

Transformative Chess: Trainers' Views on Soft Skill Development in the Selected Nordplus Countries

Andreas Ahrens¹, Jelena Zascersinska², Silva Blazulioniene³, Daiga Falkane⁴, Akeem Oppong⁵,
Alexandra Cheimona⁶, Mihails Zascersinskis², Irina Abjalkiene², Anastasija Bikova², Ludmila
Aleksejeva², Polina Glonina², Vasilisa Aleksejeva²

¹Hochschule Wismar, Germany

²Centre for Education and Innovation Research, Latvia

³Creative Future Ideas, Lithuania

⁴Riga Chess Federation, Latvia

⁵Island Panorama Center, Iceland

⁶EuroReach, Estonia

Abstract. The transformative power of chess play as an educational tool has been recognised since many researchers found positive effects of chess game on the development of such skills, e.g. problem solving, attention and memory, cognitive development, emotional self-regulation, crucial for social inclusion. However, chess trainers' views on their soft skills for strengthening trainees' social inclusion via chess game are under-explored. The research aim is to analyse chess trainers' views on their soft skills to be used in chess game for strengthening trainees' social inclusion. The exploratory study used the online survey questionnaire for data collection. The study was carried out between November 2025 and February 2026 in selected Nordplus countries. Data were processed through the frequency of answer, mean, and ranking. The study results reveal that the skills' category "Soft skills essential for social inclusion" are highly evaluated by the respondents. Specifically, the skill of critical thinking is found as the most appropriate in chess play for strengthening social inclusion. The theoretical analysis and modelling allow the categorisation of chess trainers' soft skills into three groups: teaching skills, skills essential for social and inclusion, and skills essential for competitive performance. The study results in finding that chess trainers recognise chess play as a means for social inclusion. Direction of further research are proposed.

Keywords: chess game, chess trainers, soft skills, soft skills' categorisation, ranking, social inclusion

Introduction

The transformative power of chess play as an educational tool has been revealed since Adrian de Groot started his studies of thinking behaviours of chess players in 1960s (Milat, 1997). Researchers found positive effects of chess game on the development of problem solving skills (Kazemi, Yektayar, & Abad, 2012), mathematical ability (Sala & Gobet, 2017), individuals' attention and memory (Stegariu & Vornicu, 2020), social inclusion (Ahrens, Zascersinska, Bikova, Aleksejeva, Zascersinskis, Gukovica, & Abjalkiene, 2024), cognitive and social enhancement (Andersson, 2025), emotional (Ahrens, Montero, Barbeito, Trasciatti, Falkane, Zascersinska, & Zascersinskis, 2025) and other soft skills. Researchers, focusing on the

Corresponding author Jelena Zascersinska. E-mail: esp@hs-wismar.de

ORCID

Andreas Ahrens <https://orcid.org/0000-0002-7664-9450>

Jelena Zascersinska <https://orcid.org/0000-0003-4664-8593>

Copyright © 2026 The Author(s). Published by RTU Press

Under the Creative Commons Attribution 4.0 International (CC BY 4.0) license, the author(s) and users are free to share this work (copy and redistribute the material in any medium or format giving appropriate credit, providing a link to the license).

impact of the chess game on learners, engaged education stakeholders (school principals, other school leaders, teachers and parents) to investigate benefits associated with learning to play chess in schools (Gardiner & van der Laan, 2025). However, chess trainers' views on their soft skills for strengthening trainees' social inclusion via chess game are under-explored. The research aim is to analyse chess trainers' views on their soft skills to be used in chess game for the strengthening trainees' social inclusion. The exploratory study used the online survey questionnaire for data collection. Data were processed through the frequency of answer, mean, and ranking.

Literature review

Chess game has been played for more than 2000 years (Kazemi, Yektayar, & Abad, 2012). Table 1 presents the international recognition of the chess game as a sport (Schulz, 2023; ChessBazaar, 2025).

Table 1. International Recognition of Chess Game as Sport (the authors)

Year	Event	A Short Description
1851	First International Tournament	The first international modern chess tournament was held in London, won by Adolf Anderssen, setting the standard for competitive play
1861	Timing Mechanisms	The introduction of clocks and time controls to tournaments to prevent players from taking excessive time
1886	First World Champion	Wilhelm Steinitz became the first official World Chess Champion, formalizing the highest level of competition
1924	FIDE Establishment	The Fédération Internationale des Échecs (FIDE) was founded to govern international competitions, formalizing the sport's structure.

Along with the increasing international recognition of the chess play, educational community, inspired by positive results of the research work devoted to the analysis of the influence of the chess game on individuals' abilities and skills (e.g. Binet, 1966), supported the integration of chess training into education (Giouvantsioudis, 2024). Table 2 shows the historical perspective on the development of chess game as an educational tool (Armenian Chess Federation, 2011; Jankovic, & Novak, 2019; FIDE, 2026).

Table 2. Development of Chess as an Educational Tool (the authors)

Year	Event	A Short Description
1965	Optional course at university	A facultative university course on history and chess theory
2011	"Chess at School" Programme in Armenia	Chess is included in the 2-4 grades of public schools of the Republic of Armenia as a compulsory subject
2012	European Parliament	The Parliament adopted a declaration encouraging chess to be introduced in schools to improve social cohesion and cognitive skills
2026	Year of Chess in Education	Strategic pivot toward leveraging the game for broader educational and developmental goals. The true purpose of chess in education is transformative rather than competitive. It serves as a tool to develop the cognitive clarity and personal responsibility young people need to thrive, regardless of their performance on the board

Since the importance of chess game for educational purposes is increasing along with the traditional view of chess game as a sport activity, chess game has become bi-modal as it includes two contrasting modes of competition and inclusion (Zaščerinska, Aļeksejeva, Andreeva, & Zaščerinskis, 2014).

For chess trainers, teaching skills are also of a great importance. In this work, teaching skills are considered as a kind of soft skills for chess trainers. Therefore, Table 3 categorizes soft skills into teaching and other soft skills. Other soft skills are divided into two distinct frameworks: those essential for social inclusion and those required for competitive performance.

Table 3. Categorisation of Chess Trainers' Skills (by authors)

Teaching skills	Soft skills essential for social inclusion	Soft skills essential for competitive performance
Communication with trainees	Emotion self-regulation	Chess knowledge
Strategic thinking	Time management	Chess rules and regulations
Training management		Game analysis
Educational tools	Critical thinking	Pattern recognition
Teaching methods		Resource management
Ethics	Creative thinking	Logical reasoning
		Problem solving

Table 3 presents chess trainers' teaching skills and soft skills for the purposes of the empirical study to be carried out within the present research. However, chess trainers' teaching skills and soft skills can be categorised in different ways. Another kind of skills' categorisation depends on the aim of the research, purpose of the study, researchers' experience, and other relevant factors. Even, the category of cross-sectoral skills can be introduced.

Methodology

The study is exploratory as the research community has not paid any attention to chess trainers' skills. The lack of previous research and studies on this topic ensures a great flexibility in establishing the structure for the study (Ahrens, Foerster, Zašcerinska, & Wasser, 2020).

The empirical study is motivated by the research questions: What are chess trainers' views on the use of the chess game for the development of soft skills? The purpose of the study is to analyse chess trainers' views on the use of the chess game for the development of soft skills.

The empirical study was implemented between November 2025 and February 2026. Online survey questionnaire was used as the method for data collection. Data were processed through the frequency of answer, mean, and ranking.

Chess trainers from Estonia, Iceland, Latvia, and Lithuania took part in the online survey questionnaire. The countries of Estonia, Iceland, Latvia, and Lithuania were selected for the study due to their participation in the Nordplus project "Chess as an Educational Tool for Social Inclusion". In total, 26 respondents replied to the online survey questionnaire: 7 respondents from Estonia, 1 – from Iceland, 13 – from Latvia, and 5 – from Lithuania. Table 4 shows that the respondents mostly work with disabled people.

Table 4. Respondents' target audiences (by authors)

Target audience	Countries			
	Estonia	Iceland	Latvia	Lithuania
Trainer for prison inmates	0	0	5	0
Trainer for disabled	3	0	3	5
Trainer for immigrants	4	1	5	0

Table 5 shows that the most of the respondents are between 40 and 54 years old.

Table 5. Age groups of the respondents (by authors)

Age groups	Countries				Frequency of answer
	Estonia	Iceland	Latvia	Lithuania	
20-29	1	0	5	0	6
30-39	2	1	3	1	7
40-54	3	0	5	3	11
55-67	1	0	0	1	2
68 and more	0	0	0	0	0

Table 6 emphasizes the respondents' gender is equally distributed.

Table 6. Gender of the respondents (by authors)

Gender	Countries				Frequency of answer
	Estonia	Iceland	Latvia	Lithuania	
Male	3	0	5	5	13
Female	4	1	8	0	13

Table 7 emphasize that the majority of the respondents are active chess players.

Table 7. Respondents' experience in playing chess (by authors)

Respondents' experience in playing chess	Countries				Frequency of answer
	Estonia	Iceland	Latvia	Lithuania	
No experience	0	0	0	0	0
Beginner level	3	0	5	0	8
Active player	4	1	6	5	16
Professional level	0	0	2	0	2

Table 8 points out that the majority of the respondents likes playing chess very much.

Table 8. Respondents' attitude to playing chess (by authors)

Respondents' experience in playing chess	Countries				Frequency of answer
	Estonia	Iceland	Latvia	Lithuania	
5 (very much)	5	1	10	5	21
4 (like to play chess)	1	0	3	0	4
3 (neither like nor dislike)	1	0	0	0	1
2 (dislike)	0	0	0	0	0
1 (not at all)	0	0	0	0	0

Results

The present part of the manuscript discloses the results of the online survey questionnaire and findings of the study.

Table 9 presents the views of the respondents from Estonia and skills' ranking.

Table 9. Views of the Respondents from Estonia (by authors)

Soft skills	5 point Likert scale					Mean	Rank
	5 (always)	4 (often)	3 (sometimes)	2 (rarely)	1 (not at all)		
Chess knowledge	4	1	1	1	0	4.14	3
Chess rules and regulations	3	2	1	1	0	3.29	5
Communication with trainees	5	0	1	1	0	4.0	4
Emotion self-regulation	4	1	1	1	0	4.14	3
Teaching skills	5	1	0	1	0	4.43	1
Strategic thinking	3	2	1	1	0	4.0	4
Training management	4	2	0	1	0	4.29	2
Time management	4	2	0	1	0	4.29	2
Tools	4	1	1	1	0	4.14	3
Methods	3	3	0	1	0	4.14	3
Ethics	4	2	0	1	0	4.29	2
Game analysis	4	1	1	1	0	4.0	4
Problem solving	4	2	0	1	0	4.29	2
Critical thinking	3	3	0	1	0	4.14	3
Creative thinking	3	3	0	1	0	4.14	3
Pattern recognition	3	2	1	1	0	4.0	4
Logical reasoning	4	2	0	1	0	4.29	2
Resource management	4	2	0	1	0	4.29	2

Table 10 summarizes the mean per skill's category and their ranks.

Table 10. Rank of Skills' Categories (Estonia) (by authors)

Skills' mean	Skills' categories		
	Teaching skills	Soft skills essential for social inclusion	Soft skills essential for competitive performance
	4.0-Communication with trainees	4.14-Emotion self-regulation	4.14-Chess knowledge
	4.43-Teaching		
	4.0-Strategic thinking	4.29-Time management	3.29-Chess rules and regulations
	4.29-Training management		4.0-Game analysis
	4.14-Educational tools	4.14-Critical thinking	4.0-Pattern recognition
	4.14-Teaching methods		4.29-Resource management
	4.29-Ethics	4.14-Creative thinking	4.29-Logical reasoning
			4.29-Problem solving
Mean	4.18	4.18	4.04
Rank	1	1	2

Table 11 presents the views of the respondents from Iceland and skills' ranking.

Table 11. Views of the Respondent from Iceland (by authors)

Soft skills	5 point Likert scale					Mean	Rank
	5 (always)	4 (often)	3 (sometimes)	2 (rarely)	1 (not at all)		
Chess knowledge	1	0	0	0	0	5	1
Chess rules and regulations	1	0	0	0	0	5	1
Communication with trainees	1	0	0	0	0	5	1
Emotion self-regulation	1	0	0	0	0	5	1
Teaching skills	1	0	0	0	0	5	1
Strategic thinking	1	0	0	0	0	5	1
Training management	1	0	0	0	0	5	1
Time management	1	0	0	0	0	5	1
Tools	1	0	0	0	0	5	1
Methods	1	0	0	0	0	5	1
Ethics	1	0	0	0	0	5	1
Game analysis	1	0	0	0	0	5	1
Problem solving	1	0	0	0	0	5	1
Critical thinking	1	0	0	0	0	5	1
Creative thinking	1	0	0	0	0	5	1
Pattern recognition	1	0	0	0	0	5	1
Logical reasoning	1	0	0	0	0	5	1
Resource management	1	0	0	0	0	5	1

Table 12 summarizes the mean per skill's category and their ranks.

Table 12. Rank of Skills' Categories (Iceland) (by authors)

Skills' mean	Skills' categories		
	Teaching skills	Soft skills essential for social inclusion	Soft skills essential for competitive performance
	5.0-Communication with trainees	5.0-Emotion self-regulation	5.0-Chess knowledge
	5.0-Teaching		
	5.0-Strategic thinking	5.0-Time management	5.0-Chess rules and regulations
	5.0-Training management		5.0-Game analysis
	5.0-Educational tools	5.0-Critical thinking	5.0-Pattern recognition
	5.0-Teaching methods		5.0-Resource management
	5.0-Ethics	5.0-Creative thinking	5.0-Logical reasoning
Mean	5.0	5.0	5.0
Rank	1	1	1

Table 13 presents the views of the respondents from Latvia and skills' ranking.

Table 13. Views of the Respondents from Latvia (by authors)

Soft skills	5 point Likert scale					Mean	Rank
	5 (always)	4 (often)	3 (sometimes)	2 (rarely)	1 (not at all)		
Chess knowledge	7	2	4	0	0	4.23	7
Chess rules and regulations	7	4	2	0	0	4.38	5
Communication with trainees	5	4	4	0	0	4.08	9
Emotion self-regulation	4	5	4	0	0	4.0	10
Teaching skills	7	5	1	0	0	4.46	4
Strategic thinking	10	1	2	0	0	4.62	2
Training management	8	2	3	0	0	4.38	5
Time management	5	6	2	0	0	4.23	7
Tools	7	2	4	0	0	4.23	7
Methods	6	3	4	0	0	4.15	8
Ethics	7	3	2	1	0	4.08	9
Game analysis	7	3	3	0	0	4.54	3
Problem solving	4	7	2	0	0	4.15	8
Critical thinking	10	2	1	0	0	4.69	1
Creative thinking	7	4	2	0	0	4.38	5
Pattern recognition	7	3	3	0	0	4.31	6
Logical reasoning	10	2	1	0	0	4.69	1
Resource management	8	3	2	0	0	4.46	4

Table 14 summarizes the mean per skill's category and their ranks.

Table 14. Rank of Skills' Categories (Latvia) (by authors)

Skills' mean	Skills' categories		
	Teaching skills	Soft skills essential for social inclusion	Soft skills essential for competitive performance
	4.08-Communication with trainees	4.0-Emotion self-regulation	4.23-Chess knowledge
	4.46-Teaching		
	4.62-Strategic thinking	4.23-Time management	4.38-Chess rules and regulations
	4.38-Training management		4.15-Game analysis
	4.23-Educational tools	4.69-Critical thinking	4.31-Pattern recognition
	4.15-Teaching methods		4.46-Resource management
	4.08-Ethics	4.38-Creative thinking	4.69-Logical reasoning
			4.15-Problem solving
Mean	4.29	4.33	4.34
Rank	3	2	1

Table 15 presents the views of the respondents from Lithuania and skills' ranking.

Table 15. Views of the Respondents from Lithuania (by authors)

Soft skills	5 point Likert scale					Mean	Rank
	5 (always)	4 (often)	3 (sometimes)	2 (rarely)	1 (not at all)		
Chess knowledge	5	0	0	0	0	5	1
Chess rules and regulations	5	0	0	0	0	5	1
Communication with trainees	3	2	0	0	0	4.6	2
Emotion self-regulation	1	3	1	0	0	4.0	5
Teaching skills	1	3	1	0	0	4.0	5
Strategic thinking	5	0	0	0	0	5	1
Training management	5	0	0	0	0	5	1
Time management	5	0	0	0	0	5	1
Tools	0	4	1	0	0	3.8	6
Methods	2	2	1	0	0	4.2	4
Ethics	2	3	0	0	0	4.4	3
Game analysis	5	0	0	0	0	5	1
Problem solving	5	0	0	0	0	5	1
Critical thinking	5	0	0	0	0	5	1
Creative thinking	5	0	0	0	0	5	1
Pattern recognition	2	3	0	0	0	4.4	3
Logical reasoning	5	0	0	0	0	5	1
Resource management	1	4	0	0	0	4.2	4

Table 16 summarizes the mean per skill's category and their ranks.

Table 16. Rank of Skills' Categories (Lithuania) (by authors)

Skills' mean	Skills' categories		
	Teaching skills	Soft skills essential for social inclusion	Soft skills essential for competitive performance
	4.42-Good communication with trainees	4.29-Emotion self-regulation	4.59-Chess knowledge
	4.47-Teaching		
	4.66-Strategic thinking	4.63-Time management	4.42-Chess rules and regulations
	4.67-Training management		
	4.29-Educational tools	4.71-Critical thinking	4.43-Pattern recognition
	4.37-Teaching methods		
	4.44-Ethics	4.63-Creative thinking	4.49-Resource management
Mean per category	4.47	4.57	4.56
Rank of category	3	1	2

Table 17 overviews the responses from the respondents in participating countries and skills' ranking.

Table 17. Views of the Respondents from the selected Countries (by authors)

Soft skills	Mean per country				Mean	Rank
	Estonia	Iceland	Latvia	Lithuania		
Chess knowledge	4.14	5	4.23	5	4.59	8
Chess rules and regulations	3.29	5	4.38	5	4.42	12
Communication with trainees	4.0	5	4.08	4.6	4.42	12
Emotion self-regulation	4.14	5	4.0	4.0	4.29	14
Teaching skills	4.43	5	4.46	4.0	4.47	10
Strategic thinking	4.0	5	4.62	5	4.66	4
Training management	4.29	5	4.38	5	4.67	3
Time management	4.29	5	4.23	5	4.63	6
Tools	4.14	5	4.23	3.8	4.29	14
Methods	4.14	5	4.15	4.2	4.37	13
Ethics	4.29	5	4.08	4.4	4.44	11
Game analysis	4.0	5	4.54	5	4.64	5
Problem solving	4.29	5	4.15	5	4.61	7
Critical thinking	4.14	5	4.69	5	4.71	2
Creative thinking	4.14	5	4.38	5	4.63	6
Pattern recognition	4.0	5	4.31	4.4	4.43	12
Logical reasoning	4.29	5	4.69	5	4.75	1
Resource management	4.29	5	4.46	4.2	4.49	9

Table 18 compares Top 3 Skills per country and identifies the most common skill per rank.

Table 18. Top 3 Skills (by authors)

Top	Countries				Comparative
	Estonia	Iceland	Latvia	Lithuania	
Top 1	Teaching skills	All statements	Critical thinking Logical reasoning	Chess knowledge Chess rules and regulations Strategic thinking Training management Time management Game analysis Problem solving Critical thinking Creative thinking Logical reasoning	Critical thinking Logical reasoning
Top 2	Training management Time management Ethics Logical reasoning Resource management	-	Strategic thinking	Good communication with trainees	-
Top 3	Chess knowledge Emotion self-regulation Tools Methods Critical thinking Creative thinking	-	Game analysis	Ethics Pattern recognition	-

Table 19 compares Top 3 Skills' Categories per country and identifies the most common category per rank.

Table 19. Top Skills' Category (by authors)

Top	Countries				Comparative
	Estonia	Iceland	Latvia	Lithuania	
Top 1	Teaching skills Soft skills essential for social inclusion	Teaching skills Soft skills essential for social inclusion Soft skills essential for competitive performance	Soft skills essential for competitive performance	Soft skills essential for social inclusion	Soft skills essential for social inclusion
Top 2	Soft skills essential for competitive performance	-	Soft skills essential for social inclusion	Soft skills essential for competitive performance	Soft skills essential for competitive performance
Top 3	-	-	Teaching skills	Teaching skills	Teaching skills

The study results reveal that the skills' category "Soft skills essential for social inclusion" are highly evaluated by the respondents. Specifically, the skill of critical thinking is found as the most appropriate in chess play for strengthening social inclusion.

Conclusions

The theoretical analysis and modelling allow the categorisation of chess trainers' soft skills into three groups: teaching skills, skills essential for social and inclusion, and skills essential for competitive performance. The study results in finding that chess trainers recognise chess play as a means for social inclusion. The study is limited by the number of respondents from the countries participating in the Nordplus project. Future work will focus on widening of the number of respondents and countries.

Acknowledgements

This work has been carried out within the project "Chess as an Educational Tool for Social Inclusion" supported by Nordplus Horizontal 2025 (Project number NPHZ-2025/10169).

References

- Ahrens, A., Foerster, M., Zašcerinska, J., & Wasser, I. (2020). European Accreditation Agency's View on Kazakhstan's Engineering and Information Technology Higher Education. *Society. Integration. Education Proceedings of the International Scientific Conference, Volume V*, 15-25. <https://doi.org/10.17770/sie2020vol1.4861>
- Ahrens, A., Montero, J.A., Barbeito, R., Trasciatti, M., Falkane, D., Zascersinska, J., & Zascersinskis, M. (2025). Impact of Chess Training on Prison Inmates: Piloting Experience in Selected European Countries. *Education. Innovation. Diversity*, 1(10), 21–35. <https://doi.org/10.17770/eid2025.1.8380>
- Ahrens, A., Zascersinska, J., Bikova, A., Aleksejeva, L., Zascersinskis, M., Gukovica, O., & Abjalkiene, I. (2024). Chess Play as a Means Of Improving Inclusiveness of Disadvantaged Groups. *Education. Innovation. Diversity*, 1(8), 134 – 142. <https://doi.org/10.17770/eid2024.1.7928>
- Andersson, J. (2025). *Chess Training for Cognitive and Social Enhancement*. <https://www.diva-portal.org/smash/get/diva2:1971308/FULLTEXT01.pdf>
- Armenian Chess Federation. (2011). "Chess at School" Programme. <https://chessfed.am/en/static-page/detail/2>
- Binet, A. (1966). *Mnemonic virtuosity: A study of chess players*. New York, NY: Journal Press.

- ChessBazaar. (2025). *Who Won the First Chess Tournament?* <https://www.chessbazaar.com/blog/who-won-the-first-chess-tournament/#:~:text=The%201851%20London%20Chess%20Tournament,tournament;%20he%20made%20chess%20history>
- European Parliament. (2012). *Introduction of the programme 'Chess in School' in the educational systems of the European Union*. P7_TA(2012)0097.
- FIDE. (2026). *Every Lesson Counts: The Present and Future of Chess in Education*. <https://www.fide.com/every-lesson-counts-the-present-and-future-of-chess-in-education/#:~:text=Dana%20Reizniece%2C%20Deputy%20Chair%20of,make%20decisions%20and%20take%20responsibility>
- Gardiner, G. & van der Laan, L. (2025). A Typology of Educational Benefits Associated with Learning to Play Chess in Schools: Understanding Education Stakeholder Perceptions Towards School Extra-curriculum Improvement. *Improving Schools*, 27(1), 37-54. <https://doi.org/10.1177/13654802251362988>
- Giouvantsioudis, K. (2024). Chess as an Educational Tool. *Main Issues Of Pedagogy And Psychology*, 11(2), 148. <https://doi.org/10.24234/miopap.v11i2.37>
- Jankovic, A. & Novak, I. (2019). Chess as a Powerful Educational Tool for Successful People. *7th International OFEL Conference on Governance, Management and Entrepreneurship: Embracing Diversity in Organisations*, pp. 425-441. Zagreb: CIRU. <https://www.econstor.eu/handle/10419/196101>
- Kazemi, F., Yektayar, M., & Abad, A.M. (2012). Investigation the impact of chess play on developing meta-cognitive ability and math problem-solving power of students at different levels of education. *Procedia - Social and Behavioral Sciences*, 32, 372-379. <https://doi.org/10.1016/j.sbspro.2012.01.056>
- Milat, M. (1997). *The role of chess in modern education*. https://www.chesshouse.com/role_of_chess_in_modern_education_a/111.htm
- Sala, G. & Gobet, F. (2017). Does chess instruction improve mathematical problem-solving ability? Two experimental studies with an active control group. *Learn Behav*, 45, 414–421. <https://doi.org/10.3758/s13420-017-0280-3>
- Schulz, A. (2023). *Chess Theory from Stamma to Steinitz - Review and Interview*. <https://en.chessbase.com/post/chess-theory-from-stamma-to-steinitz-review-and-interview#:~:text=The%20year%201851%2C%20with%20the%20famous%20tournament,tournament%20chess.%20This%20is%20only%20partly%20true>
- Stegariu, V.-I. & Vornicu, M. (2020). The Benefits of Chess Practice on Students -A Meta-Analysis. *Filodiritto Editore – Proceedings*, 137–142.
- Zaščerinska, J., Aļeksejeva, L., Andreeva, N., & Zaščerinskis, M. (2014). Bi-Modal Nature of Language. *Electronic Journal Thought Elaboration: Linguistics, Literature, Media Expression: TELL ME 2013*, p. 114–126, Vilnius University.