"Chess: A Learning Tool"

compiled by Steve Sawyer, Oklahoma Scholastic Chess Organization Charter President

For years, school children in the former Soviet Union, Belgium, East Germany, Zaire, and other countries have been taught chess as a way of improving basic reasoning as well as math and verbal skills. Finally, almost half a century after the Soviets, chess is being introduced formally in our public schools, from New York to California. There are many studies that substantiate the value of chess in the schools. We will take excerpts from several to build our case for "chess is a learning tool." The results as we will see, will lead us to logical conclusion, "Chess exceeds all other thinking development programs available!" (e.g. future problem solving, independent study, problem solving with computers, creative writing, etc.)

Why should we teach chess? What are the hard facts about chess and academic achievement? Chess has been proven to enhance creativity, concentration, critical thinking skills, memory, academic achievement, problem solving, cultural enrichment, intellectual maturity, self-esteem, standardized test scores, and a host of other qualities that every parent and teacher desires. The Margulies' study conclusively proved that students who learned chess enjoyed a significant increase in their reading skills. "Inside Chess" (Feb 21, 1994, p.3) states: "the Margulies Study is one of the strongest arguments to finally prove what hundreds of teachers knew all along, "chess is a learning tool."

In Ferguson's third study, which included many poor readers, the students showed significant growth in verbal reasoning skills. After only one year of chess study in Zaire, the students participating in the chess course showed a marked development of their verbal and numerical aptitudes.

Roger Langen (1992) claims that "children who learn chess at a early age achieve more in the traditional math and sciences. Chinese, European, and American research all find significant correlational values after just one year of systematic chess exposure." Langen also states: "The most striking benefits are those associated with problem-solving and creativity."

Langen goes on to say: "University symposia, like the, "Chess and Mathematics conference" at Forli, Italy, in September 1992, now take the chess and math relation as established." Chess was integrated into the French Canadian school systems beginning in 1984. The New Brunswick research showed that problem solving skills increased an average of 19.2% after the chess in math program was introduced.

The Bradford ESEA Title IV-C Project found that chess demonstrated the greatest growth over all other activities four years in a row. Since critical thinking is crucial in all aspects of life, it is imperative to disseminate the effects of this study and to implement a chess curriculum in the schools. In their study the average annual increase in percentile score for "Critical Thinking Appraisal" in the chess group was 17.3%. Nationally, students who take this test at yearly intervals do not show a gain in percentile ranking.

In 1992 New Jersey Bill #S452 - CHESS IN THE SCHOOLS

BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:

1. The legislature finds and declares that:

    a. chess increases strategic thinking skills, stimulates intellectual creativity, and improves problem-solving ability while raising self-esteem;

    b. when youngsters play chess they must call upon higher-order thinking skills, analyze actions and consequences, and visualize future possibilities;

    c. in countries where chess is offered widely in the schools, students exhibit excellence in the ability to recognize complex patterns and consequently excel in math and science: and

    d. instruction in chess during the second grade will enable pupils to learn skills which will serve them throughout their lives.

2. Each board of education may offer instruction in chess during the second grade for pupils in gifted and talented and special education programs. The Department of Education may establish guidelines to be used by boards of the education which offer chess instruction in those programs.

3. This act shall take effect immediately.

    This act was signed by the Governor after a 23-1 vote for the act by the senators.

Observations and research show that young children can be taught to think clearly and with discipline, to plan ahead, and to make sound decisions. Learning these skills early in life can only benefit later intellectual development. Teaching children to perform a complex task like chess may give them problem-solving advantages later in life.

Heidema is quoted as saying, `Recent research indicates that one of the most neglected areas in today's educational system is instruction aimed at developing logical reasoning and critical thinking." (Mathematics and Science for the K-12 Curriculum,p.104)

Billings (1985) wrote: "the most important skill a gifted student can learn is how to THINK more CREATIVELY and EFFECTIVELY." I agree and playing chess does all of these!!

The New York City Schools Chess Program Report is impressive, here is what Christine Palm writes in 1990. In its four-year existence, NYCHESS has proven that:

a. Chess instills in young players a sense of self-confidence and self-worth;
b. Chess dramatically improves a child's ability to think rationally,
c. Chess increases cognitive skills;
d. Chess improves children's communication skills and aptitude in recognizing patterns;
e. Chess results in higher grades, especially in English and Math studies,
f. Chess builds a sense of team spirit while emphasizing the ability of the individual;
g. Chess teaches the value of hard work, concentration and commitment;
h. Chess makes a child realize that he or she is responsible for his or her own actions and must accept their consequences,
i. Chess teaches children to try their best to win, while accepting defeat with grace;
j. Chess provides an intellectual, comparative forum through which children can assert hostility i.e. "let off steam" in an acceptable way;
k. Chess can become a child's most eagerly awaited school activity, dramatically improving attendance;
1. Chess allows girls to compete with boys on a non-threatening, socially acceptable plane;
m. Chess helps children make friends more easily because it provides an easy, safe forum for gathering and discussion,
n. Chess allows students and teachers to view each other in a more sympathetic way,
o. Chess, through competition, gives kids a palpable sign of their accomplishments, and finally;
p. Chess provides children with a concrete, inexpensive and compelling way to rise above the deprivation and self-doubt which are so much a part of their lives.

Most people naively believe that any child who becomes proficient at chess must be an extremely rare prodigy (probably with grand masters as parents). On the contrary, particular chess coaches consistently produce strong players, year after year, even though specific children move on. While the child's individual talent is important, the training a child receives appears to be equally important. In fact Coaches like me often say that given a few months of training, any motivated and bright 10 year old can become a proficient player. Skills acquired by playing chess are not just for the select few extremely gifted children; they are trainable skills for all. Chess educators have argued that chess is beneficial, not just for the intellectually gifted, but also for the learning disabled and hyperactive children.

The United States Chess Federation has sold buttons that say, "Chess makes you smart". I agree, let us use this wonderful teaching tool of chess to help our children learn. For more information about how your children can become involved with chess. Visit the Oklahoma Scholastic Chess Organization’s website at www.okschess.org.