The Influence of Playing Chess on Moot Court Session performance in Law Students

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***Abstract* — Some of the most important aspects that chess develops are the ability to concentrate, attention and the ability to anticipate, which are paramount in moot court sessions and future advocacy and often lead to winning or losing a case. The purpose of this experimental research is to illustrate how chess helps to develop the skills needed for law students. The research was conducted over a period of four months and the research participants were 20 law students, with 10 students included in the experimental group and another 10 representing the control group. The assessment tests were the following: concentrated attention tests (Kraepelin and Bourdon-Anfimov), Psychological Performance Inventory, the Test of Attention and Interpersonal Style in advocacy, a Decision-making test and a Technical test. Athletes in the experimental group participated in chess lessons for four months, while the control group did not benefit from chess training. The chess training programme consisted in learning the basic elements of chess, tactical and strategic exercises to help athletes improve their attention, decision-making, problem-solving and anticipation skills, visualization exercises, blitz competitions and assessment tests. The chess training programme followed by the experimental group led to better results in most of the tests, compared to the control group, where the improvement of scores was good given improved results.**

***Index Terms* — Advocacy, Chess, Concentration, Personal development.**

I. INTRODUCTION

In the last period, the benefits of studying chess have begun to be widely recognized, which has led to its introduction in law colleges, chess being considered an educational tool. Since the 1950s, special attention has been paid to the mental impact over the physical one, thus determining specific psychomotor formulations. Motor ability, which is a set of physical and technical skills, has been correlated with psychophysical processes. Within these correlations, attention has established itself as a process. In advocacy for law students chess influence the performance, attention has always been considered a vital aspect, and one of the most important aspects of advocacy psychology is attention. Studies have also been done that show that law student's behavior is related to their ability to concentrate on their moot court sessions.

In the moot court sessions of advocacy, the assessment of attention and its development have been an object of interest. Attention is considered to be a fundamental cognitive ability because it helps select the necessary information and facilitates proper functioning during advocacy.

It is known that being an elite lawyer requires a harmonious combination of physical and mental characteristics. It has been found that sometimes lawyers with very good motor skills do not perform as well as players with poorer motor skills but with a great power of self-realization.

The advocacy always raises problems, and the lawyer needs to find solutions on their own, which often consists in choosing tactical alternative solutions with effect in the past, but choosing the right action requires a certain degree of intelligence.

Some of the most important aspects that chess develops are the ability to anticipate, concentrate make quickly and good decisions and visualize, which are paramount in advocacy and often depend on winning or losing a case.

We believe that addressing this issue, namely the impact of studying chess on advocacy performance, is topical but also useful for increasing the performance of lawyer thinking. Designing a chess tournaments of law students plan with the help of specific means and methods and in accordance with the age characteristics will contribute to the mental development of football

players, which will lead to better results in their moot court sessions and other future advocacy activities.
The purpose of this experimental research is to illustrate how chess helps to develop the skills needed in advocacy for law students.

II. RESEARCH HYPOTHESES

The research hypotheses are as follows,

- *Studying and playing chess contributes to optimizing the attention of lawyers.*
- *Studying and playing chess leads to an improvement in lawyer's problem-solving and decision-making skills.*
- *The skills acquired by playing chess helps to improve advocacy performance in moot court sessions or future advocacy.*

The null hypothesis: we assume that there are no significant differences between the averages of the two groups in the initial and final tests or they are due only to chance.

III. METHODOLOGY

Participants: The research participants are 20 law students including males and females with 10 students included in the experimental group (EG) and another 10 representing the control group (CG). Participants are divided into two groups according to the team to which they belong so that the basic team represents the experimental group that plays in value group 1, and the second team, the control group that plays in value group 2. The research was conducted over a period of four months, between April 2024 and June 2024, six hours per week.

Assessment tests

- Concentrated attention tests: Kraepelin and Bourdon-Anfimov
- Psychological Performance Inventory (PPI) - The Test of Attention and Interpersonal Style in advocacy. IQ test - Raven's Matrices.
- Decision making test.
- Technical test.

IV. CHESS TRAINING PROGRAMME

Students in the experimental group participated in chess lessons for four months, while the control group did not benefit from chess training. The chess training programme consisted in learning the basic elements of chess, tactical and strategic exercises to help students improve their attention, decision-making, problem-solving and anticipation skills, visualization exercises, blitz competitions and assessment tests.

V. RESULTS

Concentrated attention tests

Table I: Percentage difference between pre- and post-test results for concentrated attention – EG and CG

	Kraepelin	*Bourdon-Anfimov*	*Kraepelin*	*Bourdon-Anfimov*
	(Experimental Group) EG		*(Control Group) CG*	
Mean – Pre-test	*27.92*	*167.37*	*16.39*	*166.31*
Mean – Post-test	*32.68*	*169.21*	*17.32*	*167.09*
Progress (%)	*18.57*	*0.59*	*6.92*	*-0.16*

According to Table 1, there were increases in attention level for both the experimental and control groups in all concentrated attention tests; however, the control group had a slight decrease in the average Bourdon-Anfimov test results. In the Kraepelin test, the mean of the experimental group increased by 18.57%, while that of the control group increased by only 6.92%. Regarding the Bourdon-Anfimov test, the mean of the experimental group slightly increased by 0.59%, while the mean of the control group decreased by 0.16%.

Table II: T - Test – Kraepelin and Bourdon – Anfimov for EG and CG

	Kraepelin	*Bourdon-Anfimov*	*Kraepelin*	*Bourdon-Anfimov*
	(Experimental Group) EG		*(Control Group) CG*	
Mean – Pre - test	*28*	*167.5*	*15.7*	*194.5*
Mean – Post-test	*33*	*167.8*	*16.4*	*196.6*
P-Value	*0.03*	*0.35*	*0.79*	*0.88*

Psychological Performance Inventory (PPI):

Table III: Percentage difference between PPI results in pre - and post – tests for EG

	(Experimental Group) EG						
	Self Confidence	Negative Energy	Attention Control	Visualization	Motivation Level	Positive En	Attitude Co

						ergy	ntrol
Mean – Pre-test	24.08	22.12	24.67	21.89	26.28	53.92	25.93
Mean – Post-test	25.08	23.88	26.12	24.21	27.65	26.31	26.86
Progress (%)	4.44	7.25	8.49	12.68	5.78	8.88	4.41

Table 3 highlights that, in the experimental group, all indicators of the Psychological Performance Inventory show an increase in average results between pre- and post-tests. Of these seven indicators, we were particularly interested in Attention control, where the increase was 8.49%, and Visualization, where the increase was 12.68%.

Table IV: Percentage difference between PPI results in pre - and post – tests for CG

	(Control Group) CG						
	Self Confidence	Negative Energy	Attention Control	Visualization	Motivation Level	Positive Energy	Attitude Control
Mean – Pre-test	20.11	20.78	24.67	19.59	24.12	22.86	21.96
Mean – Post-test	21.65	20.55	23.25	20.25	25.93	23.21	22.15
Progress (%)	3.65	-1.28	-1.82	1.09	5.45	1.56	0.93

Five of the seven indicators improved in post-test compared to pre-test by the control group. As table 4 shows attention control, which is a benchmark in our research, slightly decreased by 1.82%, while Visualization increased by 1.09%.

Table V: T- Test – Attention control and Visualization for EG and CG

	Attention Control		Visualization	
	EG	CG	EG	CG
Mean – Pre-test	23.98	23.65	21.12	19.89
Mean – Post-test	26.76	23.66	25.31	19.67
P - Value	0.02	0.99	0.003	0.93

Application of the t-test to the experimental group in order to make a comparison between pre- and post-tests reveals that, in the case of the Attention indicator, there are great differences between the results obtained by the experimental group in the two tests, as $p = 0.02 < 0.05$ (See V). The same cannot be said about the control group, where $p = 0.99 > 0.05$, which shows that there are no significant differences between the initial and final tests. Therefore, we can reject the null hypothesis for the experimental group while for the control group, the null hypothesis is confirmed.

Visualization is another indicator that reveals great differences between the results obtained by the experimental group in the two tests, $p = 0.003 < 0.05$ (Table 5). According to the same table, the differences between the two tests in the case of the control group are not significant, $p = 0.93 > 0.05$. Thus, the null hypothesis is rejected for the experimental group but is confirmed for the control group.

Decision – making test:

Table VI: Percentage difference between pre - and post - test scores for the Decision - making test – EG and CG

	Decision – Making test	
	EG	CG
Mean – Pre - test	1.85	1.32
Mean – Pos t- test	2.93	1.68
Progress (%)	37.12	23.21

Table 6 indicates that the experimental group had an average increase of 37.12% in the Decision - making test, while the average increase was 23.21% for the control group.

Table VII: T-test – Decision-making test – EG and CG

	Decision – Making test	
	EG	CG
Mean – Pre-test	1.85	1.29
Mean – Post-test	2.93	1.63
P - Value	0.08	0.45

According to Table 7, there are no significant differences between pre - and post - tests in the Decision - making test performed by the two groups, which confirms the null hypothesis; thus, $p = 0.08 > 0.05$ for the experimental group, and $p = 0.45 > 0.05$ for the control group.

Technical test:

Table VIII: Percentage difference between pre- and post-test scores for the Technical test – EG

	(Experimental Group) EG						
	Connect	Self Confidence	Concentration	Collaborate	Motivation Level	Communicate	Total

Mean – Pre-test	31.45	52.62	13.99	21.48	21.08	31.32	171.94
Mean – Post-test	28.76	56.98	21.82	27.02	37.89	46.25	218.72
Progress (%)	-10.88	9.05	56.49	16.36	73.25	42.97	24.05

Table 8 reveals that all Technical test indicators have improved, except for the Connect, where there is an average decrease of 10.88%. Thus, for the Self Confidence parameter, the progress is 9.05%, for Concentration - 56.49%, for Collaborate - 16.36%, for Motivation Level - 73.25%, for Communication – 42.97% and for Total - 24.05%.

Table IX: T - test for Technical test – EG

	(Experimental Group) EG						
	Connect	Self Confidence	Concentration	Collaborate	Motivation Level	Communicate	Total
Mean – Pre-test	32.65	53.98	15.88	24.73	21.94	31.45	185.22
Mean – Post-test	29.23	58.35	24.75	29.67	37.91	45.99	231.36
Progress (%)	0.44	0.02	0.17	0.07	0.004	0.055	0.002

Analyzing Table 9, it can be seen that, after applying the t - test to the Technical test, three indicators highlight significant differences between the results obtained in pre - and post - tests, as $p < 0.05$ for Self Confidence, Collaborate, Motivation Level and Total. Therefore, for these parameters, we will reject the null hypothesis. As regards the other parameters, namely Connect, Concentration and Communicate, we can confirm the null hypothesis that there are no significant differences between the results obtained in the two tests, as $p > 0.05$.

VI. DISCUSSION AND CONCLUSIONS

After evaluating the initial and final tests, I have reached some conclusions that confirm the research hypotheses. The chess training programme followed by the experimental group led to better results in most of the tests, compared to the control group, where the improvement of scores was not so visible or even did not exist at all. Next, we will analyze the tests performed by the investigated law students in order to observe where there are notable variations between the final and initial results. Concentrated attention tests showed improvements in most scores obtained by the two groups, with the specification that the increases were much higher for the experimental group compared to the control group in all tests. Thus, in the Kraepelin test, the experimental group progressed by 18.57%, compared to the control group, where the progress was 6.92%. The score of the experimental group increased by 0.59% in the Bourdon-Anfimov test, but the same cannot be said about the control group whose average results recorded a slight decrease of 0.16%. Given the result of the t-test in the Kraepelin test, we can reject the null hypothesis. In contrast, in the case of the other one concentrated attention tests, the null hypothesis is confirmed.

Regarding PPI, the experimental group recorded increases in average scores for all its indicators, while the control group recorded improvements in five of the seven test indicators. Thus, for the parameters that are of particular interest to us, namely Attention control and Visualization, the experimental group had increases of 8.49% and 12.68%, respectively. On the other hand, the same cannot be said about the control group, where the Attention control indicator decreased by 1.82%, while the average score for Visualization increased only by 1.09%. After using the t-test, we can reject the null hypothesis for both parameters in the case of the experimental group, but in the case of the control group, the null hypothesis is confirmed, as there are no significant differences between the two tests.

The Decision-making test reveals improved results for both groups; thus, the average of the experimental group increased by 37.12%, and that of the control group, by 23.21%. In the case of this test, the null hypothesis is confirmed for both groups, meaning that there are no significant differences between the two tests or they are due only to chance.

The Technical test shows improvements in five of the six indicators and an average decrease of 10.88% in the connect indicator. Thus, for the Self Confidence parameter, the progress is 9.05%, for Concentration - 56.49%, for Collaborate - 16.36%, for Motivation Level - 73.25%, for Communication – 42.97%, for and for Total - 24.05%. After applying the t-test, we can conclude that the null hypothesis is rejected for three

indicators, but it is confirmed for the other five indicators.

Regarding this research hypothesis that "studying and playing chess contributes to optimizing the attention of law students", we can conclude the following points for the experimental group:

The null hypothesis that there are no differences between the initial and final tests or they are due only to chance is rejected for the following tests or indicators: Kraepelin, Attention controls (PPI).

The null hypothesis is confirmed for Bourdon-Anfimov. Thus, the hypothesis is rejected for seven indicators and confirmed for three indicators.

Regarding the second hypothesis according to which "studying and playing chess leads to an improvement in law student's problem-solving and decision-making skills", the null hypothesis is confirmed. In this sense, we believe that a longer period of chess practice is needed to see good results. Although the experimental group had better scores than the control group in the Decision-making test, the differences between the two tests are not significant. As for the last hypothesis, namely that "the skills acquired by playing chess help to improve advocacy ability", we can say the following: in the Technical test, three of the seven indicators revealed significant differences, the most important being the total points where the null hypothesis is rejected, while four of them did not show significant differences between the two tests. An aspect that we believe will help law students to increase their performance is the visualization ability in which case significant differences have been noted that will be useful for their mental training.

To notice visible improvements in certain skills it development chess needs to be constantly played over a longer period of time. Means and methods appropriate to each law student characteristics should be used to improve the cognitive skills needed in sport and advocacy, such as attention, visual ability, thinking and memory.

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