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# ***“Chess at School” Project***



## **Sport – Educational Project**

### **Introduction – Summary**

Presented by

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Dott. Giuseppe Sgrò*

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## *Foreword*

Chess is a universal, ancient game of legendary source, which brings together both East and West with its cognitive, affective, imaginative aspects that involve various dimensions of child development making it suitable for rehabilitative and educational projects aimed at different groups - preschool (kindergarten) and standard school (primary and secondary).

This dispels the common place idea where chess is a game played in exclusive areas and mostly by adults, in solitary and quiet environments, focusing on a functional activity of the brain which is considered to be unsuitable for children.

Those who play chess regularly know how this affects the various aspects of the brain functions, but their role as educators was only sensed at the end of the last century and confirmed over the decades that followed (Frank, D'Hondt, 1979; Christiaen, Verhofstadt-Deneve, 1981; Horgan, Morgan, 1990; Horgan and Horgan 1988; Fucci, Pompa, Morrone 2005; Root, 2006; Bilalic, McLeod, Gobet, 2007), when it was revealed that playing chess involves a number of attention and memory features, the thought processes and their high level of versatility (intuitions and deductions, abstractions, use of languages and different intelligence aspects) which are mostly nonverbal.

It is also recognized that, like other games (Checkers, Backgammon, many card and board games), chess is played between two players who put themselves in a competitive and cognitive situation which is clearly dialectic; i.e. chess players can not think independently, one must think the thoughts of the other in a situation that forces them to assume a well defined meta-cognitive position.

These features combine to make chess a sport in which young players can express their aggression within a frame of well defined rules and limits; in addition, due to its socializing dimension, playing chess stimulates 'social integration'. Due to these aspects, the introduction in schools of a process that focuses on chess, can contribute quite considerably to the prevention of bullying, without of course being viewed as the only solution to the problem.

Bearing in mind these aspects of brain functions, the educational program we propose, linked to a theory of the mind, aims to realize a growth, cognitive and relational path by playing chess at school and in groups, to transform the experience into a shared educational opportunity for the development and socialization of minors.

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## **Chess: think before you move**

The educational findings reveal an increasingly widespread deficit in attention and concentration abilities. Children do more and more, quicker and quicker.

*Think before you move*, a requirement that characterizes the game of chess has become an unusual gesture in everyday life.

Chess, sport *par excellence* of the mind, is a game, a science, an art and a universal language that can unite the world and different generations, but there is scope for much, much more.

Including chess games at school can help to cope with the previously highlighted problems, as it allows you to:

- educate children on rules and community and social aspects;
- stimulate thought and free responsible expression as a value in itself, apart from the chess skills acquired;
- educate on the pleasure of mental commitment;
- promote respect for others, teaching them to accept and deal with daily problems;
- promote relations among peers in the group to boost socialization and personal enrichment;
- increase a sense of criticism and self-criticism (symbolic evaluation and self-evaluation);
- gradually develop skills based on analysis, evaluation, synthesis and organization of activities and interests.
- create ongoing education and school-family values (parents, grandparents, brothers and sisters, relatives);
- promote the integration of disabled minors and those from different ethnics.

In this regard, we would like to mention the positive results of various studies that have been conducted over the past 30 years on the influence chess has on the development of cognitive functions:

Member of the F.S.I. Medical-Scientific Commission  
(Dott. Giuseppe Sgro')

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## Course Structure

### 1) Who can apply:

1. The course is open to boys and girls attending primary, secondary (from the second year of primary school) or high school
2. Those who have no knowledge of the game (this is a beginner's or intermediate course), but the desire to discover and learn how to play one of the oldest games in the world
3. Maximum 20 students per course.

### 2) Calendar:

1. Since October to May, depending on the school calendar. The activity is structured in a course divided into 3 modules (8 lessons per module, total of 24 lessons) with lessons lasting 1 hour or 1.5 hours (first and second grade of secondary school).
2. Lesson times can be personalised according to school demand.
3. At the end of the course there will be a tournament held at the school with trophies for the overall and age group winners, plus medals for all contenders.

### 3) Specific objectives:

In chess, the most obvious educational functions are socializing, both cognitive and ethical, but this does not mean that less importance is given to affective, emotional and sensitivity functions. An appropriate approach to the functions of chess will be evaluated from an educational perspective (Noble, 1994, FSI, 2005).

The core objectives will be:

- To extend and apply the elementary and functional theoretical and practical concepts of chess bringing them to the knowledge of students
- Provide an enjoyable, as well as challenging tool to promote emotional and cognitive development (formal thinking, self confidence, respect for others, acceptance of criticism and confrontation).

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## 4) General Learning Objectives:

### MENTAL DEVELOPMENT

addressing and resolving problematic and decision-making situations;  
developing logical and abstract thinking and reasoning;

developing analysis, synthesis and in-depth examination skills;  
enhancing memory skills in general, and visual memory in particular and therefore attention;  
developing creativity and imagination;  
encouraging argumentation capacity and skills by developing chess language knowledge;  
Stimulating formal and organized thought patterns

### CHARACTER DEVELOPMENT

Improving thinking skills;  
control over impulsivity, emotionality, approximation, superficiality and self-assertion;  
developing the art of patience;  
encouraging self-critical awareness;  
stimulating self-confidence, self-control, decision-making skills, a sense of responsibility and overall maturation;  
encouraging and developing initiative capabilities;  
encouraging self-assessment and self-control over emotions;  
developing a balanced assessment of one's own behaviour and personality.

### IMPROVEMENT OF SOCIAL AWARENESS

respecting rules and regulation;  
respect for opponents;  
encouraging and promoting fair play;  
sublimating of aggression in the game;  
accepting defeat and adapting to reality;

## 5) Teaching Methodologies:

Each lesson is divided into four possible phases:

1. Theoretical presentation using a magnetic board followed by exercises;
2. Simultaneous games (the instructor plays simultaneously against each individual student);

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3. Games between the students (individual and team) under the supervision of instructors-teachers to check the correctness of their moves and behaviour.
4. Quizzes and chess based problems to be solved individually or in groups

## 6) Participation in tournaments

Participation in tournaments aims to stimulate in-depth theoretical and practical knowledge of the game and, above all, strengthen their characters, their ability to cope with difficult situations without losing their head, using and managing all the physical and mental resources available. It will also be an ideal opportunity to create interaction, knowledge and discussion among peers.

## 7) Materials:

All materials required to implement the project (chessboards, wall chessboard, tournament clocks, folders and cards for students) will be provided free of charge by the instructor.

For further information or to arrange a meeting, please contact:

**Chess Projects ASD**  
**Via Marghera, 47 – 20149 Milano**  
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### What do you really know about Chess?

**Is it an ancient and mysterious game?**  
Of course it is! Some people say it was first invented 1500 years ago in India, and then the game began to become really popular firstly in Europe and then in the rest of the World!

**Is it a boring game?**  
Actually millions of people of every age play Chess!

**Is it a game for young people?**  
Let's ask the world number 1, Magnus Carlsen, a Norwegian who is 21!

**Is it truly a slow game?**  
Not really! Indeed, there are 3 categories according to the time limit: blitz (5 min), rapid (15 or 30 min) and the classic game (2 or more hours)  
Most of the youth tournaments use the rapid time limit, where each match can last up to 30 minutes.

**Is it popular in Italy?**  
The Italian Chess Federation (F.S.I.) consists of 14,000 players, of which 6,000 are under 16

**Are Italians good at chess?**  
The current Italian champion is a young 20 year old Italian American, Fabiano Caruana.  
He is currently number 9 of the FIDE world rankings And number 1 in the under 21 young players rankings.  
Well done!

**Is there a link between chess and the school modules?**  
Absolutely yes, in particular with maths, geometry, philosophy, history and geography.

in cooperation with:



**CHESS**  
the mind's  
sport

### What is better than to improve your qualities by enjoying yourself?

While learning to play chess the mind's game, you will develop mnemonic, creative & reflective skills improving both your concentration and self control.

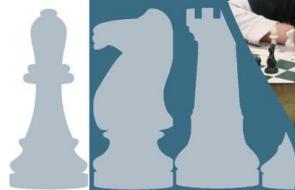
Each class will have a theoretical moment where you will learn the game and a playful moment to play with your own friends.

At the end of the course there will be a tournament with prize medals for the first classified (gold, silver, bronze) and also for all other participants.

You will be part of your school's team which will play in the finals of the , Students' Chess Championships organised by the Department of Public Education with the F.S.I..

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## Press Release Attachments

### Chess helps the weaker students Alexander Wild

Posted on the "Chess 012" website on December 2<sup>nd</sup> 2007

It seems that chess can help the so-called weak students fostering improved mental development.

A study conducted by the University of Trier found that children who play chess in elementary schools improved their various mental abilities.

**Sigrun-Heide Filipp**, professor of educational pedagogy and child development psychology at the University of Trier, conducted her first study on this topic in Germany. Following the positive results gained by the children who took part in research, Professor Filipp is trying to convince schools to introduce chess as a school subject.

**Jörg Schmilewski**, of Süddeutsche Zeitung, interviewed Professor Filipp.

Here is my translation of the interview.

**Jörg Schmilewski**, Süddeutsche Zeitung (hereafter SZ): Many students have deficits in concentration and their manner of speech. Teachers say that aggression and hyperactivity are rising at an alarming pace. How can chess help in this regard?

**Filipp**: Chess helps to direct attention, concentration and focus. The conclusion that chess lowers the level of aggression is overrated: chess is not a palliative for all ills of society, or political errors in education. **"Chess helps to direct attention, concentration and focus."**

**SZ**: The study compared two classes. One of them had given up one hour of mathematics to learn to play chess. What effect did this have on the development of children?

**Filipp**: It seems to improve their skills of attention, concentration and thinking with images.

**SZ**: It seems to enhance their perception and concentration abilities, especially in the first two years and particularly in weaker pupils.

**Filipp**: Yes, children with a difficult educational performance arrive at school, for one reason or another, with a certain disadvantage. It is very useful for them to face the world of chess. The greatest benefit is seen in the first and second year classes, rather less in the third and fourth year. This does not mean that mental capacities are no longer pliable.

**SZ**: You illustrate an increase in intelligence in the second year. How do you measure that?

**Filipp**: With standardized tests that psychology provides to large numbers. We analyzed whether or not students are able to create analogies and reach a conclusion using the visual material proposed to

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them. The improved performance clearly highlighted that the chess lessons capture the attention of children and generate a leap forward in development.

**"The improved performance clearly highlighted that the chess lessons capture the attention of children and generate a leap forward in development."**

**SZ:** In classes three and four the study shows an increase of the children's willingness to do more further to an increase in social integration. How secure are these results? Could there be other external factors involved?

**Filipp:** Yes, this is the problem. You should remove all other external factors that affect children, to clarify exactly what the difference is between the two schools. But it is likely that Chess, and everything that moves a child playing chess, is reflected in self esteem, in a feeling at ease and social integration within the school.

**SZ:** A study conducted at the "New York City Public Schools" reached the result that chess lessons, in addition to improving math skills, also improve writing skills and use of language.

**Filipp:** I am not familiar with that study but in a regional test of fourth grade children at Trier proved to be significantly above the regional average in language skills such as reading, writing and use of spoken language.

**SZ:** Do you promote the idea of including chess as a school subject?

**Filipp:** Yes, because chess forces children to concentrate and at the same time it is rewarding for them. They give children the feeling that they can win or lose. Important aspects in life. Chess also creates precursor thought processes (ability to anticipate future actions), refining their visual perception and strategic thinking: what is the opponent going to do now? What do I do then?

**These processes can only be good for children and never be of any harm.**

## **EDUCATION; Chess Seen as Aid in the Classroom di ROBERT BYRNE**

da "The New York Times" del 19 Luglio 1989

*LEAD: Some educators and parents have long feared that encouraging pupils to master chess might distract them from seeking other intellectual and academic skills.*

Some educators and parents have long feared that encouraging pupils to master chess might distract them from seeking other intellectual and academic skills.

But a growing number of school-related programs are trying to demonstrate that chess can be a strong antidote to educational problems of all sorts.

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Not only can chess teach patience and concentration, these programs are finding, but it may also offer a special benefit to poor urban children, helping to divert them from the lure of crime and drugs and to develop an interest in their studies.

Among the new programs set up to act on such theories is "Chess for Drug-Free Schools and Crime-Free Streets," which on July 7 completed a two-week chess summer camp in Washington for 50 students from housing projects.

The program is run by the International Educational Network, a nonprofit group that has arranged summer camps in mathematics, physics and chess for elite, tuition-paying students and teachers over the last five years.

### **Focus on Inner City**

But this year the group changed the program's focus in the hope that chess would help motivate inner-city children toward intellectual interests, positive competition and the will to succeed.

Other programs are under way in several other areas around the country, including New York City, whose program is the largest in scope and number of students. As more money has been made available in New York in the last few years by major contributors like the American Chess Foundation, the Mobil Oil Corporation and the Nynex Corporation, participation has increased as well. In the last year alone, the number of New York City students enrolled in chess training has doubled, to 3,000.

But even those who back these efforts hesitate to assign any special powers to chess. As Dr. Milton Goldberg, director of the Office of Research in the United States Department of Education, puts it: "Is there something special about chess that doesn't apply to any other game? If it is constructive, then you need to be able to demonstrate why it surpasses other activities in its effectiveness."

### **Harlem Example Recalled**

All the same, incidents pointing to the benefits of chess as a teaching tool have been turning up for some time. One of the most striking examples occurred 33 years ago at Wadleigh Junior High School, on 114th Street in Harlem.

"There was a hard core of 25 highly disturbed children that set the tone for the student body of 1,500," Milton Finkelstein, who was an assistant principal at the school, said in a recent interview. "We identified them from police records. We decided to give them chess and to make it an honor to be taught the game."

Mr. Finkelstein recalled that the chess training was so successful in improving the classroom performance and behavior of the original 25 students that it was extended to the school as a whole.

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Later, Wadleigh outscored four other junior high schools in Harlem on a variety of tests in a five-year experiment in which the other schools received learning incentives, including special reading classes and class trips.

Wadleigh, as the control group, received no such help, but it finished higher than the other schools in all studies, Mr. Finkelstein said.

More recently, chess programs for inner-city pupils in Indianapolis and Philadelphia have gained national attention as the children gained strong reputations in school tournaments.

### **Student Workers and Volunteers**

The current New York City program, which started two and a half years ago, was the brainchild of Faneuil Adams, a retired Mobil executive who now directs the program. It is financed by the American Chess Foundation, an organization that encourages interest in chess and provides support for a variety of activities, and it is administered by the Manhattan Chess Club.

In the decentralized New York City school system, Mr. Adams has been able to offer his chess training program directly to individual schools without having to go through the school board.

More than 400 classes of 45 to 90 minutes were offered to groups of 10 to 25 students. There were no restrictions; anyone who wanted to join could do so. Moreover, 20 seminars for classroom teachers, administrators and parents were given.

Proper scientific studies of the academic benefits of chess are scarce in the United States. In fact, Dr. Leroy Dubeck of Temple University, a physics professor who is chairman of the committee on grants of the United States Chess Federation, says he knows of only one, and that was limited to gifted children. For four years, Robert Ferguson, coordinator of education for the gifted in Bradford, Pa., followed the careers of 50 to 60 students from the seventh to ninth grades. Half were taught chess and the other half other games, like "Dungeons and Dragons," or creative writing or problem solving with computers. The chess students outscored the control group, showing a 17.3 percent gain as against a 4.6 percent gain on a test to appraise critical thinking.

While there are little hard data from studies of ordinary students, plenty of favorable anecdotes exist.

And there are two unpublished doctoral dissertations: "Chess and Cognitive Development," by Prof. Johan Christiasen of Gent National University in Belgium, and "Chess and Aptitudes," by Prof. Albert Frank of the University of Dakar in Senegal. They both conclude that chess is an effective tool for general progress in the classroom.

Their testing disclosed that the students who had learned chess showed considerable improvement in numerical aptitude and verbal ability compared with students in control groups. Both researchers emphasized that further studies should be done.

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And how do the children and their parents see it?

Damon Dicks, a 13-year-old student at Junior High School 141 in Queens and one of 14 children who tied for first place in the New York City Public Schools Chess Championship recently, says he plays the game for fun. But his mother takes a more serious stand. His concentration is better, she says, and "now he is into books."

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