

[Currently pending approval by the Otago University Human Ethics Committee]

EMPIRICAL CHESS IMPROVEMENT TRIAL INFORMATION SHEET FOR PARTICIPANTS

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate we thank you. If you decide not to take part there will be no disadvantage to you and we thank you for considering the project.

What is the Aim of the Project?

The first aim of the study is to test the commonly assumed premise that tactics training improves actual chess playing skill. The second aim of the study is to compare those who are regularly playing longer games to those who are playing shorter games to see if this influences the rate of improvement.

Background

The game of chess has a large and rich tradition of study. The oldest dedicated text we have devoted to chess and providing advice for play is dated around 1500 (1). Countless books have been written on understanding the game and a wide range of advice and opinion is available for elite chess players to improve. An internet search will turn up 44,200,00 hits on the topic of chess improvement. Yet an EBSCO and Scopus literature reviews show no results for chess improvement or learning. While there is clearly an ocean of experts internationally on chess improvement with a lot of excellent inductive reasoning on the topic of chess improvement. There has not been a single peer reviewed study on the topic.

The international governing body for chess competition known as FIDE; has a subsidiary known as the FIDE trainers commission. This body is concerned with regulating and certifying chess trainers and provides curricula for schools and trainers. Yet when one consults the FIDE trainers commission syllabus, a 208 page document we find that there are only four uses of the word study in reference to any sort of empirical research and these were pertaining to a nutrition survey considering the dietary habits of grandmasters during tournaments(2). Given the long established history of chess teaching, it is likely almost all of their recommendations are going to be wise. Yet we have never tested to control for simple confounding such as the amount of time the player spends thinking about the game, or indeed simply controlling for highly motivated individuals driven to improve.

There is therefore a need to provide evidence to support any of the current teaching methods and commonly held beliefs in the international chess community.

Benefits for learning theory: Chess expertise is an easily measured metric using well established systems such as the international Elo rating(3). In fact chess is the least controversial example of expertise in peer-reviewed literature(4). Chess has been highly studied as a tool for researching expertise, perception, problem solving and memory, and search methods(5). It has also provided fertile ground for considering biases in expert decision making(6). As we have yet to consider studies which consider the most effective methods of learning in chess it will likely provide a useful initial reference point for future research on chess specific cognitive psychology of learning.

What Type of Participants are being sought?

To be eligible for the study we are seeking chess players aged 16 or over who are interested in improvement with an online or FIDE rating under 1800. Participants ideally are already working on their chess improvement but are willing to put their current training methods on hold while adhering to the experimental conditions. You will not be eligible for the study if you are unwilling to stop all other chess improvement methods.

What will Participants be Asked to Do?

Should you agree to take part in this project, you will be asked to nominate how much time you can comfortably and regularly dedicate to chess in a week. It is suggested that you base this estimate on how much time you currently spend on chess play and training.

You would then be semi-randomly assigned to one of the four different groups. As outlined below.

If you are allocated to the first or second groups you will be asked to spend half of your nominated chess time using a free online chess tactic trainer at the website chesstempo.com. Participants will be asked to exclusively use the 'mixed' tactic trainer at the medium difficulty setting. The other half of the time you will be asked to play lichess rated games using exclusively the 10:5 or 30:20 control.

If you are allocated to third or fourth groups you will be asked to spend all of your allocated chess time just playing games. We will ask that you exclusively play one of the time controls either the 10:5 or 30:20.

Every week you will receive an email with a link to a very brief online survey to complete which will ask you 1) to estimate the amount of time you spent on chess in the last week. 2) what your current rating is and 3) the RD of your rating. The RD is a measure of the accuracy of the players rating it can easily be found on the lichess website under stats.

The study will run for twelve weeks. At the end of the study period data will be analysed. You will be informed of the results as they become available.

Risk of discomfort

If you are already using a highly effective training method, and you adopt the experimental conditions for the three month period of the trial. It is possible that your current rate of chess improvement may slow. This could cause anguish for some individuals.

What Data or Information will be Collected and What Use will be Made of it?

Your time spent playing and rating changes will be recorded and at the end of the study will be analysed for statistical significance. The data collected will be securely stored in such a way that only those mentioned below will be able to gain access to it. Data obtained as a result of the research will be retained for at least 5 years in secure storage. Any personal information held such as email addresses and lichess username may be destroyed at the completion of the research even though the data derived from the research will, in most cases, be kept for much longer or possibly indefinitely.

The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve your anonymity.

You may withdraw from participation in the project at any time without any disadvantage to yourself of any kind.

When will the study begin

We are currently seeking eligible potential participants. The first phase of the study is to gather enough people to ensure that the study is worthwhile and that we can control for things which may impair the quality of the results such as the age or skill level of the participant. We are also currently seeking ethics approval from the Otago University of New Zealand and so the study will only begin once this has been approved. This is likely to be early November. The study will run for three months in total.

How to participate

If you would like to be involved in the trial then please go to the initial eligibility survey link below.

https://forms.office.com/Pages/ResponsePage.aspx?id=DQSIkWdsW0yxEjajBLZtrQAAAAAAAAAAAN__g8mdqpUOVhEQTBKRUIKQzNDQTIVMDdWUkpOR0s5Ti4u

Who is conducting the research

Dr Mathew Hobbs MD at Rolleston Medical Centre, Senior clinical lecturer University of Otago, MBChB, FRNZCGP, BSc (Neuroscience)

Mr Eric Porter currently an undergraduate student of psychology and economics at the University of canterbury

Dr Fernand Gobet Professorial Research Fellow at the centre for philosophy of natural and social science, London School of Economics. Expert on the topic of expertise and with many publications in on the topic of psychology in chess. He is also an international master.

If you have any questions about our project, either now or in the future, please feel free to contact us at: empirical.chess@gmail.com

References

1. Murray, H. J. R. A History of Chess (Northampton, MA: Benjamin Press, 1985)
2. FIDE Trainers Commission Syllabus seventh edition. 2017 by Efstasios Grivas, Mikhail Gurevich, Miguel Illescas, Michael Khodarkovsky, Andrew Martin, Adrian Mikaleshishin and Jovan Petronic.
3. Elo, A (1978) The rating of Chess players, Past and Present. New York: Arco.
4. De Groot, A & Gobet, F. 1996 Perception and memory in chess. Heuristics of the professional Eye Assen: Van Gorcum.
5. Charness, N. The impact of chess research on cognitive science Psychological Research (1992) 54:4-9
6. Bitensky, I, Mama, Y & Algom D. Efficacy of priming: evidence from expert performance. Psychology (2014) 5, 1923-1932

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