

The Effect of Learning Model and Physical Fitness towards the Improvement of Self-Efficacy

Bachtiar Wildan Hambali Maarif, Amung Ma'mun and Tite Juliantine
Universitas Pendidikan Indonesia, Jl. Dr. Setiabudhi No. 229, Bandung, Indonesia
bachtiarwildan@student.upi.edu

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Abstract: This article discusses the model of learning and physical fitness of its effects on increasing self-efficacy. The objectives of this study were to compare the learning models of Personal and Social Responsibility Teaching (TPSR) and Direct Instruction (DI) and their interaction with physical fitness to increase self-efficacy. The method used is experiment with simple 2x2 factorial design. The sample in this study is forty students of SMPN 1 Banjaran following extracurricular futsal. Data analysis using SPSS version 23 with hypothesis testing through two way anova and Tukey test. Based on the calculation and data analysis, the following results are obtained: Firstly, there is a whole difference between the TPSR and DI models for the improvement of self-efficacy in which the TPSR learning model is better than DI; Secondly, there is an interaction between the learning model with physical fitness that gives a difference in effect to the improvement of self-efficacy; Thirdly, there is a difference of influence between TPSR and DI models on increasing self-efficacy in high fitness group whereas TPSR learning model is better; Fourthly, there is a difference of influence between TPSR and DI model on increasing self-efficacy in lower physical fitness group where the DI learning model is better.

1 INTRODUCTION

Learning model is one of the indicators in achieving the best learning result (Kirk, 2015; Macphail, 2011).

In the application, the model used can be the teachers' creation or can be adopted from the others. In applying the learning model, a teacher must understand well about the essence of that learning model so that the application will be more effective and efficient. The right learning model is not only good for the teaches, but also for the students as well (Justi and Gilbert, 2013). Not only the learning model offers convenience for the teachers, but in the process, that learning model should be able to make the students to get information, idea, skill, value, way of thinking, and how to express their thoughts (Goodyear, 2014).

In the world of education, there are so many learning models. The learning model usually used in the learning process at school consists of many varieties or types (Klaus and Maklan, 2011). The point is, learning models can be classified into four: (1) Information Processing Model, (2) Personal Model, (3) Social Interaction Model, and (4)

Behavior Model (Raab et al., 2009; Bergsteiner et al., 2010).

One of the models that is often used in the physical education learning process in order to cultivate the social and individual values of the students is known as Teaching Personal and Social Responsibility (TPSR) model (Filiz, 2017; Martinek and Hellison, 2016; Severinsen, 2014). TPSR Model is an approach model that emphasizes the individual and social development of the students through intrinsic motivation (Walsh et al., 2010). This model can be integrated with the learning model which is generally used often by physical education teachers like the Direct Instruction Model.

Direct Instruction Model is a learning model that centered on the teachers that force the students to do every instruction designed by the teachers (Cobern et al., 2010; Gurvitch and Metzler, 2013). This learning model is predominantly used in the physical education learning. The main purpose of this learning model is to maximize the learning period of the students and to develop independence in achieving and actualize the goals of education (Activities, 2013; Cohen and Zach, 2013).

So that in this model the teachers design all learning situations like designing the goals and the assignments, dividing those assignments into some smaller components, developing the training activities that ensure the mastery of each parts of the component (Metzler et al., 2015).

The learning activity that is often seen in the school is, the Direct Instruction Model is a learning activity that centered on the teachers, the students are passive and merely become the objects of the learning material. In the learning application, sometimes a teacher doesn't reflect into the learning so that the affective formation of the students does not form. On the TPSR learning, the teachers have to be more interactive, and respect each other, the teachers should give the opportunities for the students to express their thoughts.

Aside from responsibility, one thing that the teacher should also develop in PBM is Self-Efficacy. Self-efficacy is someone's belief in their own abilities to do some certain assignments, that belief will affect the action that's chosen to be done (Sciences, 2008; Bandura, 2007), and try as hard as possible so that they can survive in facing the obstacles and failures, and their toughness if they have to face setbacks (Daly et al., 2017).

The student's belief in their own success to manage their own learning activity and to master the academic activities can determine the aspiration, motivation level, and their academic achievements. The teacher's belief on their own efficacy to motivate and promote learning affect the type of learning environment that they create and the level of academic progress that's achieved by their students (Marasso et al., 2014; Bandura, 2010; Prestwich et al., 2014)

The former research, that was revealed by Escarti et al. (2010), self-efficacy is defined and enhanced at first and especially on the A behavior psychologist's work. Bandura states that belief and judgement made by individuals are that they can succeed or finish their identified work (Green, 2008).

The researchers have developed the concept of self-efficacy and generalized as belief that someone can succeed on the global and non-specific assignment, and the specific self-effectiveness as a belief that someone can finish the assignment's specific behavior (Wood and Olivier, 2007; Ivars et al., 2014)

We need to do a deeper review on the application of TPSR learning model (Teaching Personal and Social Responsibility) compared to the DI (Direct Instruction) learning model, with first categorizing

the samples based on the high and low physical fitness.

2 METHODS

2.1 Participants

Forty students that were in the futsal extracurricular in SMPN 1 Banjaran Kabupaten Bandung with the age ranging from 13 – 14. No students have got any futsal training using the TPSR and DI Models.

2.2 Instruments

2.2.1 *Tes Kebugaran Jasmani Indonesia (TKJI) / Indonesian Physical Fitness Test*

One parameter used to measure the level of physical fitness that consists of a set of test matters that become one of the parameters in knowing the level of a child physical fitness that is categorized based on that child's age. *Tes Kebugaran Jasmani Indonesia* or as known as TKJI (Indonesian Physical Fitness Test) is divided into three groups of instrument test which are differentiated according to the groups of age:

- *Tes Kebugaran Jasmani Indonesia (TKJI) / Indonesian Physical Fitness Test* for Elementary School level, age 6 – 12;
- *Tes Kebugaran Jasmani Indonesia (TKJI) / Indonesian Physical Fitness Test* for Junior High School Level, age 13 – 15;
- *Tes Kebugaran Jasmani Indonesia (TKJI) / Indonesian Physical Fitness Test* for High School level, age 16 – 19.

Based on the physical fitness parameter, this parameter can only apply to measure the child's physical fitness, in accordance with those age groups. Therefore, this parameter doesn't apply in measuring physical fitness of those who are not on those groups.

In this research, I did some tests on junior high school students of VII and VIII grades, most are 13 years old in average, then the scoring and measurement from each test uses the test size for groups consisting of 13 – 15 years old. The physical fitness test in Indonesia for junior high school level, aged 13 – 15, there are several test matters, such as: sprint run for 50 meters, pull ups in 60 second, sit ups in 60 seconds, vertical jump, and medium distance run 1,000 meters (males). Those tests have to be done at the same time.

This test aims to classify and know which students have high and low physical fitness.

2.2.2 Self-Efficacy Instruments

Questionnaires to score self-belief trust in sports. Consisting of 42 questions using 5 Likert scales. Whereas for the way of scoring using the Likert scales with four choices of answer. The answers are *SS (sangat setuju)*/really agree, *S (setuju)*/agree, *KK (kadang-kadang)*/sometimes, *TS (tidak setuju)*/disagree, and *STS (sangat tidak setuju)*/really disagree.

2.3 Procedures

The samples consisted of 40 students that joined the futsal extracurricular at SMPN 1 Banjaran. We ranked the samples that had participated in the physical fitness test from sample number 1 to 40.

Then divide the sample into two groups: group A from rank 1 to 20 with high physical fitness and group B from rank 21 to 40 with low physical fitness.

Then each group was divided into 2 smaller groups using the matching paired technique with the ABBA formula, from the highest rank of the samples, until there were 4 small groups, each consisted of 10 samples.

Then each group was randomized using the random assignment to determine which one had more and got what treatment.

Sample groups with high physical fitness:

Gr. A : 1, 4, 5, 8, 9, 12, 13,16, 17,20.

Gr. B : 2, 3, 6, 7, 10, 11, 14, 15,18,19.

Sample groups with low physical fitness:

Gr. A : 21,24, 25,28, 29, 32, 33, 36, 37, 40.

Gr. B : 22,23, 26, 27, 30, 31, 34, 35, 38, 39.

After being classified, it was then given the treatment. (A) Teaching Personal and Social Responsibility. 20 people consisting of 10 people that had high physical fitness and 10 people with low physical fitness. Treatment (B) Direct Teaching. 20 people consisting of 10 people with high physical fitness and 10 people with low physical fitness.

Giving the Self-Efficacy Questionnaire to see the ability of the self-belief level from the samples, to find out about the result of the self-belief level before the treatment was given.

We referred to the article by Escarti et al. (2010), based on that article reference, we set the treatment with 12 meetings outside the pre-test and post-test. So

that it could be ensured that each sample class got 3 times learning process a week with 90 minutes duration for each meeting.

Did the last test (post-test) after the treatment was given. Analyzed the data and gave the conclusion.

3 RESULTS

The result of the research data was analyzed with the help of SPSS 16. This is the review of the calculations in table 1:

Table 1: Research Result Data.

Physical Fitness (B)	Model Pembelajaran(A)	
	TPSR	Direct Instruction
High Physical Fitness	27.6	11
Low Physical Fitness	11.7	24.9

Because the value of t is higher (>) than the t table value (6,732 > 2,740), then H0 is declined and H1 is accepted. So the research hypothesis that states: there is a significant difference of influence between the teaching personal and social responsibility model and direct instruction model that is accepted on the significance level $\alpha=0,05$.

Because the Sig. value is higher (>) than α (4,11 > 0,05), then H0 is declined and H1 is accepted. So the research hypothesis that states: there is interaction between the learning model with the physical fitness towards the improvement of self-efficacy accepted on the significance level $\alpha=0,05$.

Because the t value is higher (>) than the t table (5,938 > 720), then H0 is declined and H1 is accepted. So the research hypothesis that states: there is a difference between teaching personal and social responsibility model and direct instruction model on the group with high confidence is accepted on the significance level $\alpha=0.05$.

Because the t value is lower (<) than the t table (794 < 2,028), then H0 is declined and H1 is accepted. So, the research hypothesis that states: there is a significant difference of influence between the teaching personal and social responsibility model and direct instruction model on the group with low confidence is accepted on the significance level $\alpha=0,05$.

4 DISCUSSION

The TPSR Learning Model is better than the DI Learning Model on improving self-efficacy. The result of this research fills the literature gap about the TPSR learning model on the improvement of confidence and supports the TPSR theory that states, *"TPSR stands for a set of ideas that have grown out of my attempt to help at risk kids take more responsibility for their personal and social development in physical activity settings,"* and means that the TPSR model was created by Hellison based on his best ideas with the purpose of improving the attitude of responsibility which is formed slowly through the direct experience of the students in the physical activity that starts from the personal feeling of responsibility to the social responsibility.

Self-efficacy that means self-belief or believing in what someone will do to make a decision or respect others is one of the forms of social responsibility that developed under this TPSR model.

Self-belief is the purpose of TPSR model learning. Through this TPSR model, this behavior develops because it was applied into the daily lesson plan, consisting of counselling time, awareness talk, lesson focus, group meeting, and reflection time.

On the counselling time session, the students are given some motivation in the form of explanation that they have great potentials in improving their behavior or to give some appreciation on their learning result for that day, this is done so that the motivation inside the students can develop and improve.

Then, on the awareness talk session, the students are given the explanation about the respect behaviors and give them chance to commit in choosing the learning purpose that they will achieve that day through the learning contracts. Then, on the lesson focus session, the instructional strategy is used to integrate the respect behavior in their moving assignment, in this case we apply a small side game so that we can give the students more chance to interact socially. This is in accordance with Vygotsky's theory that says that the change of development will happen in the social process internalisation. Then on the group meeting session, the students will gather based on their own groups to discuss about the ongoing learning, in this session the students are asked to realize about the rights that everyone has so that they can appreciate and respect others' thoughts and decisions. The last is the reflection time session, the students are given opportunity to evaluate the behavior that they have done based on the learning purposes on the contracts. Maximizing the opportunity to interact socially is in

accordance with Vygotsky's theory that says that the change of development will happen in the social process internalisation.

The application of self-belief behavior on this research has a chance of changing the students' behavior in the physical education learning through the futsal extracurricular, the behavior that is used to be done, like hesitating when they're about to pass to their friends who happen to lack ability so that they make mistake, make fun of them, disturbing other students while they are learning, act selfishly when they play and other negative behaviors have been changed by them by the application of the self-belief behavior that are developed during the learning. This is proved by the notes on the field that show that there are changes of behaviors that they do to their friends.

Like on the first meetings (1 – 4), the students' negative behaviors that reflected the low self-belief behavior could still be seen, like making fun of their friends who couldn't catch the ball passed by their friends, also when they did the passing that sometimes didn't fit their friends' ability, there was a student that did something that could harm their friends, not accepting defeat and led to mocking battle, and also there were several students that didn't receive thoughts and advices and disturbed the others by throwing small stuffs to the other groups on the group meeting session.

On the next meetings (5–9) the students' negative behavior that reflected the low self-belief behavior started to decrease, like the decrease of behavior that could harm their friends, they started to accept the defeat in the games, making fun of their friends when they made mistakes could still be seen but rarely, and there were still students that disturbed other groups on the group meeting session, but their other friends have reminded them not to do so.

On the last meetings (10–12) the change of behavior could finally be seen clearly, especially compared to the first meetings. Like the students could finally accept defeat and were able to receive the balls passed, and good decision making with no hesitation, and appreciating each other by giving applause for the winning teams, vice versa. There was still some incident that could be harmful, but they didn't do it on purpose, and they apologized right after. There was no more student that disturbed their friends on the discussion and the students had finally able to accept some advices on the group meeting session.

Those behaviors show that with some value, attitude, and behavior development, the students can become better.

5 CONCLUSIONS

Based on the research and the discussion result, we could conclude that (1) As a whole, there are significant differences between the teaching personal and social responsibility learning model with the direct instruction model towards the improvement of self-efficacy, in which the TPSR model is better than the Direct Instruction model; (2) There are interactions between the learning models with the physical fitness towards the improvement of self-efficacy; (3) There are differences between the teaching personal and social responsibility model and direct instruction model towards the improvement of self-efficacy on the high physical fitness group, in which the TPSR learning model is better than the Direct Instruction learning model; (4) There are differences between the teaching personal and social responsibility model and direct instruction model towards the improvement of self-efficacy on the low physical fitness group, in which the Direct Instruction is better than TPSR.

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