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**A NEW PERSPECTIVE OF TEACHING CHESS TO KIDS**

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***Abstract***

Chess and football have progressed tremendously over the last 20 years and their quality and complexity have never been higher. The beneficial influence of chess on the human cognitive skills and character are continually demonstrated by studies, and more and more people try to guide their children to practice this sport. While teaching chess to some 10-12 year old football players, we noticed their interest in studying chess, especially when certain concepts were correlated with the sport they already enjoyed and actively practiced, namely football. A person who is learning chess can improve only by developing some abilities such as concentration, decision-making, strategic evaluation etc. Taking into consideration the fact that these are the skills used when playing football, it makes sense that playing chess should benefit anybody who plays football and vice versa. Chess can become a more attractive and popular activity among children if it is related to the sport that is loved by everyone, football. Children should be taught to see the common concepts of these two sports, therefore recognizing that being a good player of one of them can lead to good performances in the other by transferring knowledge that can be applied in both games.

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## 1. Introduction

What is chess? It is a sport, a science, an art, but first of all, it is a game. Chess is an amusing game, but, at the same time, it is not very easy when one begins to practice at a higher level of performance.

The multiple benefits of this sport have been demonstrated over time by numerous studies and research. The development of logical thinking, critical thinking, memory, attention and intelligence (Frank, 1978; Ferguson, 1995; Dauvergne, 2000; Dyck, 2009) are some of the reasons why parents should guide their children to practice this sport.

Often, however, even if parents want and insist that their children take chess classes, the children do not show any interest in it. There are some aspects that parents or teachers need to follow when they want to teach children how to play chess and, according to them, the learning attempt may or not succeed (James, 2013). Sometimes children that are passionate about other sports or activities are not attracted to chess at all, no matter how good and/or creative their training regimen is. In these cases, but also in general, special methods and means might be used to make chess more attractive. From our point of view, this can be done by finding a passion that a child already has and trying to make a connection between it and learning. Now let's think: which is the most popular and loved sport among children, especially boys? The answer is: football.

Kitsis, a national chess master, speaks, in one of his articles, about the connection between these two sports, considering their common aspects, such as tactics and strategy (Kitsis, 1996).

## 2. Problem Statement

We could say that there are not many similarities or connections between chess and football, especially because one is an individual sport and the other is a team sport. However, we think that a little creativity using elements of football could lead to the creation of a chess teaching program that could make chess more popular among children and, implicitly, make children smarter.

In our opinion, if a child is a fan of one game, it is likely that he will enjoy the other, because both games are based on similar concepts. Therefore, if the child likes playing or watching football, he can use the understanding he has of the game to play chess and, similarly, he can appreciate a good game of football through his understanding of chess as a sport.

While teaching chess, the "mind's sport", in an effort to increase the focused attention of 10-12 year old football players, we noticed their great interest in studying chess. As well, certain concepts seemed much simpler to them when correlated with the sport they already enjoyed and actively practiced, namely football.

This junior chess teaching program is still in progress and we hope that, at the end of it, we can provide a concrete assessment of the benefits of chess on football performance. In addition to the basic elements of chess, emphasis is also placed on chess-related attention and memory exercises that are useful in helping children develop specific cognitive skills.

### 3. Research Questions

Our research questions are:

What are the similarities between the two sports, chess and football, and how can they be used to make it easier for children to learn the basic elements of chess?

Can cognitive skills acquired by playing chess help increase the performance in football?

### 4. Purpose of the Study

The first purpose of our study was to find out the common concepts of chess and football and to use them for creating new means of teaching chess to kids, and the second one was to identify the skills acquired by playing chess that can lead to better performances in football.

### 5. Research Methods

The research methods used were the literature review, the observation method and the statistical-mathematical method.

The subjects of the research were 28 children aged 6 to 10 years, 19 boys and 9 girls. They were randomly divided into 2 groups of 14 children each and participated in 5 chess courses, each class having an hour. The first group was taught the basic elements of chess by classical teaching means and methods, and in the second group, the basic rules were presented in correlation with the principles of the football game.

After the 5 chess classes, the children were given an evaluation test to see which of the two chess teaching methods was more effective. The test consisted of 10 questions about the basic rules and the opening principles in chess.

### 6. Findings

**Table 01.** Results achieved by the subjects in the evaluation test

	Classical chess teaching means	Chess teaching means correlated with football elements
Mean	7.64	8.07
Standard Error	0.36	0.40
Median	7.50	8.00
Mode	7.00	8.00
Standard Deviation	1.34	1.49
Sample Variance	1.79	2.23
Kurtosis	-0.08	0.03
Skewness	-0.13	-0.79
Minimum	5.00	5.00
Maximum	10.00	10.00
Count	14.00	14.00
Confidence Level (95.0%)	0.77	0.86

The results of our research show that there is a difference between the two ways of teaching chess to kids in terms of the knowledge acquired by them. They seem to understand better the basic principles and rules of chess if we make connections to football.

Below, we will present some of the means used in chess teaching, for a better and quick understanding of this game, means that relate to the game of football.

First of all, we want to draw attention to the common aspects of the two sports, exemplifying how football knowledge can lead to easier comprehension of the more basic and important elements of chess.

A very important aspect of both sports is the teamwork element and no other sport places such great emphasis on harmony between players as football does. Likewise, in chess, everything on the board is affected by each movement or action and one badly positioned piece can be ruinous.

Playing football and chess well is all about good positioning, creativity and instinctive reactions and calculation. During a game, players often have more than one option when deciding what to do, and a player must make a quick decision when choosing which option is best to pursue. As the former Dutch international footballer, Arnold Muhren, said, football is a game you play “with your brains, not with your feet”.

Chess and football are games that involve using space effectively and getting the timing right in order to break down an opponent’s defence whilst preventing them from breaking down yours (Winner, 2001).

The principles of the chess opening:

- Dominating (occupying) the centre of the board
- Developing the pieces to the centre
- Safety of the king (castling)
- Creating connections between the pieces and their mobility
- Creating space
- Taking the initiative or counterattack
- Identifying the opponent’s weak spots
- Attacking in the centre or on the flanks
- Penetrating and capturing the pieces (The Chess World, 2015)

The principles of the football game:

- Dominating the midfield
- Building connections between players (support) and their mobility
- Creating and using space
- Identifying and exploiting weaknesses
- Using the width of the field
- Improvisation and creativity (Strudwick, 2016)
- Taking the initiative

Considering the principles outlined above, we can find a way to teach the basics of the game of chess through the principles of football. The child must look at the chessboard in the same way he looks at a football field, where the football players are represented by the chess pieces. We begin by giving each piece a role as a striker, midfielder or defender as follows: the pawns will initially be the defenders, the knights,

bishops and the queen will be the strikers and midfielders, the rooks will act as midfielders, and the king will be the goalkeeper.

The main coordinates of the chess board are to be explained as such: the board consists of eight ranks, eight files and diagonals. The territory of each team is delimited by the middle line, known as the “border”, similar to the middle line of the football field. The board is divided into queen’s flank, king’s flank and central files, similar to the football field which is structured in the left wing, the right wing and the centre axis. The small and large centres of the chess board are correspondent to the football field’s centre.

The main challenge for children consists in learning how to properly develop their pieces in the opening, many of them moving the wrong pieces initially and getting into a disadvantage from the beginning of the game. In football, players need to create connections between them and build tactical elements. Similarly, chess pieces must be developed in the centre of the board, with some of them acting as main attackers, while others act as support pieces. As the American chess master, Jeremy Silman, said: “Never forget that your pieces should be working as a team! Nurture each and every one of them, make sure they complement each other” (Wells, 2008).

Development is the activation of multiple pieces in the opening. It is very tempting to try to get the advantage by a quick attack and continually bringing out pieces may seem a waste of attacking momentum. However, very few successful attacks can be launched without the proper development of the pieces. This is also true in football. Attackers cannot be left alone to create the attack; the midfielders and defenders must support them to enable more options as play continues.

After developing the pieces, the question arises: “Where should I start the attack? On queen’s flank, on king’s flank or in the centre?” In order to choose the right option, the chess player should analyse the various choices he/she has well, deciding where he/she has more chances to attack successfully. The player must find or create weaknesses for the opponent and then exploit them; this is the key to winning. On the other hand, the player must also pay particular attention to the opponent’s attack and be aware that if the opponent is unable to exploit a weak spot, there is no need to defend it.

Different types of chess openings can be compared to football formations as well. There are offensive openings that rely heavily on attack and combinations and less on the creation of a reinforced defence, but there are also passive openings where the player has little chance of creating a decisive attack on the king. These passive openings are more strategic than tactical.

In order to better understand the correlation between the two sports, concrete examples of played football matches and chess games of the grand masters will be used.

On the other hand, chess is a sport with multiple benefits and we think that, if we can use football to help kids understand better chess, we can also make chess an instrument to improve football performances, because chess develops some cognitive skills which are essential in professional football.

Football players are required to make instantaneous and continuous decisions throughout the match, without having predetermined playing sequences at their disposal. The football field is an unpredictable area in which players are required to respond to cues from teammates, opponents, the ball, the playing surface, the environment, and coaches and referees. A high level of cognitive skill is required to enable players to fulfil their physical and technical potential. Skills such as game intelligence, anticipation, reaction

time, decision-making, attention shifting and pattern recognition are all relevant cognitive skills that must be used during a football match (Pruna & Bahdur, 2016).

Focusing in football is complex and quirks of the brain make it especially difficult. The brain naturally likes to focus on problems, so players will be distracted by a wrong decision made by the referee or a mistake they have made during play, thus failing to concentrate on the things they do control. In order to acquire a better capacity for focusing on the actions they can control, it takes conscious daily effort from the player and, even then, there is no certainty that this skill will be mastered.

The ability to concentrate is one of the main skills of professional chess players. Concentration is the key to an athlete's ability to achieve maximum performance. For example, in the case of two athletes with equal skills, it is almost certain that the athlete with better focus on the task at hand will be the one who will triumph. Both internal and external disturbing factors are inevitable in the lives of athletes, but the best athletes learn to control their thoughts and focus on the present moment.

As Tobias Gopon says, the characteristics of a performance football player are divided into three categories: physiological, psychological and soccer-specific, and are represented by visual search strategies, decision-making and anticipation, motivational orientation, shooting, dribbling, aerobic power and anaerobic power.

In football, decision-making is the process of thinking about a certain action, such as dribbling, passing, shooting and execution. In order to find out what a player's decision-making level is, he/she can be tested with problems that may arise during a match, having to make the right decision under both mental and physical pressure.

Anticipation implies an instinct about where a teammate or opponent will play the ball or where one of them will be placed. The ability to read the game and anticipate an opponent's intentions is an important feature of talented performers (Morris, 2000). Tests to measure a player's level of anticipation are similar to those used for decision-making (Williams, 2000).

Ruud Gullit, the former Dutch national player, once remarked that a 90-minute football match can often be decided within a moment. Every game will contain significant situations when the player defines the moment or the moment defines the player. A lapse of focus often determines that moment. Part of shaping the attitude of players when faced with a mentally tough performance is helping them become aware of and prepared for those defining moments (Beswick, 2010).

All of the above-mentioned qualities of professional footballers are skills acquired through chess, as evidenced by recent research in the field.

## **7. Conclusion**

Junior footballers that follow a chess training program can improve their cognitive skills, potentially leading to better performance and increased ability with regard to skills such as attention, decision-making, anticipation and intelligence.

Simultaneously, chess can become a more attractive and popular activity among children if it is related to the sport that is loved by everyone, football. After teaching chess in two different ways, one with classical means and one by using football elements, we have noticed that the second one is more effective in acquiring knowledge by children. Children should be taught to see the common concepts of these two

sports, therefore recognizing that being a good player of one of them can lead to good performances in the other by transferring knowledge that can be applied in both games.

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