The Effect of STAD Learning Model on Learning Motivation of Elementary School Students

Dede Iman Suhendra[1]*, Agi Ginanjar[2], Mochamad Zakky Mubarok[2], Reyan Novaldi[2]

[1]Department of Physical Education, Health, and Recreation, Galuh University, Ciamis, Indonesia
[2]Departement of Physical Education, Health, and Recreation, STKIP Nahdlatul Ulama, Indramayu, Indonesia

Article Info

Abstract

The purpose of this study was to examine the difference between the effect of the STAD learning model and the effect of the conventional learning model on elementary school student learning motivation. The research used an experimental method with a non-equivalent control group design. The participants were 26 sixth graders in one of the elementary schools in Indramayu district taken using systematic sampling. The research instrument used a learning motivation questionnaire in physical education for elementary school students. The analysis technique used an independent-samples t-test. The results of the study concluded that there was a difference between the effect of the STAD learning model and the effect of the conventional learning model on the learning motivation of elementary school students. Further investigation of the use of the STAD learning model on other affective aspects, especially creativity, is needed. In addition, it is suggested to conduct research with larger number of participants so that the results of this study can be generalized, especially at the elementary school level.

INTRODUCTION

The form of learning achievement of physical education (PE), in some perspectives, is expected to provide overall development through movement activities. PE is a part of the overall education that influences a person development through activities that involve physical movements, including sports (Hadi, Nasaruddin, & Husniati, 2020). Also, PE is a learning process that prioritizes body movement activities aimed to improve the student knowledge, physical, and mental development (Supriyanto, Ginanjar, & Efendy, 2019). From some views, PE prioritizes movement activities in achieving learning goals.

Furthermore, PE can fulfil cognitive, affective, and psychomotor aspects. PE can be interpreted as a learning process that can cover cognitive and affective aspects, use the psychomotor domain to achieve the desired goals, and become a forum for students to keep them physically fit or healthy through physical activities and sports (Ginanjar, 2022). However, there are still many teachers who ignore the achievement of affective aspects in PE learning (Hanansyah & Ginanjar, 2019), because they prioritize the achievement of the psychomotor domain. In line with this, teaching and learning activity is a complete interconnected process to achieve predetermined learning goals, including an essential change of student behaviours in cognitive, affective, and psychomotor domains, which are expected to occur after the learning process takes place (Wadudu, Setiawan, & Mubarok, 2019).

One of the affective aspects contained in PE learning is motivation. PE learning in elementary schools is delivered in various forms of games and sports in a team or group, which can foster motivations. In a group, students do not just follow learning activities. The learning objectives achieved by a group need to be understood so that students will have good motivation in participating in learning activities. Motivation has an important function because it can determine student efforts in the learning process (Ginanjar, Mubarok, & Mudzakir, 2021).

Motivation is a desire influenced by factors from within itself and the environmental factors. Motivation is the energy that makes everything work or function (Komarudin, 2017). Motivation is divided into two kinds, namely intrinsic motivation and extrinsic motivation. Intrinsic motivation comes from within the individual himself to carry out sport activities, while extrinsic motivation is a desire that comes from outside the individual to carry out sport activities (Mylsidayu, 2014).

Learning plan is a foundation to carry out learning process properly in accordance with scientific rules. The learning model used must be relevant to the characteristics of students. Learning models that are not in accordance with the characteristics of student development and lack of creativity in the implementation will make students bored so that it has an impact on student motivations to engage in learning. The purpose of learning is reflected in learning outcomes, showing that students have joined the learning process, which includes new knowledge, skills, and attitudes which are expected to be achieved by students after participating in the learning process (Idris, 2017).

Therefore, it is necessary to apply an appropriate learning model to improve student learning motivations, where students can learn together with their groups. One of them is the cooperative learning (CL) learning model. CL is an effective and fun way to spur student achievement as a whole, not just individually (Slavin, 2015). CL is a set of instructional model in which students learn in groups to help each other learn the learning material (Barrett, 2005; Slavin, 1991). Then, in CL, students learn in small groups containing students with different levels of ability in completing group assignments, where each member cooperates with each other and helps to understand the learning material (Florida, 2019). Furthermore, CL can be applied to all types of classes, including special classes for gifted children, special education classes, classes with average intelligence levels, and is indispensable in heterogeneous classes with various levels of ability (Slavin, 2015). Related to research using CL in elementary schools, several studies also state that CL is often used for research at the elementary school level (Dyson, 2001, 2002; Dyson, Colby, & Barratt, 2016; Dyson, Linehan, & Hastie, 2010; Wallhead & Dyson, 2017).

Broadly speaking, there are several types of CL, such as Student Team-Achievement Divisions (STAD), Team Games Tournament (TGT), Team-Assisted Instruction (TAI), Jigsaw, and Group Investigation (GI) (Ginanjar, 2022; Metzler, 2000, 2005, 2017). The type of CL learning model used in this study was the STAD. In the implementation of STAD, all students and their

groups are given the same task and the same time to show their learning results on the first test, then they have time to conduct another practice to improve the result on the second test (Ginanjar, 2022). The important stages in STAD include the first exercise, the first assessment, the second exercise, and the second assessment (Ginanjar, 2022).

Through grouping, it is expected that students can learn by working with friends who are more capable of helping and motivating fellow friends to be actively involved in physical activities so that the goals of learning activities are achieved. From the previous observations, the teacher used a conventional model where the teacher became the center of learning. Thus, students just followed what the teacher had instructed. Students lacked of creativity and were not honed because they just followed what the teacher had instructed (Ginanjar & Ramadhan, 2021; Setiawan, Juliantine, & Komarudin, 2017).

The results of previous research related to STAD in elementary schools in Indonesia put more emphasis on psychomotor outcomes, such as volleyball passing (Wulandari, Henjilito, & Sunardi, 2021), rhythmic gymnastics (Asri & Haeril, 2021), long jump (Masdiyo, 2016), and dribble basketball (Sadik, 2016).

The purpose of this study was to examine the difference between the effect of STAD learning model and the effect of conventional learning model on the elementary school student learning motivation.

METHODS

The research method used in this study was the experimental method with a non-equivalent control group design. A non-equivalent control group design consists of two classes that are not chosen randomly. The pre-test was carried out first to determine the initial state of the two classes. Then, the experimental class was given treatments, while the control class was not given any treatment, followed by post-test for both classes (Ginanjar, 2019).

Participants

The participants were 26 elementary school students Grade 6, in one of the elementary schools in Indramayu, aged 11-12 years.

Sampling Procedures

The samples were divided into two classes using the systematic sampling with odd and even systems. In systematic sampling, members of the population get serial numbers, then the sampling is carried out using odd and even numbers (Ginanjar, 2019). From this opinion, the researcher decided the experimental class using odd serial numbers, while the control class using even serial numbers.

Materials and Apparatus

The research instrument used was a learning motivation questionnaire for elementary school student in PE (Nur, Ginanjar, Malik, & Pingon, 2021). The questionnaire consisted of 30 valid test items with a reliability of 0.90. The questionnaire could be used for elementary school students Grade 4, 5, and 6, as was tested on 134 students.

Procedures

The experimental class was given treatment using the STAD learning model, while the control class was taught using the conventional model or the learning model commonly used by PE teachers at the school where the research was conducted. Both the experimental class and the control class were given eight meetings outside the pretest and posttest so that the total number of meetings was nine meetings. The first meeting was used to collect pre-test data. After that, treatments in eight meetings were given. At the last meeting, after completing the learning, the researchers immediately took post-test data. The duration of the meeting was 2 X 35 minutes conducted once a week. In giving treatments, floor gymnastics was used for both experimental class and control class. The details can be seen in Table 1.

Table 1. Meeting Programme

Meeting	Experiment & Control Content
1	Pretest
2-3	Dominant sequence of motion, resting, repulsion, rotation, and landing on the forward roll
4-5	Dominant series of motion, resting, repulsion, rotation, and landing on the roll backwards
6-7	The series of dominant motions, resting, repulsing, turning, and landing on the elastic bolsters
8-9	A series of forward and backward rolls
	Posttest

The fidelity model followed the procedure for using the STAD learning model, including planning and implementation where the reliability on planning = 0.79 and implementation = 0.86 (Ginanjar, Ramadhan, Adib, & Effendy, 2021).

Data Analysis

Data were analyzed using statistical descriptions to find out the mean, standard deviation, and variance. Hypothesis testing used independent sample t-test using the SPSS application by following the calculation procedure of Ginanjar (2021).

RESULT

Based on the results of data analysis in pre-test, experimental class obtained mean = 18.77; standard deviation = 4.73; and variance = 22.26. In post-test, experimental class obtained mean = 21.85; standard deviation = 4.16; and variance = 17.31. In pre-test, control class obtained mean = 20.62; standard deviation = 5.06; and variance = 25.59. In post-test, control class got mean = 19.92; standard deviation = 5.58; and variance = 31.08. The details of each statistical description difference can be seen in Table 2.

Table 2. Statistical Descriptions

Variable	Mean	Std. Deviation	Variance
Exp. pre-test	18.77	4.73	22.26
Exp. post-test	21.85	4.16	17.31
Con. pre-test	20.62	5.06	25.59
Con. post-test	19.92	5.58	31.08

Table 3. Independent sample t-test

Variable	t	Sig.
Exp. >< Con	18.77	0,03 < 0,05

Hypothesis testing used independent sample t-test to answer the objectives of this study. The analysis obtained t = 2.32 with Sig. of 0.03 < 0.05, meaning that there was a difference of the effect of the STAD learning model and the conventional learning model on the elementary school student learning motivation. The details can be seen in Table 3.

DISCUSSION

The results of this study are relevant to previous studies that the STAD learning model can be used in PE learning for elementary school students (Asri & Haeril, 2021; Masdiyo, 2016; Sadik, 2016; Wulandari, Henjilito, & Sunardi, 2021). In addition, the results of this study provide a new insight that the use of STAD learning model can improve the affective aspect, namely learning motivation of elementary school students.

In general, the STAD learning model consists of exercise 1, test 1, exercise 2, and test 2 (Ginanjar, 2022). During the learning process in the class using STAD learning model, the student learning motivation was more visible shown from the enthusiasm of students in following each learning process. It was different from what happened to students who studied using conventional models. Students seemed to just "abort their obligations" by following the PE learning process.

However, in line with previous studies, the teacher still found it difficult to use the STAD learning model at the initial stage (at the first two meetings). When first using the STAD learning model, the teacher experienced difficulties, needed to adapt, and seemed to be uncertain, especially in giving test 1 and test 2 (Ginanjar, Ramadhan, et al., 2021).

Students who studied using the STAD learning model, where there was a group division in the process, seemed to be able to show their learning creativity when doing the exercises, especially in exercise 2, because each student and group were trying to improve their test results on test 2 to exceed the results of test 1. For example, after taking test 1, students and their groups did more exercises to repeat the test to improve the next test results. Sometimes, students and their groups had more creativity in changing the form of exercise when the form of exercise that had been carried out before was not effective to achieve the test results. Therefore, further research related to student creativity in using the STAD learning model is needed. It is in line with the statement of (Dyson et al., 2010) that using CL has a consistent impact on social aspects in PE learning.

Similar to previous studies, students still often joked and chatted when they were not doing any move-

ment activities during the PE learning process. It is in line with the statement stating that it has become a characteristic of Indonesian students to joke and chat during PE learning process (Ginanjar, Ramadhan, et al., 2021). An interesting thing happened when using the STAD learning model for elementary school students. They trusted and often wanted to see examples of students in their groups who performed better on tests. It proved that the social process had occurred. It is also in line with the statement that STAD model provides interaction for each student to participate in PE learning (Ginanjar, Ramadhan, et al., 2021). It indicates that teachers need to provide a strong understanding regarding cognitive aspects during delivering learning objectives so that all students can transfer knowledge to each other to carry out their movement tasks. This is also relevant to the statement saying that students who received less content knowledge were difficult to teach their friends (O'Leary, Wattison, Edwards, & Bryan, 2015) and tended to be told by students who were more capable in performing movement tasks, according to the findings of this study.

This research could also show how to re-do research using the STAD learning model for improving learning motivations (Ginanjar, Ramadhan, et al., 2021). This study confirms that motivation can be increased by using the STAD learning model. This study surely has shortcomings, thus it is hoped that further research is conducted related to the use of the STAD learning model in elementary schools, especially related to the affective aspects, because the research using the STAD learning model for elementary school students in Indonesia for improving the affective aspects is limited.

CONCLUSION

Based on the results and discussions of this study, this study concludes that there is a difference of the effect of the STAD learning model and the conventional learning model on the learning motivation of elementary school students. Further investigation using the STAD learning model on other affective aspects, especially creativity, is needed. In addition, further research should be conducted with more participants so that the results of the study can be more generalized

CONFLICT OF INTEREST

The authors declared no conflict of interest.

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