



THE COMPARISON OF SELF-REGULATED STUDENT DURING SPORT EDUCATION MODEL AND CONVENTIONAL IN PHYSICAL FITNESS PROGRAM

Shela Ginanjar^{1*} Samsudin Samsudin² and Taufik Rihatno³

¹⁻³*Department of Physical Education Health and Recreation, Faculty of Sport Sciences, Universitas Negeri Jakarta, Jakarta, Indonesia*

Email Co-Author: shelaginanjar@unj.ac.id

Abstract. The sports education model most effective way to increase independence by collaborating with team sports such as football, volleyball and basketball, but it is still rare to find people who use it in physical fitness material. This view will provide great benefits for students, especially regarding self-regulation. The main aim of this research is to see that physical education learning using the sport education model and conventional can improve students' self-regulation. This experimental research used a randomized control group pretest-posttest design. The population in this study was SMP Negeri 3 Lembang, totaling 18 classes. The sample was chosen randomly and placed in classes 7C and 7D, each with 40 students. The instrument used is a self-regulated questionnaire. The research results showed that physical education learning using the Sport Education Model was proven to have a better influence on students' self-regulation, while the conventional model did not have a significant influence on students' self-regulation. So, it is recommended that in physical education learning teachers must master and use the sports education model so that students can achieve good self-regulation. In implementing this sports education model, it must be supported by adequate infrastructure so that students' self-regulated development increases optimally.

Keywords: Self-Regulated, Sport Education Model, Conventional, Physical Fitness Program

1. INTRODUCTION

Physical education learning is currently not only seen as learning that only uses a series of physical activities or sports but must be able to provide benefits that are useful for student growth and development. In essence, students study at school to prepare themselves to face the world of work after completing the school program. Physical education teachers must be creative in teaching their students. In fact, most physical education teachers use conventional models when teaching.

This approach has long been abandoned because it tends to be teacher-centered and teachers only lecture or use commands to guide student learning [1]. In connection with this situation, it is highly recommended that the implementation of physical education learning uses creative learning models [2], [3] to encourage good learning and in accordance with student development, especially in integrating the concept of Self-Regulated. Through Self-Regulation, students are expected to be able to manage emotions, motivation and active involvement in physical education learning [4]. The uniqueness of this Sport Education model is that students will have equal opportunities to learn from each other and share responsibilities by focusing on six main components, namely: seasons, team affiliations, official competitions and training, records, celebrations and peak events [5].

The sport education model is expected to be one of the strategies that can be used by physical education teachers when motivating students to learn through interesting and challenging learning because it contains six main components of learning, namely: seasons, team affiliations, official competitions and training, recordings, celebrations and peak events [6], [7], [8] which can be maximized to achieve the expected results [9], [10], [11] during physical education learning. Another advantage of this sports education model is that it can be used to guide students to study with full motivation [12], where students are always active in learning, have good motivation and always have a high social attitude which is reflected in high cooperation between students [13].

The fact is that very few studies have found that utilize the Sport Education model in physical education learning that uses physical fitness material, most of which only focus on sports games. However, as we know, this sports education model does not always emphasize competitive matters but can be modified to be in line with the goals of the season and/or the student's level of development. Another indicator of success is the teacher's knowledge and experience in applying this sports education model [14], so that physical education teachers increasingly use the sports education model in their learning, the more they understand the conditions and needs of students and can instill self-awareness. regulated which is positive for student independence in the future.

2. METHOD

The method used was an experiment using the randomized control group pretest-posttest design [15]. The experimental group studied using the sport education model, and the control group used the conventional model. The main purpose of this study was to see how learning physical education using sports education model and conventional model can that make students improved their Self-Regulated. The instrument used was a Self-Regulated Questionnaire [16]. The population in this study was Junior High School 3 Lembang with a total of 18 classes, and the research sample was students of classes 7C and 7D with a total of 40 students each. Class 7C will learn using the sport education model, while class 7D will use the conventional model. The learning steps can be seen in the following table 1.

Table 1. Physical education learning steps using the Sports Education Model and Conventional

The Sports Education Model	Lesson	Conventional Model
<ul style="list-style-type: none"> • Introduction to Physical Fitness • Explanation of Assessment Criteria • Identify Team Coach • Team Selection and Team Name • Explanation of Student Role Rules 	1	<ul style="list-style-type: none"> • Introduction to Physical Fitness • Physical fitness exercises according to the teacher's instructions (push-up, sit up, squat jumps, jump rope 10 minutes and running for 10 minutes)
<ul style="list-style-type: none"> • Physical fitness training in the team (push-up, sit up, squat jumps, jump rope 10 minutes and running for 10 minutes) • Games related to physical fitness in the team 	2 - 3	<ul style="list-style-type: none"> • Physical fitness exercises according to the teacher's instructions (push-up, sit up, squat jumps, jump rope 10 minutes and running for 10 minutes)
<ul style="list-style-type: none"> • Physical fitness training within the team (push-up, sit up, squat jumps, jump rope 10 minutes and running for 10 minutes) • Regular Season (3 vs 3) team physical fitness competition (Best 3 taken). 	4 - 5	<ul style="list-style-type: none"> • Physical fitness exercises according to the teacher's instructions, for example (push-up, sit up, squat jumps, jump rope 10 minutes and running for 10 minutes)
<ul style="list-style-type: none"> • Preparation of the entire team for the final match. • Competition between teams (push-up, sit up, squat jumps, jump rope 10 minutes and running for 10 minutes) 	6	<ul style="list-style-type: none"> • Physical fitness exercises according to the teacher's instructions, for example (push-up, sit up, squat jumps, jump rope 10 minutes and running for 10 minutes)
<ul style="list-style-type: none"> • Awards and celebration 	7	<ul style="list-style-type: none"> • Physical fitness exercises

2.1 Procedure and Test

Some of the preparations made by the author in this study include:

- A. Survey to see actual problems about Self-Regulated and then communicate with the principal and physical education teacher at Junior High School 3 Lembang regarding permission to conduct research.
- B. The author sent a notification letter to the parents of the students in the period Mei to July 2024. The students at Junior High School 3 Lembang must be had received approval from their parents to be involved in this research. All procedures have been approved by the Jakarta State University ethics committee No.515/UN39.14/PT.01.05/VI/2024 and date of approval June 10, 2024).
- C. The author sent a notification letter to the parents of the students in the period Mei to July 2024. The students at Junior High School 3 Lembang must be had received approval from their parents to be involved in this research. All procedures have been approved by the Jakarta State University ethics committee.
- D. The author determines the population and research sample and prepares research equipment and Conduct a pretest using Self-Regulated questionnaire [16] at Junior High School 3 Lembang.
- E. The treatment using the sport education model in the experimental group and conventional in the control group with Physical Fitness material. Schedule The experimental group was held every.

2.2 Data Analysis

Data analysis follows the steps: 1) The normality test used is the Kolmogorov-Smirnov with a p-value > 0.05 . 2) The homogeneity test used is the Levene test with a p-value > 0.05 . 3) Data analysis using the independent t test with p value > 0.05 .

3. RESULTS AND DISCUSSION

3.1 Result

Table 2. The Following Shows The Results Of The Research That Has Been Carried Out.

Subject	N	Average of Age	Body Mass Index	
			Average	Description
Experiment Male	20	13	19.07	Normal
Experiment Female	20	13	19.21	Normal
Control Male	20	13	20.41	Normal
Control Female	20	13	19.00	Normal

Based on Table 1, we can know some of the characteristics of the students who are the subject of this study. To be more specific, the author divides it into male and female groups within each group. For the number of male and female participants in each group, there are 20 students. The average age of male and female participants in each group was 13 years. While for the category of body mass index, experiment male has an average of 19.07 (normal), experiment female has an average of 19.21 (normal), control male has an average of 20.41 (normal), and control female has an average of 19.00 (normal). Based on Chart 1, the experimental group who studied using the sport education model in the pretest obtained score 9415 and for the posttest obtained score 11248. The control group that studied using the conventional model in the pretest obtained score 9159 and for the posttest obtained score of 9160.

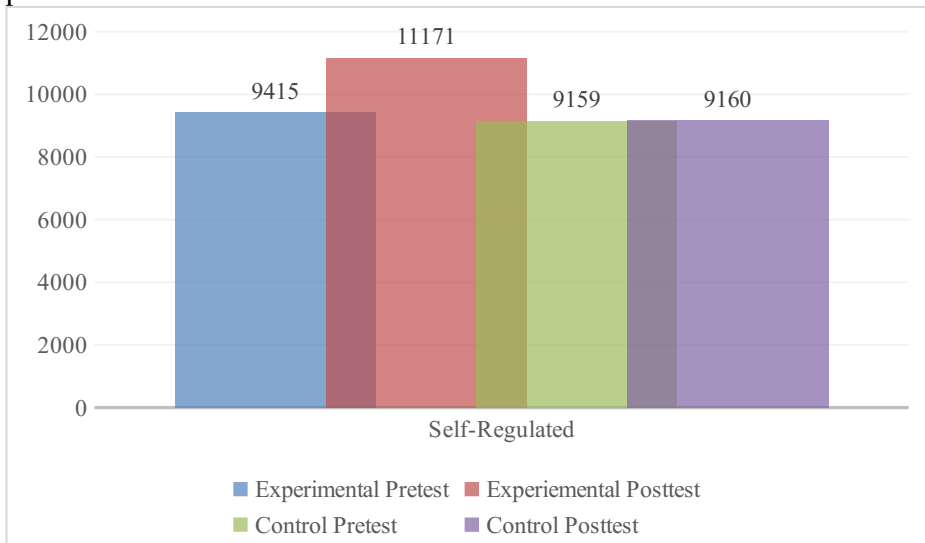


Fig. 1. The Results of Self-Regulated Students at Junior High School 3 Lembang

3.2 Normality and Homogeneity Test

The following shows the results of the normality and homogeneity.

Table 3. Normality and Homogeneity Test

Normality Test	Statistic	Sig. (2-tailed)
Experimental_Pretest	0.101	0.200
Experimental_Posttest	0.138	0.055
Control_Pretest	0.132	0.076

Control_Posttest	0.100	0.200
Homogeneity Test	Statistic	Sig. (2-tailed)
Experimental >< Control	35.686	0.000

Based on Table 3, the results of the normality test in the experimental group pretest obtained a statistical value of 0.101 with a significance value of 0.200, for the posttest obtained a statistical value of 0.129 with a significance value of 0.092. While the control group pretest obtained a statistical value of 0.132 with a significance value of 0.076, for the posttest obtained a statistical value of 0.100 with a significance value of 0.200. Because the significance value is more than 0.05, both group is normally distributed. Based on Table 2, the results of the lavene test for the experimental group and the control group about the Self-Regulated obtained a statistic of 35.686 with a significance value of 0.000. Because the significance value is less than 0.05, the performance variable in the control group and experimental group is homogeneously distributed.

3.3 Paired and Independent t Test

The following shows the results of the Paired and Independent t Test.

Table 4. Paired and Independent t Test Results

Paired Test	T	Sig. (2-tailed)
Experimental Pretest >< Posttest	-15.988	0.000
Control Pretest >< Posttest	-0.038	0.970
Independent t Test	T	Sig. (2-tailed)
Experimental >< Control	16.101	0.000

Based on Table 4, the results of Paired Test of the physical fitness shows that for the experimental group obtained a t -16.554 with a significance value of 0.000 and for the control group obtained a t -0.038 with a significance value of 0.970. Because the significance value of experimental group less than 0.05 and control group more than 0.05, that's mean Sport Education Model in Experimental group have better effect towards Self-Regulated and in the control, group doesn't have any effect. The results of independent t Test of the physical fitness obtained a t 16.101 with a significance value of 0.000. Because the significance value less than 0.05, that's mean Sport Education Model in

Experimental group have better effect towards Self-Regulated than the control group who studied with conventional model.

3.4 Discussion

Physical education learning using the sports education model with physical fitness material is considered very suitable and provides high opportunities for students to be involved and improve their physical fitness. On this occasion, students are accustomed to being able to prepare their own learning equipment, apart from that, the division of tasks such as manager, trainer, score keeping team and medical team makes students practice their self-regulated abilities. In connection with this condition, it cannot be separated from the teacher's ability to provide appropriate instructions and direction during learning. Through this habituation process, it is hoped that students can also develop their concentration abilities and improve their physical fitness, so they are able to solve all the problems they face. This situation is reflected when the rest are given tasks and always complete them on time [17]. This condition is not found in conventional learning models [3], [18], [19], where students learn with a lot of pressure and sometimes it even makes students feel bored and fed up.

Through this sports education model, the learning process is more varied and adapted to actual material conditions and students are given freedom and practice in solving problems that occur during learning [20]. This condition is inversely proportional to physical education learning using the conventional model where each student is required to discover for themselves, learn by themselves in class without knowing and understanding their needs [21], [22]. Apart from that, in the conventional model of learning activities there is more repetition of skills or skills which makes students only carry out their learning without understanding the meaning contained, because the process is determined by the teacher himself [23].

Physical education learning using a sports education model that is well designed and directed will make it easier for students to carry out every instruction and direction from the physical education teacher [24], [25], so that the process of adaptation and synchronization between the movement activities involved carried out with students' thinking abilities will occur in a directed and planned manner which will have an impact on creating a positive influence on the development of students' physical fitness. Apart from that, students can improve their

self-regulating abilities through habits carried out by physical education teachers during the learning process. Obviously, this will make it easier for physical education teachers when they must teach them skills or expertise in sports. It is necessary to realize that conditions where students are motivated in interesting learning and supported by intense competition with fellow team members and competition between teams, make each student compete to be the best at every opportunity [26]. Students indirectly carry out scientific processes by always being actively involved in the social interaction process in their learning [27]. A condition that we do not find in physical education learning using conventional models and looking at its usefulness, it is appropriate for physical education teachers to use the sports education model compared to the conventional model because the benefits are so broad for student development.

4. CONCLUSION

Physical education learning using the sports education model has been proven to have a better influence on students' self-regulation, while the conventional model has no effect. So, it is recommended that physical education teachers in their learning be able and master the use of this sports education model so that students can gain benefits that are useful for the growth and development of students' psychosocial aspects. In implementing this sports education model, it must also be supported by adequate infrastructure and full support from the school and related parties to maximize its potential. For further research, it can be suggested to complete this research by continuing to use the sports education model which discusses matters relating to aspects of student motivation, independence and discipline. Apart from that, other views are also needed regarding the perceptions of teachers, students and parents in implementing physical education learning using the sports education model

ACKNOWLEDGEMENTS

The authors would like thanks to all parties, especially for Universitas Negeri Jakarta, LPPM UNJ and the Faculty of Sports Science at Universitas Negeri Jakarta for supporting this publication.

ETHIC COMMITTEE

The study protocol was approved by the Ethics Committee of the Universitas Negeri Jakarta No.515/UN39.14/PT.01.05/VI/2024 and date of approval June 10, 2024.

CONFLICT OF INTEREST

The author declares that there is no conflict of this article.

REFERENCES

- [1] R. Gurvitch, B. T. Blankenship, M. W. Metzler, and J. L. Lund, 'Chapter 3: Student Teachers' Implementation of Model-Based Instruction: Facilitators and Inhibitors', 2008.
- [2] S. Ginanjar, Samsudin, D. Resmana, and S. M. Anugrah, 'Comparing project-based learning with conventional models: Enhancing students' enjoyment of physical education', *Edu Sportivo Indonesian Journal of Physical Education*, vol. 5, no. 1, pp. 64–81, 2024, doi: 10.25299/es:ijope.2024.vol5(1).15183.
- [3] S. Ginanjar, T. Rihatno, and D. Widyawan, 'THE SPORT EDUCATION MODELS ON PHYSICAL ACTIVITY OF JUMPING ROPE PERFORMANCE IN ELEMENTARY SCHOOL', *JUARA: Jurnal Olahraga*, vol. 8, no. 3, pp. 521–530, 2023, doi: 10.33222/juara.v5i1.1000.
- [4] Z. Xu, Y. Zhao, J. Liew, X. Zhou, and A. Kogut, 'Synthesizing research evidence on self-regulated learning and academic achievement in online and blended learning environments: A scoping review', May 01, 2023, *Elsevier Ltd*. doi: 10.1016/j.edurev.2023.100510.
- [5] D. Siedentop, 'What is Sport Education and How Does it Work?', *J Phys Educ Recreat Dance*, vol. 69, no. 4, pp. 18–20, Oct. 1998, doi: 10.1080/07303084.1998.10605528.
- [6] D. Gutiérrez, Y. Segovia, L. M. García-López, and D. Sánchez-Mora, 'Evaluation of a program to expand use of sport education model: Teachers' perception and experience', *Journal of Human Sport and Exercise*, vol. 15, no. Proc2, pp. 348–354, 2020, doi: 10.14198/jhse.2020.15.Proc2.26.

- [7] P. A. Hastie, 'An ecological analysis of a sport education season', *Journal of Teaching in Physical Education*, vol. 19, no. 1, pp. 355–373, 2000.
- [8] M. H. André and P. Hastie, 'SPORT EDUCATION IN A HIGHER EDUCATION PHYSICAL ACTIVITY COURSE', *European Journal of Physical Education and Sport Science*, vol. 3, no. 6, pp. 22–35, 2017, doi: 10.5281/zenodo.583365.
- [9] M. D. Curtner-Smith, P. A. Hastie, and G. D. Kinchin, 'Influence of occupational socialization on beginning teachers' interpretation and delivery of sport education', *Sport Educ Soc*, vol. 13, no. 1, pp. 97–117, Feb. 2008, doi: 10.1080/13573320701780779.
- [10] P. A. Hastie and M. D. Curtner-Smith, 'Influence of a hybrid Sport Education—Teaching Games for Understanding unit on one teacher and his students', *Phys Educ Sport Pedagogy*, vol. 11, no. 1, pp. 1–27, Feb. 2006, doi: 10.1080/17408980500466813.
- [11] M. B. Parker and M. D. Curtner-Smith, 'Sport education: A panacea for hegemonic masculinity in physical education or more of the same?', *Sport Educ Soc*, vol. 17, no. 4, pp. 479–496, Aug. 2012, doi: 10.1080/13573322.2011.608945.
- [12] R. Blagus, G. Jurak, G. Starc, B. Leskošek, and L. Leskošek, 'Centile Reference Curves of the SLOfit Physical Fitness Tests for School-Aged Children and Adolescents', *J Strength Cond Res*, vol. 37, no. 2, pp. 328–336, 2023, [Online]. Available: www.nsca.com
- [13] E. Alvi and R. M. Gillies, 'Self-regulated learning (SRL) perspectives and strategies of Australian primary school students: a qualitative exploration at different year levels', *Educ Rev (Birm)*, vol. 75, no. 4, pp. 680–702, 2023, doi: 10.1080/00131911.2021.1948390.
- [14] C. C. Liao, C. H. Hsu, K. P. Kuo, Y. J. Luo, and C. C. Kao, 'Ability of the Sport Education Model to Promote Healthy Lifestyles in University Students: A Randomized Controlled Trial', *Int J Environ Res Public Health*, vol. 20, no. 3, Feb. 2023, doi: 10.3390/ijerph20032174.
- [15] W. J. Creswell, *Research Design Qualitative, Quantitative, and Mixed Methods Approaches*, 4th ed., vol. 4. Thousand Oaks, California: SAGE Publication, Inc., 2018.

- [16] R. Schwarzer and S. Hallum, 'Perceived teacher self-efficacy as a predictor of job stress and burnout: Mediation analyses', *Applied Psychology*, vol. 57, no. SUPPL. 1, pp. 152–171, Jul. 2008, doi: 10.1111/j.1464-0597.2008.00359.x.
- [17] L. Sulz *et al.*, 'A scoping review of K–12 health education in Canada: understanding school stakeholders' perceptions', *Curriculum Studies in Health and Physical Education*, 2024, doi: 10.1080/25742981.2024.2311113.
- [18] S. Ginanjar, D. Widyanan, and H. Faruqi, 'Systematic Literature Review: Sports in Early Childhood in Indonesia', *International Journal of Human Movement and Sports Sciences*, vol. 11, no. 5, 2023, doi: 10.13189/saj.2023.110523.
- [19] A. O. Solihin, A. Ginanjar, and A. Budiman, 'The Involvement of Preservice Teachers in Delivering of Sport Education', *Kinestetik: Jurnal Ilmiah Pendidikan Jasmani*, vol. 6, no. 1, pp. 60–69, Oct. 2022, doi: 10.33369/jk.v6i1.20641.
- [20] M. I. Moreno-Díaz, M. Vaquero-Solís, M. Á. Tapia-Serrano, and P. A. Sánchez-Miguel, 'Physical Activity, Body Composition, Physical Fitness, and Body Dissatisfaction in Physical Education of Extremadura Adolescents: An Exploratory Study', *Children*, vol. 11, no. 1, p. 83, Jan. 2024, doi: 10.3390/children11010083.
- [21] O. N. Enriquez and K. L. Oliver, "'The collision of two worlds": when a teacher-centered facilitator meets a student-centered pedagogy', *Sport Educ Soc*, vol. 26, no. 5, pp. 459–470, 2021, doi: 10.1080/13573322.2020.1738374.
- [22] M. Gholamzadeh, Z. Saadatmand, and N. Keshtiaray, 'Evaluation of the implementation of Farhangian University's internship curriculum: A semantic analysis of Iran's experience Curriculum Evaluation Internship Semantic Analysis Teacher Education', *Iranian Journal of Comparative Education*, vol. 2024, no. 1, pp. 2839–2855, 2024, doi: 10.22034/IJCE.2024.328439.1387.

- [23] L. Murphy, N. B. Eduljee, and K. Croteau, 'Teacher-Centered versus Student-Centered Teaching', *Journal of Effective Teaching in Higher Education*, vol. 4, no. 1, pp. 18–39, Oct. 2021, doi: 10.36021/jethe.v4i1.156.
- [24] Y. Gao and N. Tasnaina, 'The Development of a Management Model on An Integration of Physical Education, Health Education, and Medical Practice for Sustainable Students' Health Development', *International Journal of Sociologies and Anthropologies Science Reviews*, vol. 4, no. 1, pp. 305–322, Jan. 2024, doi: 10.60027/ijasar.2024.3774.
- [25] N. Zeng, M. Ayyub, H. Sun, X. Wen, P. Xiang, and Z. Gao, 'Effects of physical activity on motor skills and cognitive development in early childhood: A systematic review', 2017, *Hindawi Limited*. doi: 10.1155/2017/2760716.
- [26] M. Liebendörfer, L. Kempen, and S. Schukajlow, 'First-year university students' self-regulated learning during the COVID-19 pandemic: a qualitative longitudinal study', *ZDM - Mathematics Education*, vol. 55, no. 1, pp. 119–131, Feb. 2023, doi: 10.1007/s11858-022-01444-5.
- [27] M. A. Al Mamun and G. Lawrie, 'Student-content interactions: Exploring behavioural engagement with self-regulated inquiry-based online learning modules', *Smart Learning Environments*, vol. 10, no. 1, Dec. 2023, doi: 10.1186/s40561-022-00221-x.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

