

**White Paper presented to the Education and Training Committee of the
Republic Of Turkey - Ministry Of National Education, Ankara**

The preliminary work and research which are required for introducing chess as part of the curriculum in Turkish schools are as follows:

1 - STUDIES RELATED WITH THE SUBJECT “ CHESS IN EDUCATION”

Since 2001, the constitution of the educational system of chess and standardization of the chess trainers has been the exclusive goal of the Turkish Chess Federation (**TCF**) Educational Committee and the Committee has intensified its studies in this direction. Although some practical solutions, like the widespread use of monitoring chess courses, are used, we should have a long-term educational plan and strategy.

In order to throw light on our studies, a list of the primary goals of TCF Educational Committee has been defined as follows:

1. To make use of chess as an educational tool as the first step in preliminary education like all similar recreational lectures i.e. gymnastics, music and painting.
2. Preparations must be made for the foundation of the chess department in the physical education and sports academies or faculties in Universities.
3. Providing the education of the class masters and teachers by foundation of the chess department in teacher training colleges.
4. Thanks to the educational studies (given to teachers of Ministry for improving their knowledge), assisting teachers from other various recreational branches such as gymnastics, mathematics and science, so that they will know how to play chess and teach chess at school, via a systemized program.
5. Providing an accurate system for the chess practices located in places such as Homeless Children's Centers, Orphans' Centers, Alms' Houses and Children Correctional centers.

From some of the projects carried out for this purpose, one of the foremost is to prepare a book “**Chess Teaching System**” for the Turkish Education System and groundwork of the chess lecture and practice books has been done according to the **National Education Ministry** program and purposes.

2. DEVELOPMENTS IN CHESS IN TUKISH EDUCATIONAL INSTITUTIONS

In order to help the TCF reach the goals mentioned above, the chess license program and one-year graduate program by Bulgarian National Sports Academy's, Vasil Levski, has been translated to Turkish and the case has been discussed with the **B.E.S.Y.O.** (Body Training and Sport Education Faculties) executives headed by **Abant İzzet Baysal University, Marmara University, İstanbul University, Celal Bayar University, Akdeniz University and Hacettepe University**. Many B.E.S.Y.O. members have looked upon a number of the topics discussed favorably and have accepted to take on chess as a branch of specialization at University.

Besides this, many universities have presented chess to their students as a lecture. The positive effects of chess on many science and occupational branches are known by the students and University executives. As a result, **Marmara, Boğaziçi, Galatasaray and Yıldız Technical Universities** has arranged student oriented chess courses.

Akdeniz University, on the other hand, presents chess as an elective lecture and the students complete the lecture by passing the exams. At the **Kadir Has University, chess education is given as a part of the fine arts and the students are examined via mid-semester and final examinations**. The most serious project regarding chess lectures is being managed by the **Middle Eastern Technical University. Whilst last year, chess was a one-credit elective lecture, this year, it will be a three-credit normal lecture.**

In almost every University faculty mentioned above, the chess classes offered, have been received with strong interest by students from various branches such as sciences, literature, engineering, medicine, law, pharmacy, education, communication, fine arts; in fact from almost every faculty and college.

200 students form Akdeniz University have participated in the chess lectures whereas near 150 students have participated in the courses which are arranged by Marmara University - Chairmanship of Health, Culture and Sports Office.

Chess is loved by our youth and children. It is definitely hard to find a more appropriate educational tool for the new generations. It is obvious that chess helps strengthen teaching in the educational program in the most efficient way.

From this perspective, **providing chess** classes as lectures in our schools is a **public duty**. Chess is a branch of sports which has positive contributions particularly in the educational period of children and there is a worldwide great interest in chess. Chess is a candidate to be the most popular sports of the 21st century due to the facts that it is highly parallel with the educational period and it has a relatively low cost.

The education of chess lecturers in Universities, as is done in all lectures and sport branches, will provide us with many opportunities. For instance, the trainers who complete their license programs will be able to have their Master degrees in order to provide themselves with better academic career opportunities. The Turkish and world chess and educational libraries will also be enriched with academic publications regarding chess teaching and its benefits. Graduation projects, doctorate thesis, term papers will avail us with a wider collection of material.

The TCF Educational Committee has started the studies which are essential for collecting the statistical data of all Primary Schools in Turkey. The database for the number of students who play chess and the number of trainers is being formed.

3 - THE BENEFITS OF CHESS

- Makes people realize the importance and necessity of advanced planning
- Helps more analytic and accurate thinking; develops the ability to interpret cases accurately.
- Helps develop personality and character. It teaches how to attain and develop “self confidence.”
- By defining one’s strengths and abilities better, it allows display of individual strengths and helps for individual decision making.
- Teaches how to focus one’s concentration on a subject.
- Helps understand and comprehend the other disciplines of life better.
- Brings forth scientific method and encourages research.
- Endears a questioning outlook on things and avoids learning by routine.
- It develops people into a higher thinking, researching, and judging and awareness state and also helps provide a medium where free creativity can flourish.
- It demonstrates that success can best be achieved by working in a systematic and disciplined manner.
- It shows the necessity for a combative spirit, not to succumb to failure and the necessity of preparation and hard work for success.
- It shows the satisfaction of success which will influence them into becoming even more successful.
- By demonstrating new goals, it provides motivation towards these new goals.
- It quickly exposes a person’s negative aspects, weak points or behavioral disorders which can be corrected.
- It teaches people to play by the rules, fair play, conceding defeat and congratulating the victor.
- By forming close friendships it increases socializing and enriches the social life.

All these factors may be demonstrated as “benefits of chess”, and at the same time, they are the basic aims of the National Education system. All are the characteristics that Turkish National Education requires students to learn and assimilate. A medium with this much desirable effect must definitely be utilized as an “EDUCATIONAL TOOL”. There are few educational media available across the academic disciplines which brings together and reinforces so many positive behaviors at once.

Consequently we should allow our children to benefit as early as possible from “the positive effects of chess on personality development.” We have to take steps to ensure our children demonstrate positive behavior and we should take on these goals as our duty.

Key Point!!

The aim of chess in school is not to generate professional grand masters. The most important aim is to teach chess and give young generations a learning tool in their life.

4 - CHESS IN OTHER COUNTRIES AND ITS PLACE IN THE EDUCATIONAL SYSTEM

The effect of chess on students has been demonstrated through higher scores in the Torrance creative thought test and the Watson-Glaser critical thought test in various studies. The intelligence of chess playing children, as well as their imagination, shape space knowledge, analytic and planning abilities, understanding capacity, vocabulary, memory, problem solving capacity and the ability of fast and logical thought – the effects on decision making have been proven by clinical studies.

These results provided the institution of chess as a lecture, as a part of the **curriculum**, in schools of 30 countries, including **Venezuela, USA, Russia, Bulgaria, Iceland, Canada and Spain. Again in Yugoslavia** and other countries exclusive chess schools were opened and the chess masters developed the children's interest and talent in these schools. As a result, the governments of almost 70 countries have adopted chess in various ways and believed that the exposure to chess training, of the children who make up the nations future, is beneficial.

Our country too, albeit belatedly, has appreciated this reality and chess has now been adopted and promoted in various ways by both the Ministry of Youth and Sports as well as the Ministry of Education. Presently in a lot of Turkish schools, chess is taught on the personal and group levels. Again in these schools, certified chess teachers are giving lectures and capable students participate in interschool chess tournaments.

By September 2005, the Chess will be an elective course in all primary schools of Turkey. It will be obligation for school and elective course for teacher. In Turkey we have 16 Million Primary Schools Children! The aim of nation is to increase the intellectual level of young generations.

On the other hand, the progress that chess has shown in recent years, both in our country and in the world, demands that we should also engage in new projects. For these reasons, we feel that chess should be taught in our schools and that all students should have at least a basic knowledge of chess. The importance that the USA has given chess is especially striking in the last 20 years. In a lot of states, chess is a part of the curriculum and there are many chess centers. Noteworthy developments in chess have especially occurred in the University setting. Universities such as Virginia Tech, Texas Brownsville, South Dakota, South Carolina, Maryland Baltimore County, Oberlin College, MIT, Harvard, Columbia, Bucknell, Tulane, Dallas Texas, and Texas A&M Commerce, teach chess as a lecture and prepare chess courses.

Venezuela and Iceland introduce chess to preschool children and chess is taught in class from the first years. In both countries interschool chess tournaments are met with great interest. **In Bulgaria, where chess is taught to all age groups, the students show great interest to the chess department which has founded 30 years earlier in the sports academy.** The Bulgarians who have not forgotten that chess is a psychological game, direct graduates of the sports

academy chess department to take psychology masters. Bulgaria and Greece were some of the first countries after Russia to establish international chess school unions and lead to the development of the international union of chess playing schools, ISCU.

5 – HISTORICAL VIEWS ON THE SUBJECT : CHESS IN EDUCATION

December 17, 1992: New Jersey state mayor Jim Florio, stated that there was a necessity for chess to be taught in public schools.

In a historical document dated in 1982, ex American education minister Terrel Bell, supported that preschool chess knowledge helped develop intelligence.

In the western Harlem areas of New York city and in Oakland California it was found out that chess was one of the more effective tools against the development of bad habits so that chess classes were instituted in the schools and teaching programs were prepared for the children.

In 1969, the dean of the Berlin Humboldt University, School of Philosophy Dr. Hans Klaus, speaking at the 40th World chess congress stated that: *“Chess helps the human psyche develop new thinking methods and learning to play chess from the first years onwards is beneficial. Instead of traditional / official teaching methods, playing a game is always more fun for a child. We may teach our children chess so that they may progress in their lives at school.”*

Dr. Calvin F. Degermond found, after the long study he had conducted on chess that chess developed intelligence, aesthetics, sports, decision making, determination and concentration.

In the early 1980's, the chairman of the American Chess Trust Faneuil Adams began a chess project against the bad habits in the Harlem area and the results showed that the children taking chess classes had grades 17.3% higher compared to that of 4.56%, witnessed in the students who had been directed to other activities.

6 - PROGRESS OF CHESS EDUCATION IN THE WORLD

For almost 50 years now, chess is a branch which has been taught in Russian schools as an important part of the curriculum. The benefits of chess on problem solving and judgmental abilities have been proven by a number of studies conducted in various countries. The Russians were the first to realize the real importance of chess : they taught chess to all age groups and provided schools to develop their talented students.

After a certain period, the West also started showing chess the interest it deserved. After Europe, the USA and Canada conducted studies that proved that chess had a respected place in the educational system. In his book published in 1982 (pg 178, 179) ex minister of education **Terrel Bell states: “The best and most fun method you can apply to develop your children’s intelligence is to teach your child to learn and play chess.”** and in so saying gave voice to the sensitivity shown to chess in the US educational system.

In 1973-1974, 92 students between the ages of 16-18 participated in a study which was conducted in Congo Democratic Republic (named Zaire before) by Dr. Albert Frank. At the end of the study, the group taking chess classes was more successful than the control group in administrative capabilities, mathematics and verbal ability. At the conclusion of the study, Frank found that chess had positive effects on general intelligence, creativity, judgment, fast and correct understanding and shape- space relationships.

1974-1976, 40 children of 10 age groups participated in the studies which were conducted at Assenede Municipality School, in Belgium. The groups were separated as the study and control groups. The groups were then subjected to the Piaget development test and results came back in favor of the study group.

1977-1979 at the Chinese University of Hong Kong, Dr. Yee Wang Fung conducted a study among the students of the Statistical Faculty. The results of the study revealed that the students studying chess had an approximately 15 % increase in mathematics and science test results.

Between 1979-1983, in the studies which were conducted in the state of Pennsylvania USA, the group taking chess classes, left the other control groups far behind in thought development programs. Watson-Glaser and Torrance test techniques were used in these studies. With the publication of the results of the study, Pennsylvania public schools began the application of chess classes in pilot schools and the state educational committee launched a program to teach and develop chess. Between the years 1979-1983 Dr. Robert Ferguson also prepared the federally supported project “The development of the critical and creative thought by means of chess.” The project was named as ESEA code IV-C. Students from the 7th-9th grade of the Bradford area participated in the study. The independent variables of the study were : behavioral approach to chess, computers and technology and approach to subjects other than chess.

The study lasted 32 weeks. In the first part of the study, activity classes oriented in the predetermined fields were given to each group once a week. Watson-Glaser critical thought test results of the first group rose a mean of 17.3%, making them the leader. The chess group led the others by far, mainly in originality and also with all the other creativity tests. One of the most interesting results of the study was that, the students in the chess playing group, demonstrated fluent speech ability, much above the international norms.

Another study was conducted between the years 1979-1983 in Venezuela, named “Learn to Think Project.” It aimed to find out whether chess playing raised the level of intelligence or not. All the 2nd grade students participated in the study; 4266 boys and girls in total. Children from almost every socioeconomic level took part in the study. In conclusion, teaching chess in a methodic fashion to small age groups increased the students’ IQ. **In light of these results, from 1988-1989 onwards chess classes were instituted in Venezuelan schools. This study can be found in the international chess federation report (FIDE)**

In 1980, Dianne Horgan led the study “Chess as a tool which teaches how to learn” in which 24 primary schools and 35 middle and high schools were the subjects. At the end of the study **Horgan determined that children can easily learn chess at a young age and learning chess was beneficial to the children’s intellectual development.**

A study conducted by **William Levy between the years 1980-1987 at the New Jersey State University Educational Faculty** showed that chess increased self confidence in all age groups (including university students) as well as it affected the decision-making time favorably.

Between the years 1985-1987 at the capital of the Moldova Republic Kishniev, studies were held by N.F. Talisina. In the studies it was demonstrated that chess had beneficial effects on memory, imagination, creativity, intelligence and team work. The studies were supported by the Moldovian Republics Ministry of Education and the study reports were filed at the ministry.

In 1986 Dr. Robert Ferguson led a pilot study which revealed that chess had positive effects on personal development, planned thought, analysis, problem solving and adjustment.

Once again, between the years 1987-1988 Dr. Robert Ferguson conducted another pilot study in which 6th grade students from the **Pennsylvanian province** schools participated. The project studied the developing effects of chess playing on judgment and memory. **None of the children participating in the study had either learnt or had ever played chess before.** At the conclusion of the study it was revealed that chess better developed the children’s vocal judgment and memory.

Between September 21st 1987 and May 31st 1988, in a study carried out at the M.J.Ryan school, again 6th grade students with no prior chess exposure, participated in the study.(9 boys and 5 girls) These children played chess every day and in addition to this, took chess classes 2-3 times a week. These children's mean results on tests for memory, understanding and logical thinking rose from 597.786 to 727.786.As for the oral and written judgment, the mean score rose from 568.214 to 620.714.

Between the years 1989-1992 at Brunswick state in Canada a study was conducted in which 437 5th grade students participated. The students were divided into 3 groups according to the frequency of chess classes. **The class that had the most frequent chess classes came out as the most adept at solving mathematical problems.** Along with this study, the New Brunswick state started teaching chess in school as a lecture.

As a result of another study, chess playing children from the 2nd to the 7th grade showed a mean increase in results of logic and problem solving from 62% to 81%. Between the years **1990-1992** a study involving New York city schools was done and revealed a beneficial effect on the children's reading performance. **After this study the New York city prepared a school chess program and started chess classes in all schools, according to the curriculum.**

In 1991-1992 school year, another study was managed by Philip Rifner. The study was named as *"Playing chess: A study about the problem solving ability among students with average and above-average intelligence."* In this study, it was shown that chess is beneficiary for the usage of the pre-gained (generally in the maths classes) problem solving ability in other fields.

In 1995-1996 school year, a study was conducted in Texas, USA. 112 students from 5 different schools participated in this study.(2 classes from each school). A control group consisting of 127 students was formed. The control group received basic education, whereas the study group had chess classes twice a week. The study group was 12% more successful in the judgment tests, compared with the control group.

Again between the years **1994-1997 another study was held in Texas, USA.** It showed that the students which participated in the chess club between 3rd and 5th classes showed twice more improvement in the fields of reading and mathematics, compared with the other students. That project was supported by Texas Committee of Assessment of the Academic Abilities. As a conclusion of the studies, chess became a lecture at schools and they started to arrange inter scholar chess leagues. Again, thanks to this project, chess lectures have been started in Dallas Texas University.

In 1997, in Bronx, New York city, the president of the government school # 68, Cheryl Coles, had a chess education program made ready, and stated that she observed a 11.2% increase in the reading performance, and 18.6% increase in the mathematics grades of the students who received chess training.

7. CONCLUSION

- ✓ **Chess is an educational tool which provides numerous benefits for students.**
- ✓ **It needs to be instituted as a lecturing discipline, as a part of the curriculum in the preliminary schools, schools, colleges and universities in many developed countries.**
- ✓ **The development of chess goes almost parallel to the development of a country.**
- ✓ **Chess, which strengthens and preserves its position among the changing global values in today's globalizing world, has become one of the indispensable common, basic cultures.**
- ✓ **Chess, not only has an important part in European Civilization which has become the symbol of the modern civilization, but also in the admission criteria of the European Community, where Turkey aims to be a member of.**

Chess has ushered in a new age for Turkey. One of the foremost steps in this development, is the presentation of chess as a educational tool in schools.

The educational program's substructure is being prepared by the TCF Educational Committee; and the application of the program will start upon it's approval.