong moral character through the internalization of the values contained in physical education, sports, and health, (5) develop sportsmanship, honesty, discipline, responsibility, team work, confidence, and democratic, (6) develop the ability to maintain the safety of oneself, others, and environment, and (7) understand the concept of physical activity and sport in a clean environment as an information to achieve perfect physical growth, healthy lifestyle and fitness, skilled, and positive attitude.

Playing becomes the main alternative to deliver physical education material to the lower grade elementary school students because they are in the group age of playing. The children's world is a world of play, there are no children who do not like to play, whether it is active or passive. In an active play, children do physical activity, such as: play tag with friend, football, swimming, and gymnastic. On the other hand, children will also enjoy watching the activity done by others. This is called passive play.

Playing is a physical activity, which is conducted earnestly (*ernstig*) in order to get the excitement but the earnestness (*ernst*) to get the joy from the outside of playing (Sukintaka, 1997: 13). The enjoyment that surrounds the students is a good education atmosphere because this excitement provides convenience in educating and leading them to reach the desired education goals. Moreover, Sukintaka states that the elements of freedom in playing can increase intuitive thinking, so that it can develop activity, creativity, the ability to make decision, and leadership. Therefore, playing must be given to the students, especially the lower class students.

Wuest and Bucher (1995: 41) have a high expectation that physical education can change the students' attitude to positive, which is marked by the growth of active culture (physical activity) in daily life. Then, the students can both express their movement through physical education subject at school and they can be made to be fond of moving. The students are not only moving while following physical education lesson at school, but outside the lesson they also addicted to do physical activities. Givler (2002: 12) states that physical activity should be part of students' daily life and the fast the habit grows the better. To reach physical fitness stage of achievement, students should be familiarized to do physical exercise regularly and love aerobics (AAHPERD, 1999: 45).

METHOD

This research is a Classroom Action Research (CAR). In this study, the researcher uses collaborative and integrated pattern of CAR (Sanjaya, 2011: 59-60), the teacher was who decided the problem and conducted the program, while the researcher who developed the program. This research was held in Nanggulan elementary school, Depok, Sleman, with 30 students in the lower class (the third grade) as the target. It was conducted in the odd semester year 2012/2013, for six weeks, on 1 September 2012 to 6 October 2012.

This research design uses Hopkins model. The implementation of Hopkins model follows the flows in this way: (a) identifying problems, (b) planning, (c) acting, (d) observing, (e) reflecting, (f) replanning, (g) acting, and (h) etc. (Sanjaya, 2011: 53). If it is illustrated, Hopkins model of CAR can be seen in Figure 1.

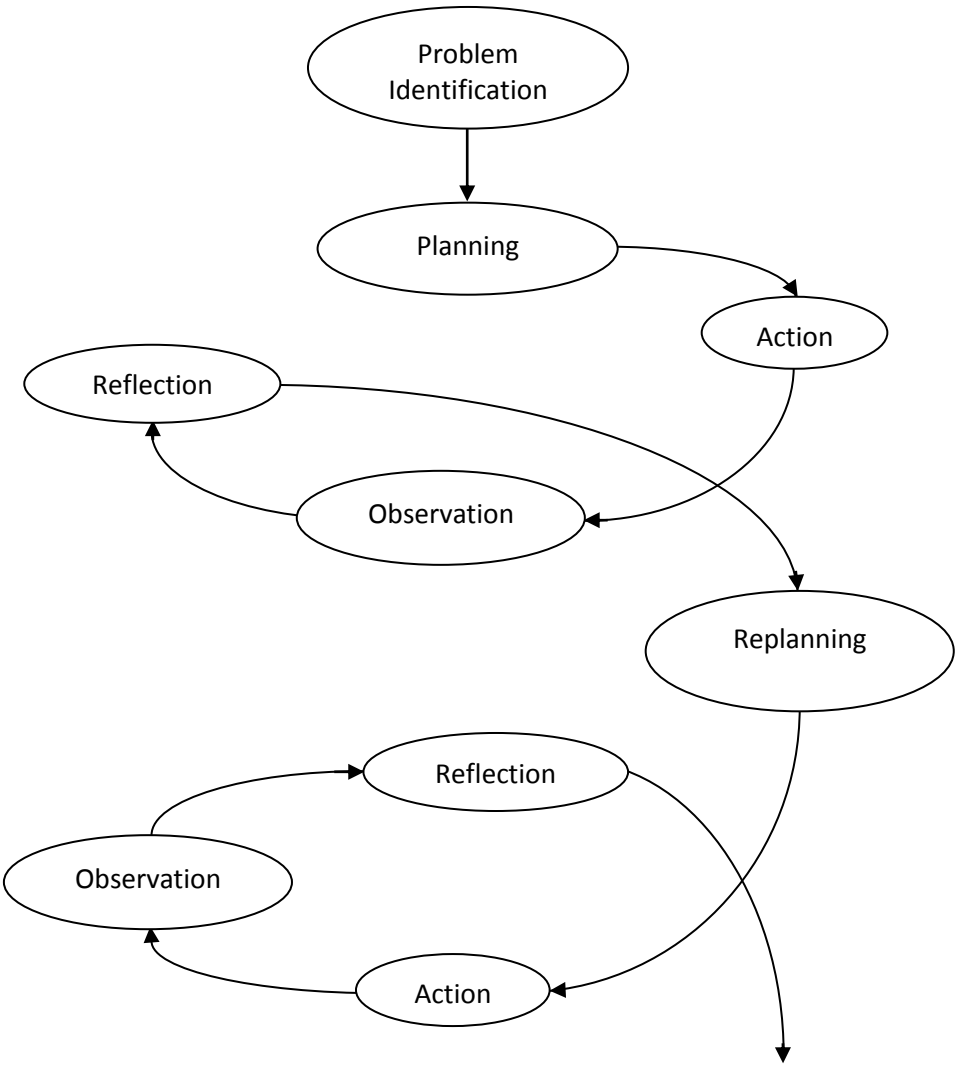

Figure 1. Hopkins Model Classroom Action Research

The data collection technique used was observation and test (Akbar, 2010: 12; Muslich, 2011: 222; Suwandi, 2011: 61; Sanjaya, 2011: 85). The instrument used to collect the data was observation sheet using rating scale (Sanjaya, 2011: 93) and Indonesia Physical Fitness Test (IPFT) for six to nine-year-old child. IPFT is a series of test that consists of five tests, they are: (a) 30 meters run, (b) hanging elbow bend, (c) 30 seconds sit up, (d) jump straight, and (e) 600 meters run (Suharto: 1999: 4). The researcher used observation guidelines, which consists of five aspects that had been validated by experts.

The indicator of success in this study is the increase of students' enthusiasm, excitement, discipline, and totality while following physical education learning process and the third grade students' physical fitness of Nanggulan elementary school. In this CAR, the data analysis technique was descriptive comparative, which compared the data among cycles (Akbar, 2010: 13 and Suwandi, 2011: 66).

RESULTS AND DISCUSSION

The Result on the Cycle 1

The first meeting in this cycle was conducted on Saturday, 1 September 2012, at 07.00 a.m., in Kradenan field with physical fitness test as the main program. The result of IPFT I can be seen on Table 1.

Table 1. IPFT Result I on Cycle I

No.	IPFT Classification	IPFT I	
		∑	%
1.	Very Good	0	0
2.	Good	9	30
3.	Fair	12	40
4.	Poor	6	20
5.	Very Poor	3	10

Table 1 shows that there are 9 students or 30 % who are fit, while the rest of them 21 students or 70 % are not fit. It is, of course, not satisfying and some efforts should be done in order to increase their physical fitness status.

The second meeting of the first cycle was held on Saturday, 8 September 2012, at 07.00-08.10, in Nanggulan elementary school field that located in the school area. As had been planned, the material given to the students was modified volleyball. The result of the observation on the second meeting of the first cycle can be seen on Table 2.

Table 2. Observation Result I on Cycle I

No.	Aspects	Observation I	
		∑	%
1.	Enthusiasm	3,2	64
2.	Excitement	3,3	66
3.	Discipline	3,2	64
4.	Totality	3,2	64

From the result of observation I, the information on the students' score on enthusiasm, excitement, discipline, and totality aspects during physical education learning process has not reach the MSC (Minimum Scoring Criteria). The MSC is every aspect that should reach the score ≥ 4,0 or Good criterion. In order to reach the MSC on the next meeting, the Researcher Team agreed to give a more competitive form of game to the students.

The third meeting of the first cycle was held on Saturday, 15 September 2012, at 07.00-08.10, in Nanggulan elementary school field, which location and condition were the same as the second meeting. The prepared material was throwing target game. The result of observation II can be seen on Table 3.

Table 3. Observation Result II on Cycle II

No.	Aspects	Observation II	
		∑	%
1.	Enthusiasm	3,4	68
2.	Excitement	3,5	70
3.	Discipline	3,2	64
4.	Totality	3,4	68

Table 3 shows the result of observation II, which has not reached the minimum requirement and it can be seen on the score of each aspects. The score for enthusiasm aspect is 3,4 (68 %), excitement aspect gets 3,5 (70 %), discipline aspect gets 3,2 (64 %), and totality aspect gets 3,4 (68 %). It means that the students have not had high enthusiasm, excitement, discipline, and totality while following physical education learning process. Therefore, the implementation of play-based approach in physical education learning process needs to be followed up with the next cycle.

The Result on the Cycle II

The first meeting on the second cycle was conducted on Saturday, 22 September 2012, at 07.00-08.10, in Kradenan field. The conducted activity was the implementation of physical fitness test. The result of IPFT II can be seen on Table 4.

Table 4. IPFT Result II on Cycle II

No.	IPFT Classification	IPFT II	
		∑	%
1.	Very Good	2	6,67
2.	Good	12	40
3.	Fair	15	50
4.	Poor	1	3,33
5.	Very Poor	0	0

Over all, the result of IPFT II shows the amount of fit students is significantly increased. The amount of fit students becomes 46.67 % (previously 30 %) so there is an increase of 16.67 %, whereas that is not fit is 53.33 % (previously 70 %) so there is a decrease of 16.67 %.

The second meeting of the second cycle was conducted on Saturday, 29 September 2012, at 07.00-08.10, in Nanggulan elementary school, which located in school area. The material given to the students were relay game. The result of the first observation of the second cycle can be seen on Table 5.

Table 5. Observation Result I on Cycle II

No.	Aspects	Observation II	
		∑	%
1.	Enthusiasm	4,1	82
2.	Excitement	4,1	82
3.	Discipline	4,0	80
4.	Totality	4,2	84

Table 5 shows the increasing trend of the observation from time to time even the last improvement has reached the limit of MSC. All aspects, such as enthusiasm, excitement, discipline, and totality have reached minimum score 4,0 of 5,0. Nevertheless, the next meeting is still continued because there is still one more meeting quota as well as to improve the learners' MSC.

The third meeting of the second cycle was held on Saturday, 6 October 2012, at 07.00-08.10, in Nanggulan elementary school field, which location is in school area. The material given to students is a game called moving the object. The result of the first observation of cycle II can be seen on Table 6.

Table 6. Observation Result II on Cycle II

No.	Aspects	Observation II	
		∑	%
1.	Enthusiasm	4,4	88
2.	Excitement	4,5	90
3.	Discipline	4,2	84
4.	Totality	4,3	86

Table 6 shows an increase in all observed aspects over the prescribe limit of MSC. It strengthens the assumption that play-based approach can increase students' interest to follow physical education learning process.

The more comprehensive illustration on the result of physical fitness test and observation on cycle I and cycle II can be seen on Table 7 and Table 8.

Table 7. The Comparison of IPFT Result on Cycle I and Cycle II

No.	Classification of IPFT	IPFT I		IPFT II		Changes	
		∑	%	∑	%	∑	%
1.	Very Good	0	0	2	6,67	+ 2	+ 6,67
2.	Good	9	30	12	40	+ 3	+ 10
3.	Fair	12	40	15	50	+3	+10
4.	Poor	6	20	1	3,33	- 5	-16,67
5.	Very Poor	3	10	0	0	- 3	- 10

Table 8. The Comparison of the Observation Result of Cycle I and Cycle II

No.	Aspects	Cycle I		Cycle II		Changes	
		∑	%	∑	%	∑	%
1.	Enthusiasm	3,3	66	4,3	86	+ 1	+ 20
2.	Excitement	3,4	68	4,3	86	+ 0,9	+ 18
3.	Discipline	3,2	64	4,1	82	+ 0,9	+ 18
4.	Totality	3,3	66	4,3	86	+ 1	+ 20

Discussion

The comparison between IPFT I and IPFT II result, as shown in Table 8, there is a positive changes. It proves that the implication of play-based approach in physical education learning process can increase students' physical fitness. The increase of students' physical fitness cannot be separated from the increase of their interest to physical education subject, which is shown in Table 8.

Table 8 shows that the score of enthusiasm, excitement, discipline, and totality reach above the MSC. It means that students can follow physical education learning process with high enthusiasm, excitement, discipline, and totality. Students feel enjoy when they follow physical education learning process because it is packed with playing. The result is in the same vein with the theory that states, students of elementary school in the lower class (third grade) are in a play age (Huizinga in Mechikoff, 2010: 5). Hence, when the material of physical fitness subject is packed in a form of playing, the students feel being in their world that makes them totally express their desire to move.

Nevertheless, if observed carefully among the observed aspects, it was the aspect of discipline, which shows the lowest result, 4,1 (the other aspects are 4,3). It is along with the development theory, which states that psychological condition of the elementary students' on the lower class (third grade) has some characteristics such as great curiosity, critical, and adventurous (Hurlock, 1990: 146). As a result, it is no wonder if they become unruly and like to do strange things. The researcher argues even though discipline aspect is the lowest aspect of all, does not mean that it is poor!

CONCLUSION AND SUGGESTION

Due to the result of this research and previous discussion, generally, it can be concluded that the implementation of play-based approach in physical education learning process can increase the third grade students' physical fitness status in Nanggulan elementary school. The increase of the third grade students' physical fitness status is also shown by the increase of enthusiasm, excitement, discipline, and totality of the students while following the physical education process.

Due to the conclusion, implication, and limitation, the researcher gives some suggestions:

1. The physical education teachers in elementary school, especially on lower class, should apply play-based approach in physical education learning process because, empirically, the benefits have been already proven.
2. Four games that are presented in this study are not fix examples, meaning that various games can still be explored and developed more while the physical education teacher implements play-based approach in physical fitness learning process.
3. It is also possible for a physical education teacher in elementary school to implement play-based approach in physical fitness learning process on upper class such as the fourth grade, the fifth grade, and the sixth grade.
4. The physical education teachers in elementary school should optimize KKG forum's role and function to sharpen, concern, and care in order to increase their professionalism in providing service to the society.

REFERENCES

AAHPER. 1999. *Physical Education for Lifelong Fitness: The Physical Best Teacher's Guide*. Champaign, IL: Human Kinetics.

Akbar, S. 2010. *Prosedur Penyusunan Laporan dan Artikel Hasil Penelitian Tindakan Kelas*. Cetakan Kedua. Yogyakarta: Cipta Media.

Corbin, C. B., Masurier, G. C. L., & Lambdin, D. D. 2007. *Fitness for Life: Midddle School*. Champaign, IL: Human Kinetics.

Givler, J. I. 2002. A physically active lifestyle starts at birth. *Teaching Elementary Physical Education*. 13 (6), 12.

Graham, G. 2008. *Teaching Children Physical Education: Becoming a Master Teacher*. (3rd Ed.). Champaign, IL: Human Kinetics.

Hurlock, E. B. 1990. *Motor Development*. Champaign, IL: Human Kinetics.

Lutan, R., dkk. 2001. *Pendidikan Kebugaran Jasmani: Orientasi Pembinaan di Sepanjang Hayat*. Jakarta: Ditjen Olahraga, Depdiknas.

Mechikoff, R. A. 2010. *A History and Philosophy of Sport and Physical Education: From Ancient Civilizations to the Modern World*. 5th ed. Boston: McGraw-Hill Companies, Inc.

Metzler, M. W. 2005. *Instructional Models for Physical Education*. (2nd Ed.). North Cattletrack Rd.: Holcomb Hathaway, Publishers, Inc.

Muslich, M. 2011. *Melaksanakan PTK Itu Mudah*. Cetakan Kelima. Jakarta: PT Bumi Aksara.

Mutohir, T. C. 2009. Program Pembinaan dan Pengembangan Olahraga Pendidikan Terpadu Jangka Panjang. *Makalah*. Jakarta: Kemenegpora.

NASPE. 2005. *Physical Best Activity Guide: Elementary Level*. (2nd Ed.). Champaign, IL: Human Kinetics.

Sanjaya, H. W. 2011. *Penelitian Tindakan Kelas*. Edisi Pertama. Cetakan Ketiga. Jakarta: Kencana Prenada Media Gorup.

Suharto. 1999. *TKJI: Tes Kesegaran Jasmani Indonesia untuk Anak Umur 6-9 Tahun*. Jakarta: Depdiknas Puskesjasrek.

Sukintaka. 1997. Bermain. *Olahraga*. 3 (1), 11-16.

Suwandi, S. 2011. *Penelitian Tindak Kelas (PTK) dan Penulisan Karya Ilmiah*. Cetakan Pertama. Surakarta: Yuma Pustaka.

Wikgren, S., Scott, C., & Rinaldi, A (Eds.). 2010. *Health and Wellness for Life*. Champaign, IL: Human Kinetics.

Wuest, D. A., & Bucher, C. A. 1995. *Foundations of Physical Education and Sport*. (12th Ed.). St. Louis: Mosby-Year Book. Inc.