

The Effect of Invasion Games on the Students' Self-Efficacy in Physical Education

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Abstract— This study was aimed at exploring the contribution and the use of physical education in elementary school through invasion games learning to improve the students' efficacy. The researcher used experimental method with pre-test and post-test control group design. This study involved 87 4th grade students as the research samples who were selected by implementing a total sampling technique. The treatment was given in 10 meetings. For the instrumentation, the researcher used Self Efficacy Scale (SES) with reliability (0.86) and validity (>0.02) that consisted of 30 items. The invasion games practiced were football, handball, basketball, hockey, and net games. The invasion games provide integrated experiences to the students, especially on their psychological aspects i.e. self-efficacy. The Paired Samples Test result indicated the significant score (0.018) on the students' self-efficacy tests as the significance data of pre-test and post-test < 0.05. Based on the data analysis, it revealed that there was a significant improvement on students' self-efficacy through the invasion games learning.

Keywords: *invasion games, self-efficacy, elementary physical education*

I. INTRODUCTION

Self-efficacy is figured out as someone's belief on their ability to manage and do the activities to achieve the goals [1]. The self-efficacy is important to be possessed by everybody as consideration in solving the problems encountered. The students with low self-esteem, aggressive, passive attitude, however, will hinder their performance. In addition, those attitudes will also inhibit them in achieving the expected achievements. The children with those attitude usually have a poor self-concept and self-esteem as well. Moreover, they are less-passionate in achieving the best performance [2].

Self-efficacy is used to indicate the specific variable which could affect someone's performance and to set how much the effort should be exerted to make themselves develop individually, how long it will last and able to deal with the problems [3]. Therefore, the higher self-efficacy the more effort will be exerted to achieve the best, vice versa, the lower self-efficacy the less effort will be exerted. So that, it makes the problems becoming a self-threat.

Someone with low self-efficacy tend to interpret all the failure caused by his/her inability [4]. Regarding to the close relationship between self-efficacy and children physical activity, therefore, the intervention is considered as the best

way to promote elementary level students' physical activities during the class-break. In which, in their class-break, the students' are exposed with the activities that could improve their self-efficacy [5]. By doing various physical activities, the students' are expected to have self-efficacy. Physical activities, however, might provide good and bad experiences for them. Self-efficacy could be one of determinant someone's success in doing a physical activity. The physical activities, which were undertaken perfectly, is also good to improve the students' psychosocial, physical, and mental health [6].

The students' success in undertaking the physical activity is also affected by the much efforts and well-braided social relation [7]. Creating positive vibes need a social skill. The students, who are success in their social life, will create a good communication in their daily life as well. In adolescence, the self-efficacy have a significant correlation with their positive physical activity [8]. This case indicates that physical activities, however, will improve someone's self-efficacy. An activity that involves someone's strength and stamina interpret the fatigue and pain as a self-efficacy alert [9]. One thing that could facilitate the physical activities is invasion games.

Invasion games have a chance in improving the students' thinking skills and problem solving skills in social context. When it is designed logically, it provides a new perspective on teaching and learning process which is different from the conventional teaching approach [10]. Invasion game is a team game which is designed to attack the opposite team's territory and bring the point for own team [11]. Regarding to the uniqueness of team-games, the beginner will be hard to follow as it consists of body movement skills. Therefore, the students' need some repetitions before they undertake the activity consistently.

In sport-team, the games can be expanded more flexible and unpredictable. In which, there will be an interaction among two different teams [12]. The games-based approach is developed as a result of dissatisfaction on the technique-based approach in teaching, that emphasize the teaching more on tactical skill and strategy [13]. This approach combine the games and various tactics. In invasion games, every team will undertake the game with the opposite team. This can be 3 on 3, 4 on 4 depending on the needs. The students' experience during the games could become the basis of their self-efficacy. This study is aimed to recognize the effect of invasion games on the students' self-efficacy.

II. METHOD

This study administered experimental method with pretest and posttest group design. The population is the students of the 4th grader and 87 students are employed as the research sample. In this study, some games are selected to be played including football, hockey, basketball, and net game. It spent about two months with 10 meetings.

As for the instrumentations, the SES (Self-Efficacy Scale) was used with 0.86 reliability and >0.02 validity consisting 30 items of assessment. The data gathered then analyse by using Paired Sample T-Test.

A. Findings

From the data analysis, the researcher gained the following result:

TABLE I. RESULT RESEARCH

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Self-efficacy	Pre_eks - Post_eks	6.85714	9.47756	2.53298	12.32932	1.38496	2.707	13	.018

The above table showed that the Paired Samples Test indicate the significant score 0.018 on the students' self-efficacy tests. Because, the significant data of pretest and posttest is < 0.05. Thus, this can be assumed that the invasion

III. RESULTS AND DISCUSSION

Based on the data processing, this study revealed that the invasion games effect significantly on the students' self-efficacy. As the invasion games could facilitate the students' inquiry through analysing the games by their own. The failure on defending, attacking, and bringing the score for team, however, give them space to experience and improve their self-efficacy. this improvement could be affected by some factors [1], includes: (1) self-efficacy will be affected by the students' success experience (*Mastery Experience*) in encountering the problems in their learning process. (2) self-efficacy will be affected by other's experiences (*Vicarious Experience or Modelling*). In every invasion game undertaken by the students should be incorporated into some small different groups. (3) self-efficacy will be affected by the verbal persuasion. In invasion games, the teacher or instructor should convince the students to be able to complete every games challenge. The verbal persuasion is given when the students loose thread while completing the games challenge. (4) self-efficacy will be affected by psychological and affective factor. In invasion games, the teacher or instructor should create the positive atmosphere to make the students keep enjoy while undertake the game and complete every game challenge.

The most important point is that the teacher or instructor should be able to ensure that the students take the benefit from the fun and dynamic learning approach. Other than that, the students able to learn the technics, tactics, and ability of decision-making. The invasion game is perceived as the best and effective way to promote students' ability in collaboration with others, promote their self-confidence, and their physical fitness as well. Practically, the finding revealed that the invasion games should be implemented to facilitate and better improve the students' physiology [11].

Besides, this concept is emphasized on the stimulating the students' participation. The students have to be able to develop not only their psychomotor skills but also their affective and cognitive aspects should be develop as well [14]. This what makes the students' self-efficacy improve even better after they undertaken the invasion games.

The tactical skill in a game, however, could enhance the students' ability in comprehending the rules of the game, solving the problems, and confidently making the decisions. This might be happened during the games. The students could also learn by experiencing and/or observing other's experiences [15]. Through experiences, their self-efficacy was developed as well.

Besides, the invasion games dealt with solving the tactical game problems. Solving the problems by the students' abilities. The problems occurred while offending and defending makes the students accustomed with and encouraged to confidently complete the game [16].

The students' ability in overwhelming the problems could affect on the improvement of their self-efficacy. The games are designed to promote the students' cognitive development and their ability to solve the problems [17]. The students with a high self-efficacy could seriously participate the game, manage, and cognitively complete the game [18].

The self-efficacy will improve if the students experienced the challenges and obstacles. This improvement is supported by the surrounding environment [19]. Practically, in the invasion games, every team will put the effort to intervene each other. Thus, through this exercise, the self-efficacy of the students might be improved significantly.

IV. CONCLUSION

According to the result, this study revealed that the invasion games could give the significant effect on the students' self-efficacy, especially on the students of the elementary school.

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