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Impact of competitive learning method on the accuracy of direct free kicks in football among male university students

Waleed Sameer Hadi AlAridhee*, Wathik Mohammed Abdallah, Thamer Hussein Kahat

College of Physical Education and Sports Sciences, University of Al-Qadisiyah, Iraq

* Correspondence: Waleed Sameer Hadi AlAridhee; waleedsameer88@yahoo.com

ABSTRACT

The objective of the present research was to study the impact of the competitive learning method on the accuracy of direct free kicks in football among male university students. The research community was composed of the 90 third-year male students of the College of Physical Education and Sports Sciences of the University of Al-Qadisiyah, in the academic year 2020-2021. A total of 24 of these 90 students were randomly selected for the research sample, and they were equally divided into two experimental groups of 12 students. The experimental group 1 used only the competitive learning method, while the experimental group 2 used the competitive learning method and the Football Jumping Wall Device. The statistical analyses were carried out with the Statistical Package for Social Sciences (SPSS). The competitive learning method significantly improved the accuracy of direct free kicks in football among male university students. The combination of competitive learning method with the use of the Football Jumping Wall Device was more effective than the use of the competitive learning method alone. Therefore, the authors recommend the combined use of the competitive learning method and the Football Jumping Wall Device to improve the accuracy of direct free kicks in football among male university students.

KEYWORDS

Competitive learning style; Direct free kick; Football Jumping Wall Device

1. INTRODUCTION

Accuracy is one of the very important primary matters in the scoring process for the direct free kick in football, and to benefit from it in matches requires researchers to make more effort and attention at this stage by teaching students to perform this kick, through the method of competitive learning and modern innovative devices. Keeping pace with the development in football, teaching

students to increase the accuracy of scoring leads to achieve goals in the match, which leads to a significant increase in the winning rate (López et al, 2023; Sánchez et al, 2019). The competitive learning method is a tool in the hands of teachers to be used to improve the learning of the students.

There is no doubt that improving the accuracy of direct free kicks in football among male university students requires teachers to prepare teaching methods using innovative devices and scientific inventions aimed at accomplishing this task. Therefore, the researchers sought to delve into this problem to find an objective solution by applying the competitive learning method and using the Football Jumping Wall Device, in order to develop the accuracy of direct free kicks in football among male university students.

The objective of the present research was to study the impact of the competitive learning method on the accuracy of direct free kicks in football among male university students. The hypothesis of this research was that the competitive learning method would improve the accuracy of direct free kicks in football among male university students.

2. METHODS

2.1. Design and participants

The design of this research was experimental, with two equal groups. The research community was composed of the 90 third-year male students of the College of Physical Education and Sports Sciences of the University of Al-Qadisiyah, in the academic year 2020-2021. A total of 24 of these 90 students were randomly selected for the research sample, and they were equally divided into two experimental groups of 12 students. The experimental group 1 used only the competitive learning method, while the experimental group 2 used the competitive learning method and the Football Jumping Wall Device.

2.2. Instruments and procedures

The tools and devices used in this research were: 20 legal footballs, a laptop computer (HP), a whistle, 3 electronic stopwatches, and a medical scale for measuring weight. We also used the Football Jumping Wall Device (Hadi & Al-Khikani, 2018).

The Football Jumping Wall Device, showed in Photo 1, is a sports device in the form of a human wall of dolls with electrical and mechanical movement. This device is very useful for teaching and training the accuracy of direct free kicks in football. It is also exciting for the students and avoids boredom. Furthermore, it can be moved through the iron arm and wheels. The types of movements of the Football Jumping Wall Device during performance are presented in Photo 2.

Photo 1. Football Jumping Wall Device.

Photo 2. Types of movements of the Football Jumping Wall Device during performance.

The accuracy of direct free kicks in football among male university students was measured following the guidelines of Shaker Jabr (2012). The objective of the test was to measure this accuracy

from different areas and with the presence of a wall. The test was conducted on a soccer field and the material used was: 12 soccer balls, a tape to set the scoring area for the test, and a tape measure. Also, white powder was used to determine the scoring distance. The wall consists of five students at a distance of 10 yards from the ball.

The tester stands in the three scoring areas (right, center, left). The student evaluated has one direct free kick, the results of which are not counted. After this first attempt, the test starts. The student should perform 36 direct free kicks (12 from the right scoring area, 12 from the central scoring area and 12 from the left scoring area). Of the 12 direct free kicks from each scoring area, 3 attempts must aim at each of the four accuracy areas located in the football goal (Figure 1).

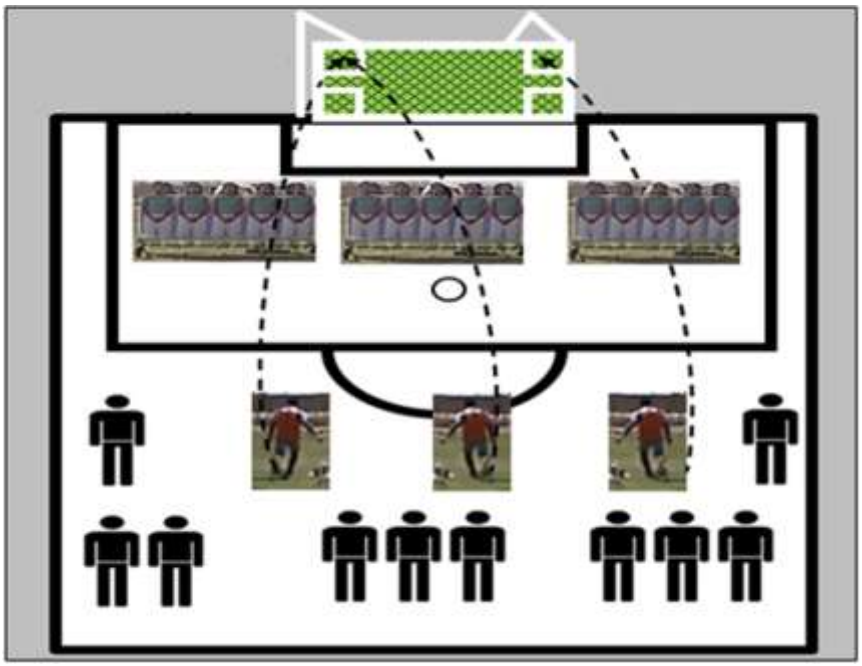

Figure 1. Method of testing the accuracy of scoring from direct free kicks (right, center, left)

Regarding the score system of this test, balls that fall outside the accuracy area count as zero. Balls hitting the wall and not reaching the accuracy area count as zero. Balls hitting the accuracy area bar count 1 point. Successful balls entering the accuracy area count 2 points.

The researchers conducted an exploratory experiment on a sample of 4 students who did not belong to the research community. The purpose was to identify possible obstacles and to check the validity of the device. After the exploratory experiment, the procedure was: pre-test, intervention program (4 weeks), and post-test. Pre-tests and post-tests were carried out in the same conditions.

In the educational program, the competitive learning method was applied in the main section of each educational unit. The program had a duration of 4 weeks, with a total of 4 educational units (one per week). Each education unit lasted 90 minutes. Each group was divided in two sections that competed with each other. As the educational curriculum was implemented by the subject's teacher, the researchers supervised the implementation of the educational curriculum using the competitive learning method and the invented device, without interfering in the teaching process.

2.3. Statistical analyses

The statistical analyses were carried out with the Statistical Package for Social Sciences (SPSS), version 24. The statistical methods used by the researchers to analyze the data were means, standard deviations, and t tests. The significance value was $p<0.05$.

3. RESULTS AND DISCUSSION

Table 1 describes the accuracy of direct free kicks in the pre-test and post-test of the two experimental groups. The accuracy of both groups significantly improved ($p<0.05$) from pre-test to post-test. The researchers attribute this improvement to the use of the competitive learning method. This method creates a great motivation to complete the task of scoring the direct free kick in the most accurate way, as the students compete with each other and they desire to obtain the best results. As Al-Khalidi (2003) mentions, if the need for achievement is strong, the individual does difficult and arduous work until the achievement is obtained. Hughes (1982) confirms that "competition increases the learners' desire to learn". Also, Barakat (1974) indicated that competition with the colleague in learning is a very motivating element.

Table 1. Accuracy of direct free kicks in the pre-test and post-test of the two experimental groups.

Groups	Pre-test		Post-test		t	p
	Mean	SD	Mean	SD		
1	5.333	0.492	6.250	0.622	0.001	<0.05
2	5.417	0.515	7.583	0.669	0.000	<0.05

Table 2 describes the accuracy of direct free kicks in the post-tests of the two experimental groups. The accuracy of group 2 was significantly higher ($p<0.05$) than the accuracy of group 1. Therefore, the combination of competitive learning method with the Football Jumping Wall Device was more effective than the use of competitive learning method alone.

Table 2. Accuracy of direct free kicks in the post-tests of the two experimental groups.

Group 1		Group 2		t	p
Mean	**SD**	**Mean**	**SD**		
6.250	0.622	7.583	0.669	0.000	<0.05

4. CONCLUSIONS

The competitive learning method significantly improved the accuracy of direct free kicks in football among male university students. The combination of competitive learning method with the use of the Football Jumping Wall Device was more effective than the use of the competitive learning method alone. Therefore, the authors recommend the combined use of the competitive learning method and the Football Jumping Wall Device to improve the accuracy of direct free kicks in football among male university students.

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AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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