INVESTIGATION OF THE EFFECTIVENESS OF THE PLAYFUL COMPETITION IN ADOLESCENT FOOTBALL PLAYERS

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Abstract

Games are one of the most effective educational methods. Thanks to the game and the competitive situation, we can avoid monotonous work and motivate the child. In our research, we were interested in how the players' performance changes due to the competitive situation. We hypothesized that speed and agility would be more effective if the competitive method were used. U-16 football players took part in the study. Our results showed that in both cases, speed and agility improved when we used the playful method. In this case, the playful method was to create a competitive situation. When measuring speed, 81% of players achieved better results when we created a competitive situation. When testing agility, 75% of the players performed better with the player method.

Keywords: *football, speed, agility*

THEORETICAL BACKGROUND

## THE ROLE OF THE GAME AS AN EDUCATIONAL METHOD

The competitive situation during the game is one of the most effective teaching methods (BÍRÓ, 2015). The varied movement material used during the game enables extensive and versatile development (BÍRÓ, 2015; BÍRÓ et al., 2015). Because the child plays, competes, and performs the task this way, he concentrates, pays attention to the game, his partner, the opponent, the observance of the rules, and thinks. This improves psychomotor and cognitive functions. His ability to recognize situations, make judgments, take the initiative, and, finally, develop his skills. Movement games, thanks to their different intensities, will harmoniously develop children's ability to perform and ability to perform (KOVÁCS, 2007). This is because the individual movement stimuli changes within a game. An excellent physical education expert or coach tries to develop children versatilely, planning the tasks so that as many impulses reach their students as possible. In movement games, movement is the main activity that connects various developmental actions. These can be logical tasks, tasks requiring cognitive ability, and role-playing games. Movement games can also be effectively used in training for some notable development or load. These games should also be used with sport-specific equipment because the child can acquire the skills needed for the given sport more effectively. Thanks to the games played in the team, team cohesion and trust in each other are strengthened. Ball games enable the development of children's adaptability. In addition, space and time perception and the

sense of rhythm also develop. It also results in the effectiveness of communication and sound decision-making. In addition to these, motor skills also develop continuously (BICSKEI, 2010). In addition, it is also essential to highlight the motivating power of games. During the game, the athlete is affected by increased emotional effects, so the expressed emotions positively affect the performance. External and internal motivational effects appear within the games, which can interact. If the coach or a teammate praises the other, it will probably positively affect him, thus increasing his internal motivation (PIKÓ, 2002). Motivation is a critical emotional and psychological state that improves the child's performance. The game can also be a great way to develop self-efficacy and self-image. Developing a competitive spirit develops self-confidence through appropriate self-criticism and, thus, internal motivation (CSÁNYI - RÉVÉSZ, 2015). A motivated child is also more receptive to absorbing new knowledge, increasing motivation for learning. This allows the teaching-learning process to work smoothly (ANNI, CLAUDIO - MAJA, 2004). It is, therefore, essential to find the most effective method in the teaching process, as the learning process will be more successful. The teaching-learning process can work effectively if linked to some development method. In this case, in our research, this educational method will be the game, creating a competitive situation.

PURPOSE AND METHODS

Our research aimed to determine the effectiveness of the player education method in the case of adolescent players. Our goal is to assess the effect of the competitive situation during the game on the athletes' performance. During the research, we measured speed.
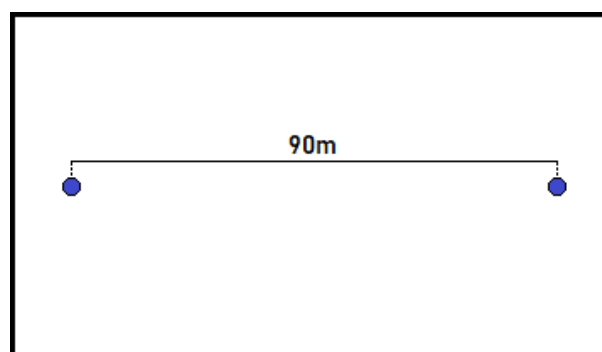
Figure 1: Layout and dimensions of the track
Source: own source

and agility. In both tests, we used a player and a non-player method. We planned the necessary track construction and prepared the required supplies and measuring devices. When calculating the speed, we used a 90-meter track surface, and on top of that, we provided a deceleration section. The track section was marked with two cones (see Figure 1). The time was recorded with a stopwatch. The athletes first performed the test without the playful method, followed by the playful method. The competition created the game

situation. Sixteen players participated in the tasks and were paired up before the exercises. The first task (method without games) was for both members of the pairs to run the given section of the track separately at the highest possible speed. In the second task, starting simultaneously at the highest possible speed, the distance must be completed in a race. The playful method, in this case, was the competitive situation. Agility was measured in a 20m x 40m area. We set up two track sections in this area. The area was more significant than the two court sections because the players needed minimal extra space for support. Nine cones determined the courses. In addition to the target cones, six indicated the starting point and the course section. The cones were located five meters apart, connecting imaginary lines.
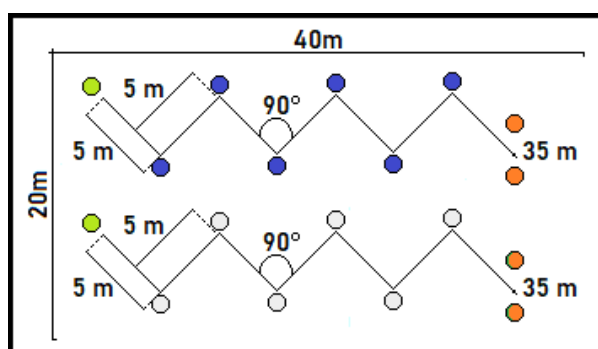

Figure 2: Layout and dimensions of the track
Source: own source

Their angles were 90 degrees to each other. The players covered 35 meters from the starting cone to the finish line. The track layout is illustrated in Figure 2. The results were recorded with a stopwatch. As before, the measurement was conducted first without and then with a game. The players ran along the course from the starting cone to the last cone at the highest possible speed, with a low center of gravity (Figure 3), and then performed the task in pairs (Figure 4) for competition. The exercise
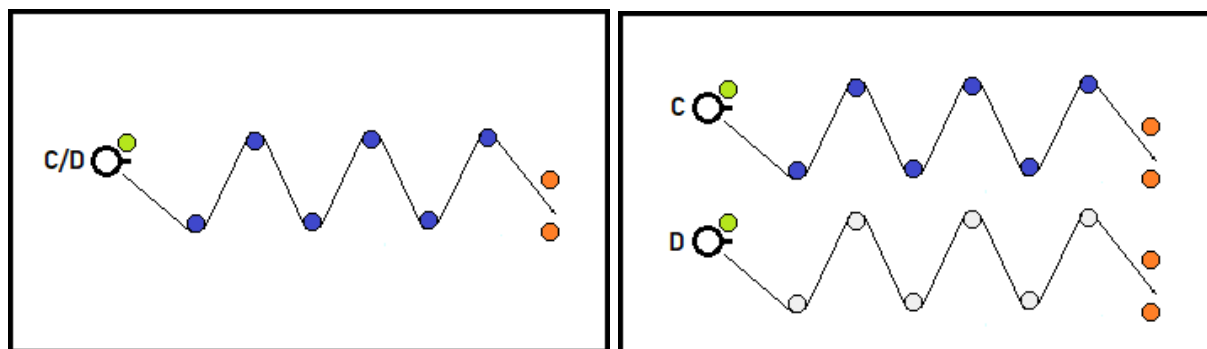

Figure 3: Execution of a task without a game. Figure 4: Execution of a task involving a game
Source: own source   Source: own source

must be performed with changes of direction through the cones. The goal is to run between the two final cones. The players participating in the study were team members of the U16 age group of the DASE Student Sports Association.

RESULTS

Thirteen of the sixteen players achieved better results when they completed the distance in a game situation. This is 81% of cases. Player three ("E," "G," "I"), on the other hand, finished earlier with the no-game method. In these three cases, their opponents achieved a better result than them. The fact that they saw the other player running faster may have played a role, so they already gave up on the race in their heads, thus running slower. If we look at the competing pairs, both members of five out of eight pairs achieved a better result. In these five pairs, the members most likely motivated each other in the competition. This occurred 63% of the time. When looking at the differences, I would emphasize that the results of players "N" and "D" are the two outstanding values . They are the ones who showed the best improvement in results using the playful method. Their results: player "N" is 1.65 seconds better, and player "D" is 1.43 seconds better than without a competitive situation. The average of the differences for those who achieved a better performance by playing is 0.66 sec. Among those who finished slower during the competition than individually, player "G" demonstrated the most significant difference of 0.71 seconds. In the three cases where the result was better without playing, the average difference in value was 0.47 seconds. The table demonstrates that the average result indicator was 13.53 seconds using the no-game method at the team level. The task performed with the game took an average of 13.08 seconds at the team level. The difference between the team averages of the two methods is 0.45 seconds, which favors practice with the game. The results conclude that the playful method can be more effective than the exercise without playing. Motivation during tasks was greater when players competed against each other. For this reason, on average, they achieved a better result when the task was a game.

Table 1: Results of speed measurement

Tested Player	Without Game (sec)	Involving a Game (sec)	Difference (sec)	
"A" player	12.81	12.22	- 0.59	
"B" player	12.51	12.03	- 0.48	
"C" player	12.97	12.43	- 0.54	
"D" player	14.44	13.01	- 1.43	
"E" player	12.81	13.06	+ 0.25	
"F" player	14.28	13.31	- 0.97	
"G" player	11.63	12.34	+ 0.71	
"H" player	12.65	12.51	- 0.14	
"I" player	11.94	12.40	+ 0,46	
"J" player	12.38	12.28	- 0.10	
"K" player	15.03	14.81	- 0.22	
"L" player	15.90	15.00	- 0.90	
"M" player	13.72	13.03	- 0.69	
"N" player	14.75	13.10	- 1.65	
"O" player	14.22	13.92	- 0.30	
"P" player	14.50	13.78	- 0.72	
Average	**13.53**	**13.08**	**0.66**	**0.47**

Source: own source

Similar results were obtained when measuring agility. Of the 16 players, 12 achieved better results when the task had to be performed using a playful method. Children performed 75% better in a competitive game situation. However, out of 16 cases, four players reached the finish line slower than in a competitive situation. However, out of these four cases, the opponents of 2 players ("A" and "I") achieved a better result. The other two competitors ("K" and "L"), on the other hand, achieved a worse result at the same time within one competition. Both contestants achieved a better result in 5 out of 8 pairings. Players "F" and "C" showed the most significant improvement in results with 0.95 sec and 0.83 sec. Among those who achieved a worse result in a game, player " A " produced the most crucial difference with 1.46 seconds. The average difference between the players who achieved a better result using the player method was 0.40 seconds, while those who achieved a worse result did so by an average of 0.67 seconds. At the team level, the average of the players without play is 9.96 sec, while with play, it is 9.83 sec—the difference is -0.13 seconds in favor of the exercises performed with the game. The measurement results allow us to conclude that the player method is more effective at the team level, as more players achieved better results. At the team level, the players reached the goal in less time when they were in a competitive situation.

Table 2: Results of agility measurement

Tested Player	Without Game (sec)	With Game (sec)	Difference (sec)	
"A" player	9.41	10.87	+ 1.46	
"B" player	10.23	9.74	- 0.49	
"C" player	9.61	8.78	- 0.83	
"D" player	10.08	10.07	- 0.01	
"E" player	10.12	9.64	- 0.48	
"F" player	10.19	9.24	- 0.95	
"G" player	9.79	9.20	- 0.59	
"H" player	10.08	9.72	- 0.36	
"I" player	10.11	10.54	+ 0.43	
"J" player	10.57	10.17	- 0.40	
"K" player	10.01	10.38	+ 0.37	
"L" player	9.82	10.24	+ 0.42	
"M" player	9.70	9.65	- 0.05	
"N" player	10.02	9.84	- 0.18	
"O" player	9.75	9.63	- 0.12	
"P" player	9.91	9.59	- 0.32	
Avarage	**9,96**	**9,83**	**0.40**	**0.67**

Source: own source

CONCLUSION

The results suggested that speed and agility can be developed more effectively if we create a competitive situation. Our research hypothesized that player task performance can be used more effectively to improve soccer skills than the non-game method. This hypothesis was confirmed, as the playful teaching method was more effective. Regarding speed, 13 out of 16 players achieved better results with the game than without the game. This is 81% of the study sample. On average, they achieved better results in a game situation than without a game situation. While without play, the team reached the goal in an average of 13.53 seconds, while with play, it took 13.08 seconds. Motivation played a role, as they were competing against each other. We observed the same thing when measuring agility. 12 out of 16 players achieved a better result in a competitive situation. The player's task performance was, therefore, more effective. If we examine the ratios at the team level, the average result of the players was 9.96 seconds, which decreased to 9.83 seconds with the player method. Parallel to the speed, the team achieved better results on average here, too, when I conducted the exercise using a playful method. If the task is instructed in a game during training, they will be put in a situation (game situation) where they will perform better to win. This manifests itself in the fact that they complete the task faster. Our measurement proved that, on average, they performed the exercises faster in a game situation.

REFERENCES

Anni, K., Claudio, D. & Maja, P. (2004). *Guidelines for Game- Based Learning*. Pabst Science Publishers, Lengerich.

Bev, H., Jeny, G. & Maude, P. (2013). *Teaching Physical Education in the Primary School*. Routledge, Abingdon.

Bicskei, B. (2010). *Kapusok könyve*. Bicskei és fiai Kft, Budapest.

Boronyai, Z., Csányi, T., Kun, I., & Vass, Z. (2016). *Labdarúgás az iskolában*. Magyar Diáksport Szövetség, Budapest.

Bíró, M. (2015). Játékelméleti alapismeretek, In: Bíró, Melinda (szerk.) *Mozgásos játékok*. Eger, EKF Líceum Kiadó, 6-23.

Bíró, M., Juhász, I., Széles-Kovács, Gy., Szombathy, K. & Váczi, P. (2015). *Mozgásos játékok* Líceum Kiadó, Eger.

Brusseau, T. A., Darst, P. W., Pangrazi, R. P. & Sariscsny, M. J. (2012). *Dynamic Physical Education for Secondary School Students.* Benjamin Cummings, San Fransisco. USA.

Callies, E. (1995). Tanulás a játékban. (szerk.): *Játékpszichológia. Szöveggyűjtemény.* Eötvös József Könyvkiadó, Budapest.

Carlo, B. & Tudor, B. (2015). *Periodization Training for Sports*. Human Kinetics, Champaign. USA.

Csányi, T. & Révész, L. (2015). *A testnevelés tanításának didaktikai alapjai*. Magyar Diáksport Szövetség, Budapest.

Gáldi G., Gáspár M., H. Ekler J., Nádori L., Rétsági E., Szegnerné Dancs H. & Woth P. (2011). *Sportelméleti ismeretek*. Dialóg Campus Kiadó, Pécs.

Gerald, G. (2002, eds.). *An introduction to primary physical education*. Routledge, Abingdon.

Göltl, G. (2002). *Labdarúgás lépésről lépésre*. Magyar Sporttudományi Társaság, Budapest.

Hollósi, H. (2008). *Gyermekkép, gyermekvilág gyermekfelfogás változásai pedagógiai megközelítésben.* In: Géczi J. (szerk.): Iskolakultúra. Gondolat kiadó, Veszprém, 92-103.

Jarvei, G. (2000). *Sport, culture and society*. Routledge, Abingdon.

Kovács É. T. (2007). *A mozgásos játékok hatása a 9-10 éves gyerekek fizikai képességeinek fejlődésére.* Kolozsvár.

Maár, T. (2009). *A játék módszerének alkalmazása a tanítás során*. In: Géczi J. (szerk.): Iskolakultúra. Gondolat kiadó, Veszprém, 44-55.

Molnár, A. & Müller, A. (2024). A Gamifikáció alkalmazása a toborzás és kiválasztás területén. *GRADUS*, 11 (1), Paper: 005, 9.

Müller, A., Židek, P. & Lengyel, A. (2024). Az akadálypályás mozgásfejlesztés szerepe és jelentősége az autizmus spektrum zavarral élő gyermekek esetében. *KÜLÖNLEGES BÁNÁSMÓD*, 10, 1, 63-74., 12.

Németh, Zs. (2015). *A labdarúgás technikai mozgásanyagának oktatás módszertani javaslatai.* PTE TTK Sporttudományi és Testnevelési Intézet, Pécs.

Pikó, B. (2002). *Egészségtudatosság serdülőkorban*. Akadémiai Kiadó, Budapest.

Sheppard, J. M., & Young, W. B. (2006). Agility literature review: classifications, training, and testing. *J Sports Sci*, Ballarat.

Tóth, L. (2000). *Pszichológia a tanításban*. Pedellus Tankönyvkiadó, Debrecen.