

THE BENEFIT OF SOLVING BLINDFOLDED TACTICS IN YOUNG AND ADULT PLAYERS^{§§}

DOI:10.24234/miopap.v11i2.41

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Abstract

Blindfold chess is a game where the board and pieces are not visible to its players. The project aims to verify the didactic usefulness of solving blindfolded tactics in young and adult people. A sample of 27 students (14 -30 years old) was formed, and several training sessions with blindfold tactical exercises were organized. In three months (from May to July 2023), 12 lessons of 2 hours each were organized. Then, objective measures (not subjective evaluations) of the benefits of this method have been collected by measuring two performance parameters (solving times of exercises and FIDE elo rating change after training sessions) and comparing them with their results before using this method. We analyzed the interaction between performance x blindfolding tactics compared to the control group participants, particularly the correlations between performance improvement x training interaction and the experimental cognitive path with the three training interaction steps. Significant are differences in the improvement (both in solving tactics times and in Rapid FIDE Elo rating) as a function of FIDE rating under vs over 1900 Elo ($p < 0,05$), with a more significant improvement for males. In the control group, the interaction is not essential ($p > 0,5$) both in solving tactic times (with an average reduction of 30 seconds for each move) and in FIDE Elo Rating change after the training sessions.

Keywords: blindfold chess, tactics training, cognitive development, chess players, young players, adult players, problem-solving skills, visualization techniques, mental calculation, chess training benefits.

INTRODUCTION

Blindfold chess is a particular game where the board and pieces are not visible to players. Famous chess players (e.g., Pillsbury, Koltanowski, Najdorf, et al.) could successfully play 30-45 blindfold games simultaneously. For an ordinary observer, this seems to demand exquisite memory capabilities. Still, in the shadow of the pattern recognition versus search dilemma, a specific area of

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research began to develop because blindfolded chess attracted a lot of scientists because of its extravagance, leading to many studies. Binet (1893, 1894) studied the abstract representation of such skilled players. Saariluoma (1991) and Saariluoma and Kalakoski (1997, 1998) studied memory and decision-making in blindfold chess and concluded that blindfold practice improves chess skills. Grandmaster Jonathan Tisdall (1997) argued that his ability to play chess blindfolded was one of the main reasons he achieved the GM title. Campitelli and Gobet (2005) studied the mind's eye in blindfold chess and argued that visual imagery plays a vital role in problem-solving. They showed how a theory of expert memory - the Template theory (Gobet and Simon, 1996, 2000) – accounts for most of the blindfolded data. The results show that irrelevant information affects chess masters only when it changes during the presentation of the target game. Chabris and Hearst (2003) and Jeremic, Vukmirovic, and Radojicic (2010) found no significant statistical difference between the rapid and blindfold games. RB Ramesh, Indian Olympic team coach and one of the most successful and influential chess trainers in the world, in a recent interview (News in Chess Magazine 2022/3), speaks about his teaching methods and says that most of his students are actually able to visualize better because they can read a chess book without a board and this is very useful. Ramesh says that his method produces fantastic results.

METHOD- EXPERIMENTAL DESIGN

The project aims to verify the didactic usefulness of solving blindfolded tactics in young and adult people.

A sample of 27 students (14 -30 years old) - 20 are males and 7 females, 12 students are under 18, and 15 are over 18 - has been formed, and several training sessions with blindfolded tactical exercises have been organized. At the beginning of the project, the subjects had a standard FIDE rating of 1650 and 2100 elo. In three months (from May to July 2023), 12 lessons of 2 hours each were organized. Then, objective measures (not subjective evaluations) of the benefits of this method have been collected by measuring two performance parameters (solving times of exercises and elo FIDE rating change after training sessions) and comparing them with their results before using this method.

The experimental design also includes a control group of 11 students (8 male and 3 female) of the same age and playing level, who never have solved blindfolded tactics but only tactics traditionally reproducing the moves on the board.

TEACHING METHOD

To make the subjects good at visualizing, we experimented with a cognitive path consisting of three steps:

- 1) to remember the notation of moves, to be able to repeat this, seeing the pieces as they move on the board and rebuilding the solution in their mind;
- 2) to give a straightforward position and make them find the moves: after solving many accessible positions without moving pieces, they will be able to visualize it in their mind and increase the length of the solutions;
- 3) to ask them to analyze and solve 13 blindfolded training positions with different levels of complexity:

13 blindfolded training positions

The maximum resolution time for each exercise is 40 minutes. Each exercise was administered to the subjects twice, 20 days apart. The average correct resolution time in the first step was 32 minutes; in the second step, the average time decreased to 27 minutes.



Diagram 1: two stages of training sessions

DATA ANALYSIS

We analyzed the performance x blindfolded tactics interaction, in particular, the correlations between chess playing performance improvements—measured by solving time tactics exercises on the chessboard and FIDE elo rating change after training sessions—and the experimental cognitive path with the three steps of blindfolded training interaction compared to participants in the control group.

At the end of the experimental training, we organized two tournaments: one with a standard

rate of play (90 minutes plus an additional 30 seconds for each move) and another with a rapid rate of play (10 minutes plus an additional 5 seconds for each move).

RESULTS AND DISCUSSION

This interaction is significant ($p < 0.005$) in solving tactics times (with an average reduction of 31%) and in the Rapid FIDE Elo rating (with an average increase of 26%). We have normalized the K-factor (40 for under 18 and 20 for over 18) to have the variation of FIDE Elo (Standard and Rapid) homogeneous for all the subjects in the sample.

The interaction is less significant but still interesting ($p = 0.3$) in the Standard FIDE Elo rating. This result could also be influenced by the fact that, in addition to tactical exercises, strategy studies and middle-game analyses are also helpful for improving playing performance in standard time.

Significant are differences in the improvement (both in solving tactics times and in Rapid FIDE Elo rating) as a function of FIDE Elo rating under vs over 1900 elo ($p < 0.05$) with a more significant improvement for players over 1900 Elo rated and as a function of gender ($p < 0.01$) with a more significant improvement for male. There aren't differences in the improvements as a function of age under vs over 18 y.o ($p > 0.5$).

In the control group, the interaction between the subjects is not significant ($p > 0.5$) in solving tactics times and in Standard and Rapid FIDE Elo ratings.

There may be biases due to the different sizes of the control group compared to the experimental group and the number of females compared to males.

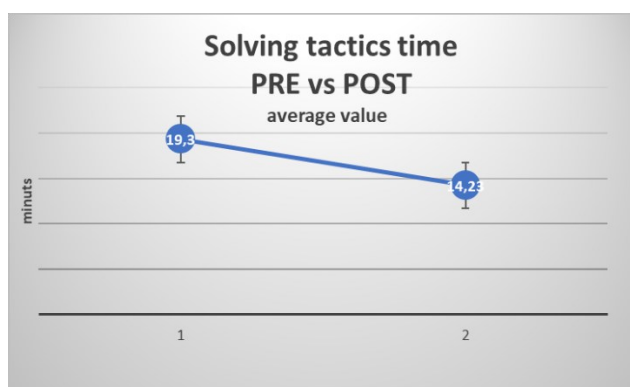


Diagram 2

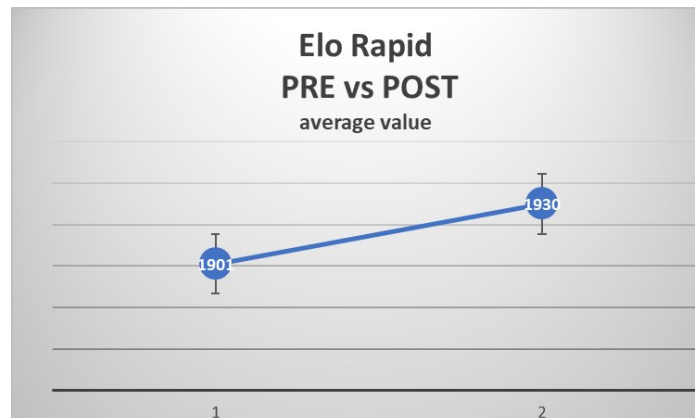


Diagram 3

CONCLUSIONS AND FINDINGS

Our study demonstrated that objective changes in chess playing performance can be reliably induced by solving specific blindfolded tactics in a chess training program.

The promising results of this pilot study encourage us to organize a new experimental design in the summer with more significant and homogeneous samples (experimental and control group) to prepare a detailed “Blindfolded tactics training protocol” adaptable to the subjects' different playing levels.

Acknowledgements: The authors thank the editors and anonymous reviewers for their constructive feedback.

Funding: This study was not supported by internal or external funding sources. All research presented in the article was conducted at the expense of the author(s).

Availability of data and materials: All supporting data generated or analyzed for this study are available upon request.

Ethics approval and consent to participate: Not applicable.

Consent for publication: Not applicable.

Competing interests: The authors declare that they have no competing interests.

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Received: 22/09/2024
Accepted: 11/11/2024

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