Research on the Application of Adversarial Game Teaching in Primary School Football Teaching

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Abstract: This paper discusses the application and effects of adversarial game teaching method in primary school football teaching, and provides references for the reasonable development of adversarial game in primary school football teaching. This paper uses literature review, experimental research, questionnaire survey, data statistics, logic analysis and other research methods to study some students in the Kaifeng Two Division Attached Elementary School. The results indicate that the 12 weeks adversarial game teaching method is not superior to conventional teaching methods in improving student physical fitness, but it can effectively improve students' football dribbling skills and football learning interests. Therefore, the introduction of antagonistic game teaching in primary school football teaching can effectively improve the teaching quality.

Key words: Adversarial Games; Primary School Football; Football Teaching; Application

1. Introduction

In recent years, in order to better promote campus football education, educators and coaches have begun to actively explore innovative football teaching methods, especially in primary school [1]. By introducing adversarial football games, students can be provided with richer football learning experience, enjoy the fun brought by football in activities and develop sports skills and teamwork spirit more comprehensively. Therefore, the study on the application of adversarial games in primary school football teaching can provide theoretical basis for the better development of primary school football teaching, so as to promote the improvement of primary school teaching effect.

2. Research Object and Method

2.1 Research Object

This paper takes the application of adversarial game teaching in primary school football teaching as the research object, and takes 30 boys in the Kaifeng Two Division Attached Elementary School as the investigation object.

2.2 Research Method

2.2.1 Literature Review Method

On the basis of the topic selection, the research results and latest progress of primary school students' football teaching methods are collected, and the collected data are systematically collated and analyzed, which provides a solid theoretical foundation for this study.

2.2.2 Questionnaire Survey Method

In this study, the Sports Learning Interest Scale is adopted, which includes many measurement items such as positivity, negativity, skill learning and sports participation [2]. It is verified that the Cronbachα coefficient is 0.89, with good reliability.

2.2.3 Experimental Method

In this study, the experimental group adoptsthe adversarial game teaching method, while the control group adopts the traditional teaching method. After the experiment, the effect of adversarial game teaching method is evaluated by comparing and analyzing the performance differences of the two groups of students in physical fitness, football skills and sports learning interests.

2.2.4Data Statistics Method

In this study, the T-value test of SPSS26.0 software is used to statistically analyze the data of the experimental group and the control groupbefore and after the experiment,, and the statistical significance level is $P<0.05$.

3. Experimental Scheme

3.1 Experimental Object

Thirty male students in grade 5 of the Kaifeng Two Division Attached Elementary School are selected as the research objects and randomly divided into the experimental group and the

control group. The experimental group receives 12 weeks of adversarial game football teaching training, which is conducted three times a week, with each training lasting 40 minutes, for a total of 36 lessons. While, the control group receives the regular football training.

3.2 Test Index

Physical fitness index: 50 m running, sit and reach, sit-up for one minute, 50m×8 shuttle run. The physical fitness index is tested in full accordance with the provisions and requirements of the National StudentPhysical Health Standard [3]. Football technical indicators:

(1) 27m dribblingstraight: two football sign buckets within a distance of 27m are placed, and one is at the starting point and the other one is at the end; the width of thedribbling range is 2m;in the process of dribbling, the dribbler needs to touch the ball at least 3 times, and finally stop within a distance of 2m from the end.

(2) 14 m dribbling around the pole: In the 14 m long and 2 m wide field, a sign bucket is set up every 2 m; students should pass the side of the sign bucket when dribbling and the time taken to complete the dribble should be recorded.

Related indicators of football interest: This study adopts a sports learning interest scale questionnaire, which includes four dimensions, namely negativity, positivity, skill learning and sports participation [4].

3.3 Adversarial Game Content

Decisive battle game: teams are grouped into 1-on-1 matchups for wheel elimination; the losing student is eliminated, until the champion is chosen [5].

Football league: set up 3 teams, carry out 5-on-5 matches, simulate the real league; the game adopts the points system, and finally determine the champion according to the points.

4. Research Results And Analysis

4.1 Comparison of Various Indicators Between the Two Groups of Pupils Before the Experiment

4.1.1Comparative Analysis of the Physical Fitness Between the Experimental Group and the Control Group Before the Experiment

According to the test results, there was no significant difference in physical fitness indexes between the two groups of students before the experiment, $P > 0.05$. Therefore, the subjects can carry out relevant teaching experiments.

4.1.2Comparative Analysis of Football Dribbling Skill Between the Experimental Group and the Control Group Before the Experiment

In the comparison data of football skills between the experimental group and the control group before the experiment, there was no significant difference of 27 m dribbling straight and 14 meters dribbling around a pole, $P > 0.05$. Therefore, the football dribbling skill of the two groups of students meet the premise of the experimental design.

4.1.3Comparative Analysis of Football Learning Interest Between the Experimental Group and the Control Group Before the Experiment

In the sports learning interest test before the experiment, there was no significant difference in the indicators of negativity, positivity, skill learning and sports participation between the two groups before the experiment, $P > 0.05$, which meets the premiseof the experimental design.

4.2 Comparison of Various Indicators Between the Two Groups of Pupils After the Experiment

4.2.1Comparative Analysis of Physical Fitness Between Experimental Group and Control Group After the Experiment

Table 1. Comparative Analysis of Physical Fitness Between the Experimental Group and the Control Group After the Experiment

Item	Group	Mean Value	Standard Deviation	T-value	*P*-value
50m Running	Experimental Group	10.07	0.80	-2.143	0.241
	Control Group	10.34	0.98		
Sit and Reach	Experimental Group	14.31	2.05	2.503	0.118
	Control Group	13.33	2.25		
Sit-up for One Minute	Experimental Group	35.73	3.63	0.737	0.467
	Control Group	36.66	4.27		
50m x 8 Shuttle Run	Experimental Group	124.39	4.37	-2.104	0.144
	Control Group	125. 51	10. 37		

As shown in Table 1, in the comparison of physical fitness tests after the experiment, there was no significant difference between the experimental group and the control group in 50m running, sit and reach, sit-up for one minute and 50m ×8 shuttle run, P > 0.05. In conclusion, the adversarial game teaching is not superior to conventional teaching in terms of improving students' physical fitness. Therefore, in order to improve students' physical fitness, adversarial game teaching is not the best choice for football teaching .

4.2.2Comparative Analysis of Football Dribbling Skill Between the Experimental Group and the Control Group After the Experiment

Table 2. Comparative Analysis of Football Skills Between the Experimental Group and the Control Group After the Experiment

Item	Group	Mean Value	Standard Deviation	T-value	*P*-value
27 m Dribbling Straight	Experimental Group	11.03	1.70	1.79	0.042
	Control Group	13.04	1.42		
14 m Dribbling Around The Pole	Experimental Group	11.52	1.45	-0.89	0.027
	Control Group	12.99	1.77		

As shown in Table 2, after the experiment, it is found in the technical comparison data related to football dribbling that there are obvious differences between the experimental group and the control group in dribbling skills such as the27 m dribbling straight and the 14m dribbling around the pole, $P < 0.05$. It can be found that adversarial game teaching method has certain advantages in promoting the improvement of pupils' football dribbling skills, and its effect is better than the conventional teaching method. Therefore, the adversarial gameteaching method should be reasonably used in primary school football teaching to ensure the improvement of pupils' football dribbling skills.

4.2.3Comparative Analysis of Football Learning Interest Between the Experimental Group and the Control Group After the Experiment

Table 3. Comparative Analysis of Football Learning Interest Between the Experimental Group and the Control Group After the Experiment

Item	Group	Mean Value	Standard Deviation	T-value	*P*-value
Negativity	Experimental Group	2.33	0.81	-4.785	0.000
	Control Group	3.80	0.86		
Positivity	Experimental Group	3.53	1.12	2.198	0.036
	Control Group	2.54	1.35		
Skill Learning	Experimental Group	3.93	0.76	2.334	0.028
	Control Group	3.13	1.06		
Sports Participation	Experimental Group	3.66	0.72	2.982	0.006
	Control Group	2.80	0.86		

As shown in Table 3, in the comparison data of learning interest in football after the experiment, various indicators in the experimental group were significantly higher than those in the control group, $P < 0.05$. In the primary school football teaching, the physical and mental development characteristics of pupils are taken into account, such as reactivity, strong curiosity, easy to transfer concentration and emotional fluctuations. Therefore, the adversarial football game teaching can be used as a teaching strategy.

5. Conclusion and Suggestion

5.1 Conclusion

Before and after the experiment and between the experimental group and the control group, there is no significant difference in the four physical qualities of pupils. In terms of football dribbling skills and sports learning interest, there is no significant difference between the two groups before the experiment, and there is a significant difference between the two groups after the experiment, and the experimental group is better than the control group.

5.2 Suggestion

The adversarial game teaching method can not change the physical fitness of students in a short time. In the follow-up research, the adversarial game teaching should be carried out for a long time in order to achieve the significant physical fitness improvement effect. In the training of

football dribbling skills, it is suggested that football teachers should adopt the adversarial football gameteaching method to improve students' dribbling skills. In addition, coaches should reasonably arrange the content of adversarial games in football teaching to continuously promote students' interest in football.

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