

*Translated from the original in spanish*

**Original article**

## **System of games for familiarization with chess, in schoolchildren of primary education first cycle**

### **Sistema de juegos para la familiarización con el ajedrez, en los escolares del primer ciclo de la enseñanza primaria**

### **Sistema de jogos para a familiarização com o xadrez, nos escolares escolares do primeiro ciclo do ensino básico**

**Rolando Díaz**<sup>1\*</sup>  <http://orcid.org/0000-0001-8550-2349>

<sup>1</sup>Universidad de Pinar del Río "Hermandos Saiz Monte de Oca", Pinar del Río, Cuba.

\*Corresponding author: [rolando.diaz@upr.edu.cu](mailto:rolando.diaz@upr.edu.cu)

**Received:** December 16<sup>th</sup>, 2012.

**Approved:** April 5<sup>th</sup>, 2020.

---

#### **ABSTRACT**

In these modern times, where the demands are ever greater and the advances in science and technology progress at a dizzying rate, emphasis needs to be placed on efforts towards an ever more developing education. Therefore, priority must be given to learning, to the development of skills, physical abilities, human values and personal resources, in a general sense, in terms of the comprehensive development of the personality. An interview, a survey and observation of the playing time of schoolchildren in the first cycle were carried out and it was found that students prefer the teaching of chess through games. The objective was to propose a system of games to familiarize students with chess in the first cycle, which has been structured based on reality and objectivity, based on the most current precepts on the subject in question. After the application, the results were favorable in terms of the teaching of chess.

**Keywords:** chess; game system.

---

#### **RESUMEN**

En estos tiempos modernos, donde las exigencias son cada vez mayores y los adelantos de la ciencia y la técnica avanzan vertiginosamente, se necesita priorizar los esfuerzos hacia una educación cada vez más desarrolladora. Por tanto, hay que proporcionarle importancia al aprendizaje, el desarrollo de habilidades, las capacidades físicas, los valores humanos y recursos personales, en sentido general, en función de un desarrollo integral de la personalidad. Se aplicó una entrevista, encuesta y la observación realizada al turno de juego en los escolares del primer ciclo y se constató que los estudiantes prefieren la enseñanza del ajedrez mediante juegos. El objetivo consistió en proponer un sistema de juegos para la familiarización con el ajedrez en los escolares del primer ciclo, el cual se ha estructurado sobre la base de la realidad y objetividad, partiendo de los preceptos más actuales sobre la temática en cuestión. Luego de la aplicación, los resultados fueron favorables en función de la enseñanza del ajedrez.



**Palabras clave:** ajedrez; sistema de juegos.

---

## RESUMO

Nestes tempos modernos, em que as exigências são cada vez maiores e os avanços da ciência e da tecnologia progredem a um ritmo vertiginoso, há que dar prioridade aos esforços no sentido de uma educação cada vez mais orientada para o desenvolvimento. Por conseguinte, deve ser dada prioridade à aprendizagem, ao desenvolvimento de competências, capacidades físicas, valores humanos e recursos das pessoas, de um modo geral, em termos do desenvolvimento global da personalidade. Foi realizada uma entrevista, um inquérito e uma observação do tempo de jogo dos alunos do primeiro ciclo e verificou-se que os alunos preferem o ensino do xadrez através dos jogos. O objectivo era propor um sistema de jogos para familiarizar os alunos com o xadrez no primeiro ciclo, o qual foi estruturado com base na realidade e objetividade, com base nos preceitos mais atuais sobre o tema em questão. Após a aplicação, os resultados foram favoráveis em termos do ensino do xadrez.

**Palavras-chave:** xadrez; sistema de jogos.

---

## INTRODUCTION

Teaching people to think is the basic aim of pedagogy and of all good teaching systems. Through chess, the ideal means of achieving these aims can be achieved. Chess is a noble entertainment for the intellect, a cultural object, a science with innumerable facets to discover, it has enormous educational and formative potential, it can act as a channel for an important number of aspects of a psychological nature, it helps to dimension the will and constancy as an element of formation; it is an effective instrument in the education of the personality.

That is why, several authors state how:

"the systematic study of chess contributes to the integral formation of the individual in ten basic areas, namely: recreational, sporting, intellectual, cultural, ethical, aesthetic, instrumental, emotional, preventive and social health" (Blanco. U. p. 25, 2004).

"Chess within sport and Physical Education is an effective tool to teach logical thinking, that children who are passionate about this sport study very well in school, enter university without any problem and have an excellent career" (Cortes. p. 36, 2009)

"Chess is a mental art and sport; it is a rational game where each player decides the movement of his pieces" (Darwin. 12, 2012).

The author of this paper considers chess to be an activity in which reflection, patience, concentration and serenity are put into practice. A greater knowledge of the teaching of chess allows students to enhance their skills and discover them through their practice. Because it is a game, it becomes attractive, so the student learns by playing, while interacting and strengthening a series of positive values, as well as their self-esteem.



This sport is a never-ending subject. The many centuries that have passed since the first piece was moved have not diminished the interest and passion that it awakens today more than ever in all areas. There are many advantages to playing chess, and not because it is a game should be considered without significance, much less in children, because what they learn from chess will be decisive in their lives. Thousands of years ago, Plato already mentioned the importance of the game in children, considering it the determining factor in the formation of the citizen.

The author considers that the Program of Massification of chess in Cuba was, at the time, a fundamental tool in the integral development of the personality; with the increase of the educational content and the televised classes, the development of this game has been limited within the educational schedule, which - giving only in the participative sport. In spite of its importance and for it, it is necessary of a beginning with actions that stimulate and achieve the familiarization as initial element, of a solid vocational orientation towards the game science.

This interesting topic of the intellectual development of the student and the teaching of chess in schools has been approached by outstanding researchers among which stand out: **Djakow, Petrowski and Rudik (1925) and Blanco, (2004)**, where it is appreciated that they pay special attention to their teaching strategies, development of the game, their tactics and other endeavors; but it is considered that, to achieve a true motivation and systematization towards chess, it is necessary to initiate and approach the game of science with other teaching variants. That is why, offering the familiarization of the game of chess, from a more pleasant perspective, could achieve greater acceptance for its initiation, interest, constituting this the end proposed in the work.

The games are in fact a historical phenomenon in the social and cultural development of humanity and its importance is given by the contribution it provides in the development of capabilities, skills as a basis for sports initiation, in addition to its high educational value.

Play as a vital expression of childhood, as a formative, recreational educational tool, must be present in every characterization of the child as an important aspect of being and developing. If playing is learning, play should appear or occupy an important place within the Physical Education class.

Etymologically, play comes from *Jocue*, which means lightness, frivolity, pastime, and *Ledus*: which is the act of playing.

The Real Academia of The Spanish Language (RAE in Spanish) defines it as,

"the action of playing, pastime or fun, its definition is something not defined since it is an activity mainly under its leisure aspect".

From the physiological point of view, it is the activity carried out by superior beings without an apparently utilitarian end, as a means of eliminating their excess energy. However, when a child is ill he does not lose interest in play and continues to play.

From the psychological point of view, it is the spontaneous and disinterested activity that demands a freely chosen rule to be fulfilled or a deliberate obstacle to be overcome. The special function of play is to provide the child with the moral pleasure



of success, which, by increasing his or her personality, places it before his or her own eyes, and those of others **Gutenberg (1994)**.

Arnolf Russell defines play within the psychological as a pleasure-generating activity that is not carried out with an aim outside of itself, but by itself.

From the sociological point of view, play can be defined as a voluntary activity or occupation that is carried out within certain established limits of space and time, according to freely accepted rules **Huizinga, J., Homo L., (1972)**.

Furthermore, this author assumes the game as:

"(...) a voluntary action or activity, carried out within certain limits of time and place, according to a freely accepted rule, but completely imperative and provided with an end in itself, accompanied by a feeling of tension and joy and an awareness of being other than in ordinary life".

The definition described covers the essential elements of play: it assumes it as an activity, therefore, implicitly considers it as a system of actions and that it has its own structure, part of the intrinsic motivation of the subject who wants to play in fact. No one can really play, if they are not interested in this activity; it is recognized that it has an end in itself and, finally, it specifies that those who play, experience moments of attention and high complexity, given that they have to overcome obstacles, overcome barriers, comply with mandates or rules, oppose rivals and that all this provides them with an opportunity for development.

Related to this issue of games in Primary Education, it has been systematically researched, especially in the last five years. Reviewing scientific articles on games, it is suggested that several of the authors have approached this issue from different dimensions, either from inclusive education, from popular and traditional games to enhance the learning of chess in the Physical Education class, for the learning of mathematics through digital play, associated with motor conflicts and, among other issues, the game associated with projective relationships (**Rodríguez Fernández, J, et al., 2015; De Ocáriz Granja, U. S., & Burgués, P. L., 2015; Cadavid, J. M., 2016; Díaz, V. M., & Requena, B. E. S., 2016; Giménez Fuentes-Guerra, F. J., & Díaz Trillo, M., 2016; Vindel, I. M. F, 2017; Breda, T. V., 2017; Rodríguez, V. L. O., Torres, a. Y. R., & Aguilar, C. C., 2018; Sáez de Ocáriz Granja, U., et al., 2018 and Patón, R. N., et al., 2018**).

The author of the work shares the conceptualization about the game, assumed by Villalón (**García, G. p. 1986. p. 29**), when considering that this is:

"a voluntary activity that is carried out based on the selection and decision of those who are going to participate in it, with rules that channel its dynamics, which are chosen, approved and fulfilled by all; where the players feel and act assuming new roles, based on the connotation that the game has for them and because of the content and functions that they represent in it, which makes them feel as if they were someone else, so their behavior is very special".



The author assumes **Vygotsky's conception (1981)** that teaching and education lead and guide psychic development. Familiarization with chess is an optimal way to foster the development of the schoolchild's personality in the cognitive dimension, where school, community, and family are the fundamental elements for its development.

When making a balance of the deficiencies found in the exploratory study, the author of this work determines that there are theoretical-methodological deficiencies with respect to the use of games to strengthen the learning of chess in primary education. Therefore, the following objective is set out to propose a system of games to familiarize first cycle students with the teaching of chess.

## **MATERIAL AND METHODS**

In the process of carrying out a characterization in the object of study, 20 teachers from five primary schools of the Pinar del Río municipality are determined as population for a sample of 15 teachers, who receive the necessary information to carry out this research.

In order to know the current status of teachers' training on games related to chess teaching, a diagnosis is made based on the implementation of an observation guide, a group of surveys and interviews.

With the observation, the author aims to research the situation of the teachers under study, based on the following indicators:

- He directs the pedagogical activity in an appropriate way.
- He enables the formation of values in schoolchildren
- He organizes the components of the teaching-learning process (content, objective, form, methods, means and evaluation).
- He carries out actions for the independent work and the socio-cultural integration of its students.
- He manifests the inter- and transdisciplinary approach in the execution of the contents of its class.
- He develops strategies for the attention to individual differences.
- He organizes concept maps for the construction of definitions.
- He orients research projects for the search of solutions to professional problems.
- He develops exercises or tasks related to the contents of life.
- He uses and/or creates group dynamics techniques for the activation of learning.
- He carries out teaching tasks that relate schoolchildren to their responsibility before work, their profession and society.
- He establishes a favorable emotional climate for the development of communication between students and between students and teachers.

The survey (for teachers and directors) is applied to assess the state of knowledge about play, chess and didactics for the quality of primary teachers' pedagogical performance. This instrument was developed in accordance with the indicators described below:

- Level of knowledge about the components of didactics.
- Level of knowledge about the components in the teaching of chess
- Level of knowledge about the school game.



- Knowledge about training to implement the game in order to improve the quality of classes.

The interview (for teachers) is elaborated with the objective of evaluating the state of knowledge about the game, chess and didactics for the quality of pedagogical performance. The indicators on which this study is based are:

- Knowledge about the components of didactics in general.
- Orientation of the games in an oral and written way during the class.
- Development of the values inherent to the pedagogical activity that are achieved from the training activities.

The documentary review is put into practice to evaluate the state of the permanent and continuous formation of the primary teachers, according to the development of the teaching of chess through the game.

This review is applied to the individual improvement plan, the undergraduate training programme, the regulations of the legal framework for training, the individual work commitments of primary teachers, the evaluation certificates and the physical education syllabus and methodological guidelines for the first cycle of primary education.

Among the criteria taken into consideration are the following:

- Identification of the formation (training) related to the game and teaching of chess
- Assessment of the correspondence between plans, programs, agreements and work strategies with the need for training on the games in the teaching of chess.
- Assessment of the problems identified in the teacher's evaluation, related to the didactics, the game and the teaching of chess.

## **RESULTS**

In a synthesized way, these methods helped the researcher focus on the following strengths and weaknesses:

### **Strengths:**

1. Existence of game shifts during the week.
2. Teachers recognize the role of play in the development of educational potential in primary school.
3. Teachers recognize that chess can be introduced as a necessary game because of the potential it offers in the development of personality.



### **Weakness:**

1. Insufficient preparation of first cycle teachers according to the game shift in the activities programmed in the methodological plan in the school.
2. The individual plans of first cycle teachers do not always include actions aimed at training in subjects related to their play culture.
3. Insufficiencies in methods for planning and development in the direction of the types of games to be employed in the play session.
4. Insufficiencies in the use of varied games to learn contents of the subjects of the cycle.
5. Limitations with respect to the own values that emanate from the didactic games.
6. Difficulties in the evaluation as a result and as a process, in function of motivating the students in the development of the games.

In analyzing this inventory of strengths and weaknesses, the author is motivated to try to strengthen these presented weaknesses, focusing his study on training development. The key features of the proposal, as well as the preliminary results, will be shown below:

### **Rationale for the proposal**

It has been proven that school chess makes people, who participate in it, perform more satisfactorily because it optimizes their self-esteem, enriches their intellect and commits them socially.

This statement is based on the fact that chess, as a cultural and sporting element, promoted in schools, allows for a better child. In this training, chess becomes an instrument that stimulates a series of cognitive and emotional skills; therefore, it must be considered a useful pedagogical resource for the development of our society.

It is based on the principle that chess should be considered a cultural heritage of humanity and, therefore, its knowledge, an inalienable right of the new generations. This preaching and the permanent work in favor of the incorporation of chess in schools has become, with the passing of time, a cause. In this sense, **Blanco U., (1998)**, points out that:

"We understand that the cause of chess, and particularly that of school chess, is a good cause, a noble cause".

That is why, this cause is spread and reached to all school levels of our society, it is necessary the active and critical participation of the teacher or massively teaching and learning process of chess. Precisely, the teacher is the one called upon to carry out this great mission because he or she is the one best qualified to:

- To conceive education as a constant search for answers to vital existence. Develop skills and abilities to process, analyze, interpret and present information.
- To value culture, sport and recreation as inalienable rights of the individual. To conceive chess as a means of promoting better citizens.



The author assumes the criteria of Professor **Laplaza, Jorge. (1995)**, when he expresses: "in general we want".

- That the children, through the learning of chess, systematic and programmed, discover their intellectual abilities.
- That they learn to accept that not all recreation and play activities are satisfied with strength sport or physical activity nor with the very often alienating, electronic pastimes.
- That chess, because of its cultural roots and insertion throughout the world, opens up a wider vision of its possibilities to them. That they learn to transfer skills acquired in the game to all the domains in which their progress and motivation are framed.
- That, they find in the method of study of play the teachings of behaviors that are sometimes lacking in the curricular development of schools. That, by understanding their own measurable value in sport, they achieve the valuable self-confidence that helps them to overcome difficulties in all their activities ".

The author agrees with the above criteria, but considers that, for a greater effectiveness in the familiarization with chess; it must begin by studying the characteristics of the board and the dynamics of the pieces because they constitute the basis of any new element to be learned in this sport. All this process is essential to make it extensive from the earliest ages.

From the pedagogical point of view, the proposal is based on the theory of advance: the pedagogy of adventure and some of its precepts in its organization and implementation in order to achieve the expected results. From this perspective, the massifier raises and helps in the solution of the problems previously declared. In this case, the game, due to its motivating character, makes the child assume the decision that leads him/her to become familiar with chess.

In the organization of this proposal, the following steps are taken as guiding elements for the application, in the familiarization with chess, in such a way that these activities are reflected in the proposed games:

1. Initiation activities.
2. Disinhibition activities.
3. Communication activities.
4. Trust and adaptation activities.
5. Activities to find decisions and solve problems.
6. Activities of civil responsibility.
7. Activities of personal responsibility.

Furthermore, the game system takes into account the methodological guidelines for chess in schools (academic year: 2005-2006) of the Instituto Superior Latinoamericano de ajedrez- (ISLA).

Taking up again the theoretical background approached in its different contexts and having as paradigm the adventure pedagogy, as well as the game and its ludic potentialities, besides that from this perspective the massifier is an entity that raises and helps in the solution of the problems, the game for its motivating and coherent character, the participant of this one assumes decisions that take him to a process





of familiarization with the central object of these problems; in this case, it is important the game of chess.

### **Game system to familiarize students with chess**

General objective of the proposal: to familiarize students in the first cycle with the elements that govern the game of chess, through games organized in the playing class at school.

#### **Game # 1. Introductory activity**

Name: Design and build your wall chessboard and pieces of it, in a creative way.

Objective: to achieve the creation of wall chessboards to be used in the areas of the District, relying on the participation of all team members.

Development: this activity is carried out with three teams where each one of them will have the materials assigned for the confection of the chessboards. For this, the technician will present them with a model wall chessboard to serve as a guide and they will be guided to take into account:

- The chessboard should be 1.50 cm, on each side. Location of the columns taking into account the letters of the alphabet.
- Location of the rows taking into account the numbers from one to eight.
- The size of the pieces must be proportional to the dimensions of the squares on the board.

They must make one set of white pieces and one set of black pieces, each consisting of two rooks, two bishops, two knights, two queens, kings and eight pawns for each side.

Materials: cardboard, brush, down, tempera, paper, glue and scissors will be used.

Evaluation: at the end of the activity, the technician, with the opinion of the group, designates the winning team based on the creativity shown in the making of the mural.

#### **Game # 2. Disinhibition activities**

Name: Value shot

Objective: to place the chess pieces as quickly as possible, taking into account the absolute value of the pieces, using two dice.

Development: this activity will be done in pairs, where each member will have a chess set.



The dice will be rolled and the pieces will be placed according to the numbering that appears in the roll, taking into account the absolute value of the pieces; for example:

- 1 x 1 roll, two pawns will be placed.
- 1 x 2 roll, 1 x 4 roll will be repeated.
- 1 x 3 roll, one pawn will be placed and one of the following variants: bishop/knight, bishop/rail, knight/knight.
- 1 x 5 roll, 1 pawn and 1 rook will be placed.
- A roll where a two appears will be repeated.
- 3 x 3 roll, one of the following options will be placed: bishop and knight; two bishops; two knights.
- If the roll is 4 x 5, the queen is placed as it has a value of nine points.
- If the roll is four with another option, it will be repeated.
- If the roll is 5 x 5, the two rooks will be placed.

If the roll has a six, the king will be placed and the other piece will be in correspondence with the number that comes out, taking into account the exceptions seen.

Variant of the game: value shot.

Development: this activity will be carried out with three teams, where each one will have a game. They will be integrated by ten members; they will be placed in a circle; each one will develop its roll with dice, making the corresponding placement.

Materials: chess board, chess pieces, number dice.

Evaluation: the team that first places the pieces correctly according to the indications given wins.

### **Game # 3. Trust and adaptation activities**

Name: the dice and figures of chess.

Objective: to place the chess pieces in the right place on the board, showing the corresponding move and capture, using the dice.

Development: this activity will be carried out with three teams.

To do so, they will be guided:

The participants form a circle.

They are given a die with the chess figures.

A member of the team will roll the dice and the piece that comes out is the one that the child will take from a box located in the center of the circle where the pieces are, placing them on the board, in the showing the movement and capture that is his due.

Materials: chess board, chess pieces, box, painted dice.



Evaluation: the team that correctly demonstrates the movement and capture of the pieces in the corresponding roll wins.

#### **Game # 4. Communication activities**

Name: game of darts.

Objective: to get each team member to solve the problem as quickly as possible.

Development: this activity will be carried out with three teams, using a chess wall chessboard for which it will be taken into account:

In each square, a card appears with the following orders: placement of the pieces, move and capture, openings, checkmate in two moves, endgame, chess history.

When making the roll, the executor must be placed two meters away from the wall chessboard.

A chessboard with pieces will be used to perform the exercise. Each member of the team, when it corresponds to him, throws the dart towards the chessboard and it will respond to the situation that it looks like on the card.

Materials: chess board with its pieces, wall chessboard, cards, and dart.

Evaluation: the team that correctly performs the problem solution most quickly is considered the winner.

#### **Game # 5. Trust and adaptation activities**

Name: speed of placement of algebraic notation.

Objective: to make each member familiar with the algebraic notation system used in chess.

Development: there will be a competition between three teams and we will proceed:

Each member, at the sound of the whistle, will run to a box with cards.

The member will place the pieces according to the position indicated on the card, taking into account the algebraic system and will return to the starting point.

The distance to be covered is eight to ten meters.

Evaluation: the team that first finishes with the correct solutions will win.

Materials: chess board, chess pieces, whistle and box.

Evaluation. The team that first completes the correct placement of the positions given by the algebraic system wins.



### **Game # 6. Activities of civil responsibility**

Name: I have a chess set.

Objective: to perform the different movements of the pieces through body chess.

Development: this activity begins with a story: I have a chess game where a Queen lives with her King, the Bishop with his Rook and the Knight with his Pawn.

The participants are asked to represent with their bodies the movements corresponding to each piece:

Queen: moves her whole body in different directions.

King: moves up and down.

Rook and bishop: moves diagonally, forward and backwards.

Knight: moves by trotting.

Pawn: moves forward.

In addition, a giant board will be painted in the area where the activity takes place.

Materials: cardboard, brush, down, paint, temperament and colors will be used.

Evaluation: the team that correctly demonstrates the movements in a more creative way wins.

### **Game # 7. Activities of personal responsibility**

Name: choose your favorite piece.

Objective: to make the different movements and capture the pieces on a giant board.

Development. This activity will be done with three teams and proceed as follows:

Each team member is given a chess piece. Each member of the team is given a chess piece. They are told to imitate the piece given to them through their body movements and, at the same time, capture it on the board.

Chess giant.

The children will be given a cardboard to paint the different pieces.

Materials: cardboard, brush, down, paint, temperas and colors will be used.

Evaluation: the team that correctly demonstrates the movement and capture of the pieces through body chess wins.

General observation: all these activities are carried out with previous knowledge that the students have about the game of chess.



## Preliminary results of the proposal

- The use of the turn of the game in the first cycle for the teaching of chess constitutes a novel way for the integral formation of the personality of the students.
- To deepen in the preparation of teachers for the good development of the turn of game for the learning of chess in students.
- The teaching of chess through play motivates students.
- The management of the center is interested in the application of games related to chess and therefore represents chess in the training of students.

In conclusion, it is proposed that the functionality of the school and the learning of the students depend, to the greatest degree, on the creativity with which the pedagogical process is projected; on this, it will depend that it becomes a temple of dedication, love, dedication, wisdom and devotion to the work being done.

It is evident, in the diagnosis made, that the students of the first cycle feel motivated by the practice of chess and there is a lack of a system of play in the "José Antonio Echevarría" school. In this sense, this work is aimed at promoting a taste for chess, the conceptual appropriation of its dynamics and achieving its massification as a training and developmental element in school learning. After the application of the game system for the familiarization with chess and the analysis of the results obtained, the effectiveness in the teaching process and the motivation for the practice of this sport were verified.

## REFERENCES

- Blanco, Uvecio (2004). *Fundamentos del Ajedrez Escolar*. Caracas, República de Venezuela. pp.36.
- Breda, T. V. (2017). La Construcción De Las Relaciones Proyectivas en el juego "Puntos de Vista". *Anekumene*, (14), 56-65. Recuperado de: [https://www.academia.edu/37635836/La\\_construccion\\_de\\_las\\_relaciones\\_proyectivas\\_en\\_el\\_juego\\_Puntos\\_de\\_Vista](https://www.academia.edu/37635836/La_construccion_de_las_relaciones_proyectivas_en_el_juego_Puntos_de_Vista)
- Cadavid, J. M. (2016). El Rol del Juego Digital en el Aprendizaje de las Matemáticas: Experiencia conjunta en escuelas de básica primaria en Colombia y Brasil. *Revista Electrónica de Investigación en Educación en Ciencias*, 11(2), 39-52. Recuperado de: <https://www.redalyc.org/pdf/2733/273349183004.pdf>
- Cortes García, G., (2009). "Ajedrez y Psicología". La Habana, Cuba. Editorial Pueblos y Deportes, p. 145.
- Ramírez, D., Batista Zaldivar, M., & Bueno, L. (2012). Metodología para la masificación del ajedrez en las comunidades urbanas. *EFDeportes.com, Revista Digital.*, 17(174), 1-5. Recuperado de [https://www.researchgate.net/publication/339841476\\_Metodologia\\_para\\_la\\_masificacion\\_del\\_ajedrez\\_en\\_las\\_comunidades\\_urbanas](https://www.researchgate.net/publication/339841476_Metodologia_para_la_masificacion_del_ajedrez_en_las_comunidades_urbanas)
- De Ocariz Granja, U. S., & Burgués, P. L. (2015). Estudio de los Conflictos en el Juego en Educación Física en Primaria. *Revista Internacional de Medicina y Ciencias de la Actividad Física y del Deporte/International Journal of Medicine and*



Science of Physical Activity and Sport, 15(57), 29-44. Recuperado de:  
<http://cdeporte.rediris.es/revista/revista57/artestudio555.htm>

Díaz, V. M., & Requena, B. E. S. (2016). *Innovando en el aula de Educación Primaria con GT 6*. Innoeduca: international journal of technology and educational innovation, 2(1), 13-19. Recuperado de:  
<http://www.revistas.uma.es/index.php/innoeduca/article/view/1061>

Djakow, Petrowski y Rudik. (1925). Factores del Talento Ajedrecístico en Grandes Maestros. Moscú, Editorial: Moscú, URSS.

Villalón García, G. (2006). *La Lúdica, la escuela y la formación del educador*. Editorial Pueblo y Educación La Habana, Cuba. Recuperado de  
<https://isbn.cloud/9789591313867/la-ludica-la-escuela-y-la-formacion-del-educador/>

Javier, G. F.-G., Francisco, & Manuel, D. T. (2016). *DICCIONARIO DE EDUCACIÓN FÍSICA EN PRIMARIA*. Servicio de Publicaciones de la Universidad de Huelva p 245. ISBN: 978-84-16872-89-3. Recuperado de  
[https://books.google.com/cu/books/about/DICCIONARIO\\_DE\\_EDUCACION\\_FISICA\\_EN\\_PRIMARIA.html?id=B7k\\_DQAAQBAJ&redir\\_esc=y](https://books.google.com/cu/books/about/DICCIONARIO_DE_EDUCACION_FISICA_EN_PRIMARIA.html?id=B7k_DQAAQBAJ&redir_esc=y)

Gutenberg, E. (1994). Planificación Social y Gestión De La Comunidad. Madrid: ed. Popular.

ISLA. Instituto Superior Latinoamericano de Ajedrez, (2005). Indicaciones metodológicas de ajedrez en las escuelas primarias curso 2005/06., Ciudad Habana, Cuba.

Laplaza, Jorge. (1995). ¿Qué Queremos con el Ajedrez para los Niños? El ajedrez como herramienta educativa del siglo XXI. Escuela internacional de educación física y deporte. Folleto de teoría y práctica de los juegos material referativo de apoyo a la docencia.

Patón, R. N., Ferreira, B. R., & García, J. M. G. (2018). Incidencia de los juegos cooperativos en el autoconcepto físico de escolares de educación primaria. Retos: Nuevas Tendencias en Educación Física, Deporte y Recreación, (34), 14-18. Recuperado de: <https://recyt.fecyt.es/index.php/retos/article/view/58803>

Rodríguez Fernández, J., Pazos Couto, J. M., & Palacios Aguilar, J. (2015). La promoción de juegos populares y tradicionales en los centros de enseñanza primaria del municipio de Boiro (A Coruña). *Sportis*, 1(1), 53-74. Recuperado de <https://dialnet.unirioja.es/servlet/articulo?codigo=4942271>

Rodríguez, V. L. O., Torres, a. Y. R., & Aguilar, C. C. (2018). Alternativa de juegos para potenciar el aprendizaje del ajedrez en la clase de educación física (original). *Revista científica olimpia*, 15(51), 14-26. Recuperado de: <https://revistas.udg.co.cu/index.php/olimpia/article/view/505>

Sáez de Ocariz Granja, U., Lavega i Burgués, P., March Llanes, J., & Serna Bardavío, J. (2018). Transformar conflictos motores mediante los juegos cooperativos en educación primaria. *Universitas Psychologica*, 2018, vol. 17, núm. 5, p. 1-13.



Recuperado de:  
<https://revistas.javeriana.edu.co/index.php/revPsycho/article/view/17060>

Vindel, I. M. F. (2017). La inclusión del juego. *Revista de Educación Inclusiva*, 7(1).  
1-14p. Recuperdo de:  
<https://revistaeducacioninclusiva.es/index.php/REI/article/view/165>

Vygostky, I.S., (1981). *Pensamiento y lenguaje*. Editorial Pueblo y Educación, C. Habana.

**Conflict of interests:**

The authors declare not to have any interest conflicts.

**Authors' contribution:**

The authors have participated in the writing of the work and analysis of the documents.



This work is under a Creative Commons Attribution-NonCommercial 4.0 International license.

Copyright (c) 2020 Rolando Díaz

