

Chess Makes Kids Smarter



BY DR. GERARD J. DULLEA

Chess lovers have long contended that chess should be a valuable classroom tool. It can provide an intellectually stimulating, rewarding activity, but it can also teach discipline, concentration, planning and all the other good things that go into successful chess.

In 1977, however, the National Institute of Education (NIE) argued against this position, saying in effect that good students and good chessplayers tend to be the same group simply because they are more intelligent and more intellectual than their classmates. NIE contended that transfer of skills is minimal, arguing that time spent on one skill detracts from the learning of another.

Some months later, Dutch scholar Adriaan de Groot wrote a rebuttal of NIE's position, basing his arguments on a careful two-year study in Belgium. Now, thanks largely to Harry Lyman of Massachusetts, in behalf of the Massachusetts Chess Association and the American Chess Foundation, the Flemish source of de Groot's argument has been translated into English.

The Belgian study was the doctoral thesis of Johan Christiaen, titled "Chess & Cognitive Development." It was a carefully controlled experiment with 20 students

in the fifth grade in 1975, following them through the sixth grade the next year. As might be expected of a foundation for a doctorate in psychology, the test was carefully designed and executed, complete with a control group and other features of good experimentation.

Christiaen's aim was to use chess to test Jean Piaget's theory about cognitive development, or intellectual maturation. Piaget holds that an important growth period occurs approximately between the ages of 11 and 15. In this stage, the child moves beyond physical trial and error and begins hypothesizing and deducing, developing more complex logic and judgment. In Piaget's terms, the youngster moves from the "concrete" stage to the "formal" stage.

Piaget further contends that the environment of a child can speed up or slow down the maturation. So Christiaen proposed to vary environment with either chess or no-chess. If chess were the significant variable between two groups of youngsters, any significant difference in the development of students could be attributed to enrichment brought by chess to their environment.

And it worked! In the words of Harry Lyman, "Learning chess makes kids smarter in the classroom!"

On 42 Friday afternoons, after school, Christiaen taught chess to 20 boys randomly selected from a group of 40. The other 20 were the control group, the one that would be compared. He did his best to keep these students ignorant of their experimental function.

In testing after these two years, the chess group scored somewhat better than the control group on various of Piaget's tests for cognitive development. More of a difference, however, was evident in their regular school testing! In the school testing, the chess group did significantly better in both the fifth grade tests and (somewhat less so) in the sixth grade tests.

Christiaen notes that some of this difference may be due to what Robert Rosenthal of Harvard calls the "Pygmalion effect." That is, teachers who may give special treatment to "special" students may get special results from those students.

On the other hand, classroom testing was supported by standardized testing administered by an outside agency, which did not know the identities of the two groups. On these tests too, the chess group performed better than the control group.

This study by Dr. Christiaen needs support, extension and confirmation. And other tests can be made too. For the moment, however, we have scientific support for what we have known all along — chess makes kids smarter!

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Course Outline

Here are the key features of Christiaen's chess course:

Text: Jeugd schaak (Chess for Youths) by Berry Withius.

Time: One hour, after school, on Fridays, for 42 sessions.

Curriculum:

- The moves of the pieces.
- Exercises on mate.
- A complete game.
- Mandatory scorekeeping.
- Some theory in each lesson, gradually reduced in favor of exercises and games.
- Five sessions of simultaneous games against the instructor.
- Participation in two interschool tournaments.
- An intraschool championship, with final results displayed in the classrooms.
- Emphasis throughout that a beautiful game is more important than a victory.