

FIDE-ECU Chess in Schools Survey Report



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Author Note

Authors

The FIDE-ECU Chess in Schools Survey Report was written by Jesper Hall and Jerry Nash with contributions from the Survey Group.

Thanks to FIDE and ECU

The Survey Group wishes to thank the leadership of FIDE and the ECU for their interest in Chess in Education and for their ongoing support of this project. The cooperation between FIDE and the ECU provided the vision for this initiative and hopefully will serve as a model for future endeavors.

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Abstract

In the summer of 2020, FIDE and the ECU decided to join forces to take a survey on what Chess in Schools (CIS) looks like in the world. The information gathered would inform the next step, that of suggesting an operational, marketing, and financial plan for FIDE for Chess in Schools for 2021-2025. The group working with the survey, people from FIDE, ECU, and the Armenian Institute, chose the broader definition of Chess in Schools: chess in a school environment.

All 190 federations under the umbrella of FIDE were contacted, as well as major CIS-organisations, and asked to complete a survey of 17 questions in Survey Monkey to get a statistical foundation. The next steps were to structure the statistics, make a report, select especially interesting countries and projects, and make interviews with those involved to get a deeper understanding. Then a final report would be produced, which is this report. This final report will be presented in a seminar that includes the supervisory group of the project as well as members of FIDE EDU and ECU EDU. After that, the survey report will be given to a group responsible for creating the strategic plan for FIDE EDU for 2021-2025.

It is important to note that the survey does not fulfill the criteria of a scientific work, as most of our respondents made estimations. Since Chess in Schools most often is heterogeneous with no need to have control on a national level, the data required to create statistics will be more difficult to acquire. Still, this is the first overview that takes a step towards an understanding of the situation of CIS in the world.

The survey had 196 respondents, out of which were 135 federations, 39 CIS-organisations, and 22 private and public schools. Forty-two federations/countries did not respond.

According to the survey, there are today 25,600,000 children participating in chess activities in a school environment. Of that number, 15,000,000 of them are children in India, 5,000,000 in China, and 5,600,000 from the rest of the world.

There are 92,550 schoolteachers and 145,690 instructors from outside the school providing chess instruction and programming around the world.

Of those responding, 78 countries have qualifications for teaching chess in schools.

Every country and chess in schools' movement is different. One of the goals of this project is to identify similarities so that experiences and best practices can be shared. The divisions we have chosen for the different chess in schools' movements are: Highly Institutionalized Model, Diversity Model, and Less Institutionalized Model. The Highly Institutionalized Model is centralized with support and recognition from the government, often compulsory, with a national curriculum, and chess skills are often an important factor. The Diversity Model is decentralized with a variety of ways in how chess is used and how chess instruction is given. As the state does not give direct support, there is often a struggle for funding and for chess to receive recognition as a pedagogic tool. The Less Institutionalized Model has

two different subcategories. 1) Countries with underdeveloped chess in schools' movements struggling with little or no funding or materials, no curriculums, and no training instruction standards. 2) Countries with no federation involvement or centralization but a diversity of providers like charities, organizations, companies, and private initiatives.

Beside this division, there is another important category – the one between chess in schools' movements based on having regular teachers providing chess and those having chess instructors from outside offering chess at the schools. The different needs of those in these two categories can be enormous, just like the differences in the organization of the movement itself. Please note that many countries have a mix of these two categories.

The last category that FIDE must consider is that of the countries not answering the survey. That could most likely mean that there is no chess in schools at all, and FIDE must have a plan for those countries as well.

The survey group also conducted follow-up interviews with 24 countries with interesting situations and programs in order to identify key factors for success for the different categories, as well as to pinpoint the needs of the countries and the possible role of FIDE.

We recommend that FIDE plan for each category, reflect on how they can support positive CIS development, and create projects depending on the analysis.

Introduction

Background

The use of chess as a pedagogic tool is increasing around the world. This movement has developed in different directions depending on goals, context, and whether it is directed by federations, organizations, companies, chess clubs, schools, or private individuals. Such diversity can provide creativity and drive, but a problem emerges in that, without “a spider in the net,” there is no overview of the scope and content of such programming. This creates the risk that the wheel will be invented repeatedly as work is done in isolation and the experiences are not shared.

With this survey, the International Chess Federation (FIDE) and the European Chess Union (ECU) join forces to get an overview of Chess in Schools (CIS) in as many of the 194 countries under the FIDE umbrella as possible.

Overview and Definition of Chess in Schools

Around the world, a range of definitions exists for Chess in Schools (CIS) or Chess in Education (CIE). FIDE EDU and ECU EDU focuses on the definition of CIS/CIE as the use of chess as an educational tool. In this definition, chess is promoted due to its value for social and intellectual development. But other countries have a variety of goals for chess in schools that may include a primary focus on chess skills improvement and chess as a competitive activity. For the purposes of this Survey, we have chosen the broadest definition: chess in a school environment.

Due to the limitations of time and resources, the collection of information from the initial survey data and the follow-up interviews must be considered limited in nature. One of the recommendations to come out of this project is the need to conduct more in-depth research in the future. The existing data offers possibilities for additional study and analysis from which other recommendations may be drawn.

For example, the categories for Chess Education Models listed later in this report are not the only archetypes which can be deduced. Our hope is that the Survey, its analysis, and the recommendations offered provide a springboard for discussion for everyone interested in Chess in Schools. Additional recommendations for goals and strategies will be suggested by the Strategy Group already tasked by FIDE and the ECU to offer a broad approach to the development of Chess in Education worldwide.

Survey Project Goals

To provide an overview of the current state of Chess in Schools worldwide.

To suggest an operational, marketing, and financial plan for FIDE 2021-2025 concerning Chess in Schools.

Survey Group Goal: Study and Description of major Chess Teaching Models worldwide

- Including data referring on number of students, teachers, and schools involved and the evolution & positive effects, where available, SWOT analysis, critical aspects, etc.

- Leading models of the CIE program - optional, obligatory, extracurricular/club, transversal and mixed with other subjects. Most relevant curricula and teaching programs as number of hours per week, per year etc. age and class level.
- Financial models – funded by states, local authorities, schools, parents, federation, sponsors, or any combinations.
- Certification of teachers, instructors, and students.
- Connected system of activities, such as tournaments and chess events.
- Success stories of introducing chess in schools, mainly agreements with national and local authorities.
- Media and social media support and visibility.
- Feedback on the motivation and benefits (documented when possible) from students, parents, teachers, school managers, local and country authorities, sponsors, etc.
- Existing Materials – authorized textbooks and guides for teachers, books for students, apps, solving materials. Existing scientific studies on demonstrating the benefits of Chess in Education.

Working Process for the Survey Group

- Collection of Facts (Survey Monkey)
 - Survey website with explanations and survey questions in English, Spanish, and Russian.
 - Outreach to federations and CiS organizations by FIDE and members of the survey group.
 - Digital survey of 17 questions that offers the possibility of multiple responses from individuals and organisations from within a country.
- Structuring of Statistics
- Report 1 – Overview of Data Collected
- Analysis of Answers, pinpointing especially interesting countries or projects
- Interviews with key persons according to the pinpointed countries and projects
- Analysis of Interviews
- Final report
- Online seminar presenting the results and suggestions for FIDE for 2021-2025

Special Note on the Data and Statistics from the Survey

This survey is likely the largest of its kind with 196 respondents across 151 countries. Nevertheless, the reader should understand that the data collected is not precise from the standpoint of a researcher conducting a rigorous scientific study. Responders to the survey often offered their best guesses as to the state of chess in education in their country. Many of these estimates are likely to be underestimated while a few may be inflated. Still, the survey does represent a good first glimpse of the worldwide state of chess in schools.

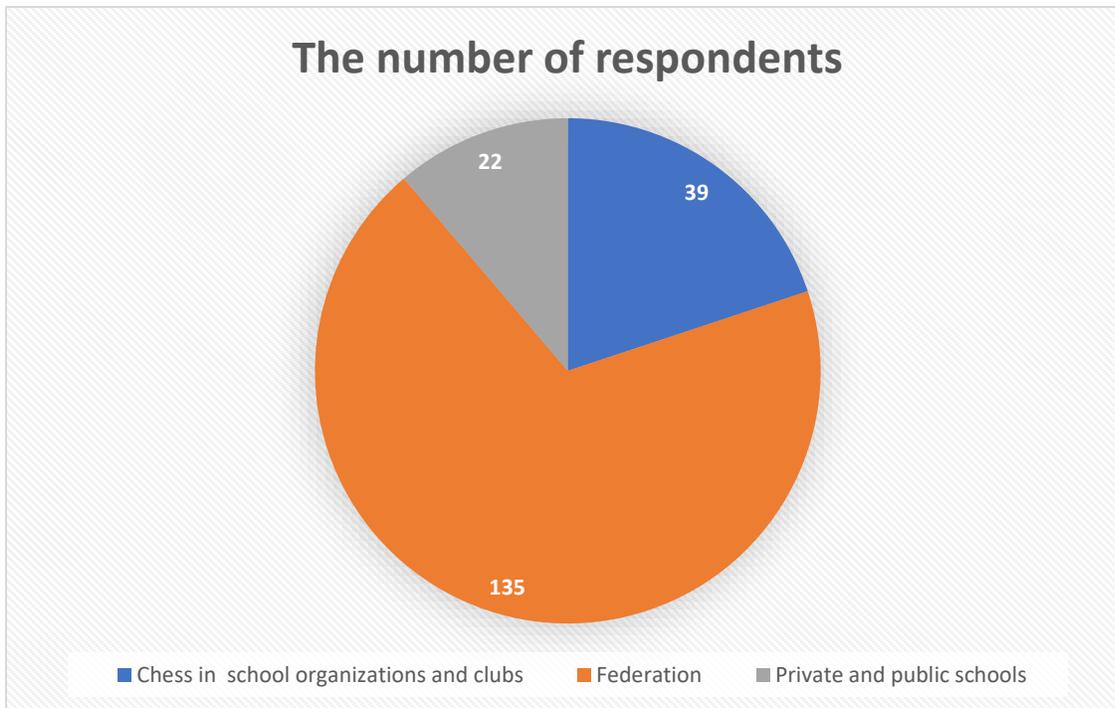
Overview of Data and Statistics from Chess in Schools Survey

Descriptive Data

Table 1: Overview of Responses

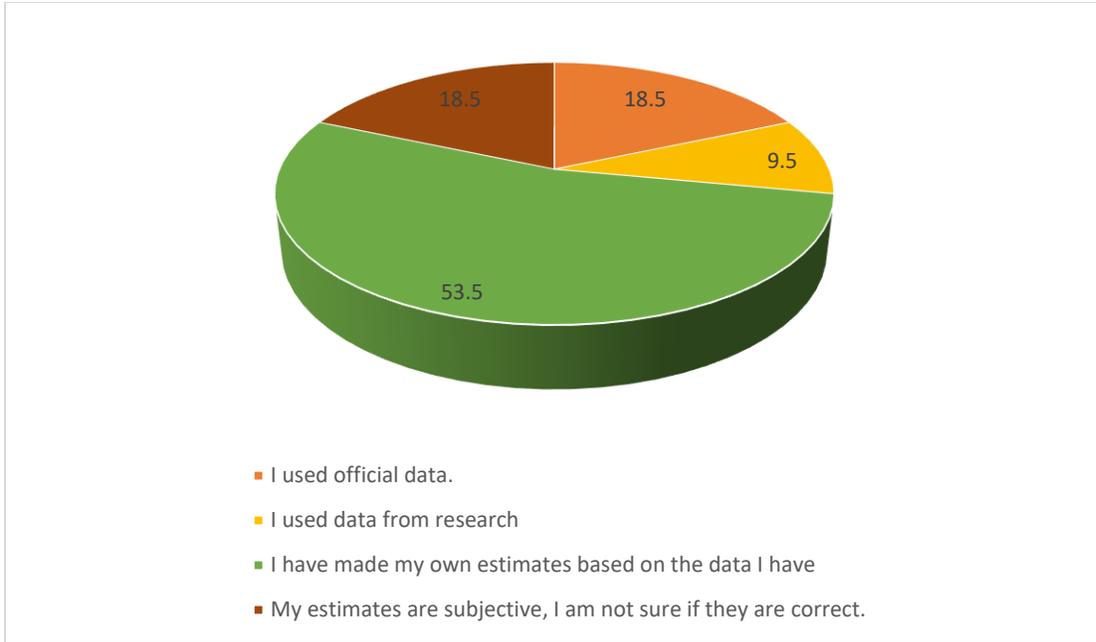
Number of Responses	196
Number of Countries Responding	152
Number of Federations/Countries Not Responding	42
Number of Students Participating in Some Form of Chess Activity in a School Setting	About 25,373,339*
Number of Countries with More Than 10000 Children Participating in Some Form of Chess Activity in a School Setting	37
Number of Teachers	About 92,550
Number of Chess Coaches	About 145,690
Number of Countries Using Software	98
Number of Countries with Qualifications for Teaching Chess in Schools	78
Number of Countries That <u>Used Official Data</u> to Estimate the Facts They Provided in This Survey	44
Number of Countries That <u>Used Data from Research</u> to Estimate the Facts They Provided in This Survey	20

* We should take into account that the vast majority of children participating in chess instruction in school are from India and China. 15,000,000 according to the survey response from India. 5,000,000 according to the survey response from China.

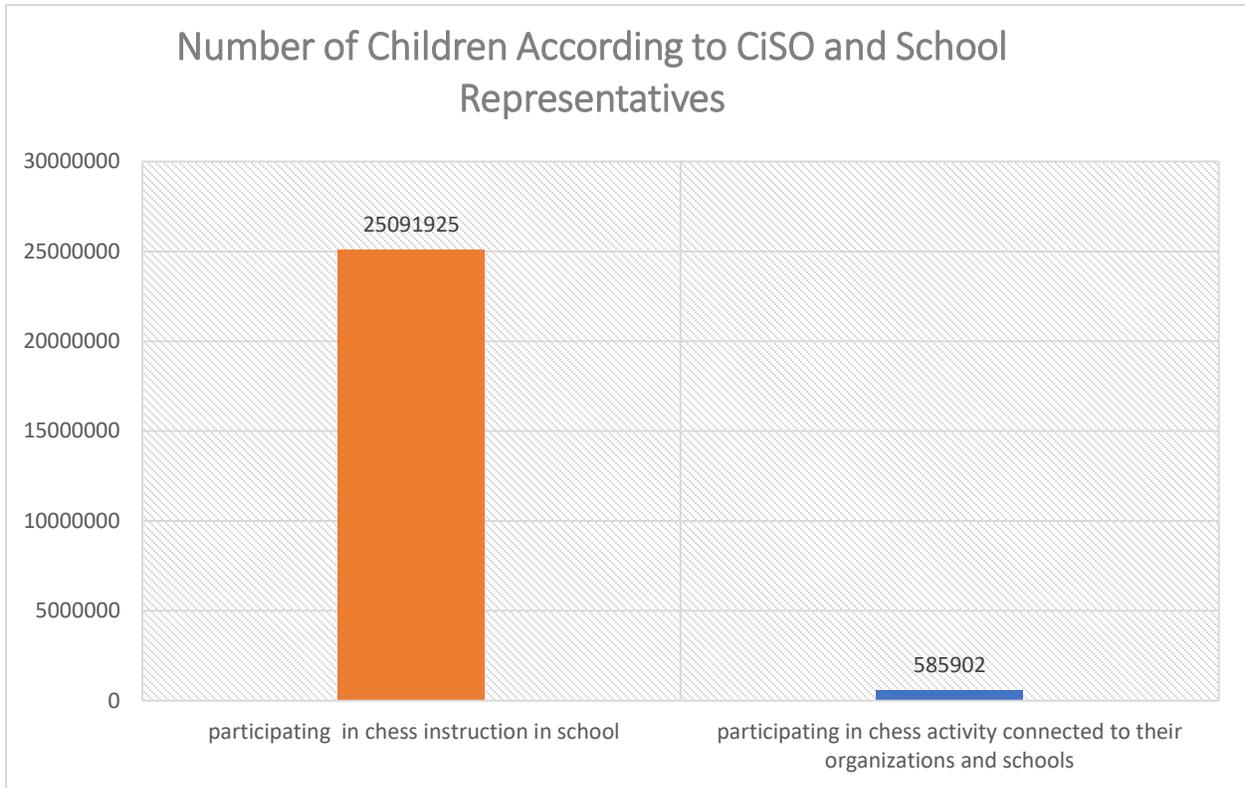


Graph 1. The Number of Respondents

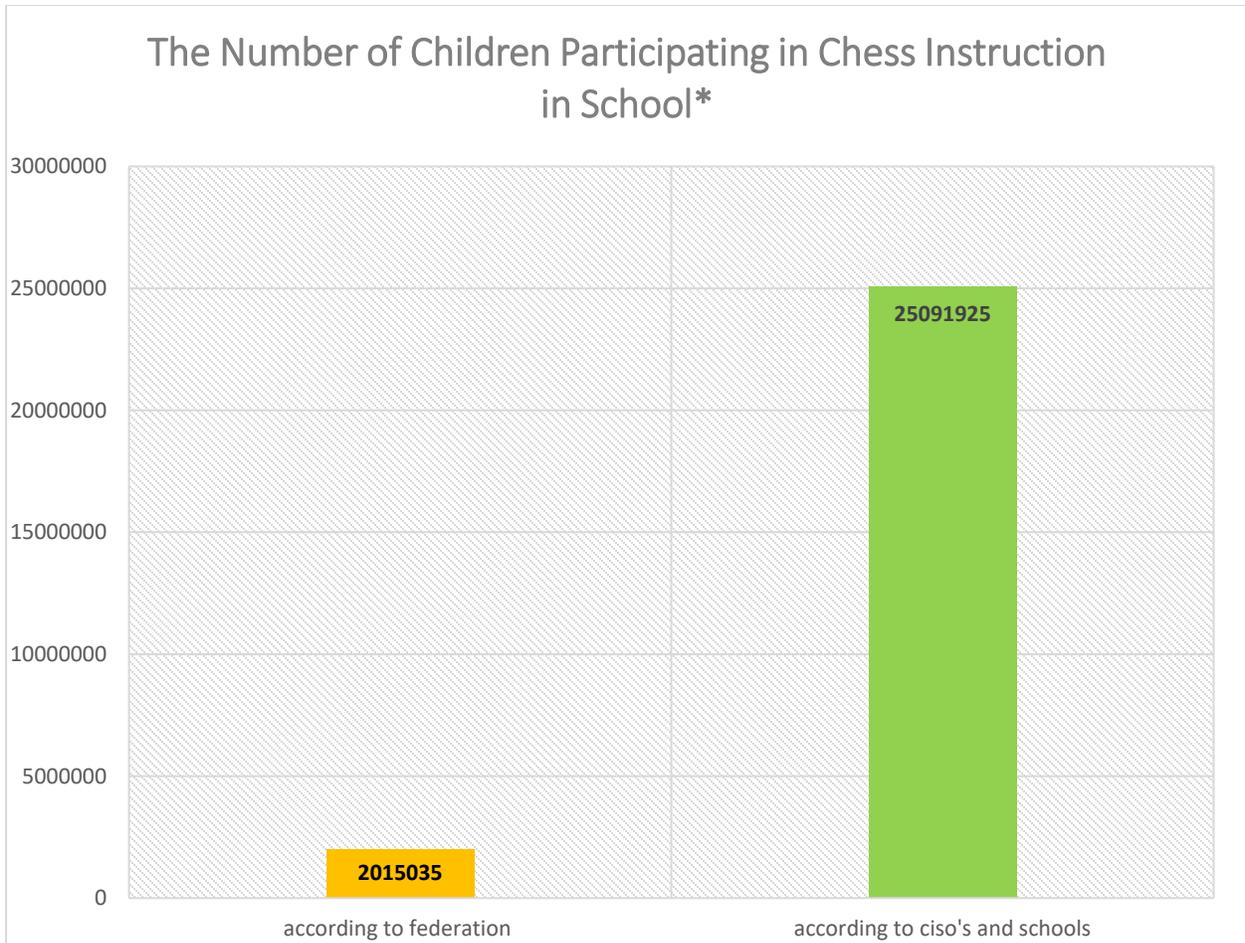
It is interesting that there are **135** Federation respondents among the 196 respondents, comprising the majority of the respondents. However, only a few of them used official or research data (**about 28%: Graph 2**). On the other hand, we can see that there are countries that used official or research data when providing information to this survey. This provides hope that there are even more individuals who are able and willing to search for, or conduct research, and compile official data on chess education.



Graph 2. Sources of Data Provided in the Survey by Federations



Graph 3. The Number of Children According to Chess in Schools Organizations (CiSO) and School Representatives



Graph 4. The Number of Children Participating in Chess Instruction in School

* We should take into account that the vast majority of children participating in chess instruction in school are from India and China. 15,000,000 according to the survey response from India. 5,000,000 according to the survey response from China.

Countries for Follow-up Interviews

Table 2: List of Suggested Countries/Projects for Follow-up Interviews

№	Countries	<u>Used Official Data to Estimate the Facts They Provided in this Survey</u>	<u>Used Data from Research to Estimate the Facts They Provided in this Survey</u>	With Qualifications for Teaching Chess in Schools	With More Than 10000 Children Included in Some Form of Chess Activity in a School Setting
1.	Algeria	√		√	√
2.	Andorra	√		√	
3.	Angola	√		√	
4.	Argentina	√	√	√	√
5.	Armenia	√		√	√
6.	Azerbaijan			√	√
7.	Bangladesh	√		√	√
8.	Bolivia		√		√
9.	Brazil	√		√	
10.	China			√	√
11.	Columbia		√		√
12.	Cote d'Ivoire	√		√	
13.	Croatia	√		√	
14.	Cuba	√		√	√
15.	Czech Republic	√		√	
16.	Denmark		√		√
17.	Georgia	√		√	
18.	Germany			√	√
19.	Greece			√	√
20.	Guatemala	√	√	√	
21.	Guyana	√		√	
22.	Hungary	√		√	√
23.	Honduras		√	√	
24.	Iceland		√	√	
25.	India	√	√	√	
26.	Indonesia		√	√	
27.	Iran	√	√	√	
28.	Israel			√	√
29.	Zambia	√		√	
30.	Kazakhstan			√	√
31.	Lesotho	√		√	
32.	Liechtenstein	√		√	

33.	Malawi	√		√	
34.	Mauritius	√		√	
35.	Moldova			√	√
36.	Monaco	√		√	
37.	Netherlands			√	√
38.	Norway	√			√
39.	Poland		√	√	√
40.	Portugal	√		√	√
41.	Qatar	√	√	√	
42.	Romania	√		√	√
43.	Russian	√	√	√	√
44.	Rwanda	√		√	
45.	Singapore	√		√	
46.	Slovakia	√	√	√	
47.	South Africa	√		√	
48.	Spain	√	√	√	√
49.	Sri Lanka			√	√
50.	Turkey	√		√	√
51.	Turkmenistan			√	√
52.	Uganda		√		√
53.	Ukraine	√			√
54.	United States of America		√	√	
55.	Uruguay	√		√	
56.	Vietnam			√	√
57.	Uruguay	√			

Green	Meets 4 Criteria	3 Countries
Blue	Meets 3 Criteria	13 Countries
Pink	Meets 2 Criteria	41 Countries

Countries with Qualifications for Teaching Chess in Schools

Teacher Qualifications

During our survey we identified **78 countries that have some type of teacher qualification** for chess education, but the main qualification procedures are not institutionalized. In other words, they do not have common principles, mechanisms, rules, or an assessment system. The majority of these countries conduct the qualification process with the help of national federations, training conducted by invited foreign trainers, or the national sports organization. There appears to be little control of educational chess in public schools and the vast majority of even qualified schoolteachers have poor knowledge of pedagogy related to teaching chess.

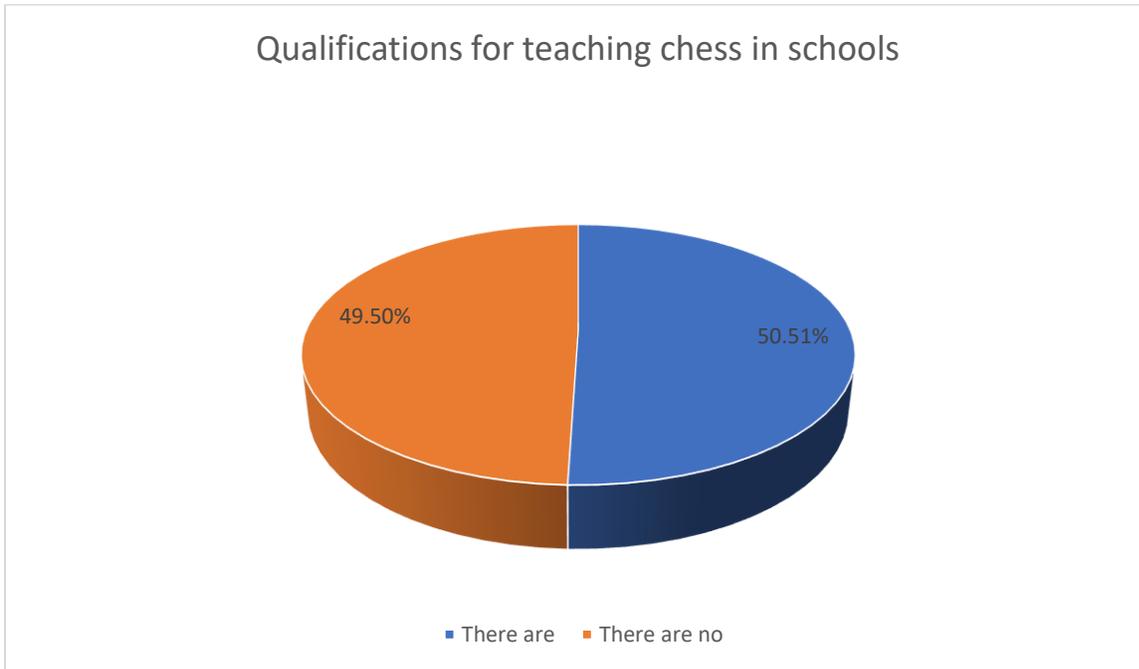
Table 3: List of Countries with Qualification

№	List of Countries with Qualifications for Teaching Chess in Schools
1.	Albania
2.	Algeria
3.	Andorra
4.	Angola
5.	Argentina
6.	Armenia
7.	Azerbaijan
8.	Bangladesh
9.	Belarus
10.	Belgium
11.	Bosnia and Herzegovina
12.	Brazil
13.	Bulgaria
14.	China
15.	Chinese Taipei
16.	Cote d'Ivoire
17.	Croatia
18.	Cuba
19.	Czech Republic
20.	France
21.	Georgia
22.	Germany
23.	Greece
24.	Guatemala
25.	Guyana
26.	Honduras
27.	Hungary
28.	Iceland
29.	India
30.	Indonesia
31.	Iran

32.	Iraq
33.	Ireland
34.	Israel
35.	Italy
36.	Kazakhstan
37.	Kenya
38.	Korea, South
39.	Kyrgyzstan
40.	Laos
41.	Latvia
42.	Lebanon
43.	Lesotho
44.	Liechtenstein
45.	Malawi
46.	Mauritania
47.	Mauritius
48.	Moldova
49.	Monaco
50.	Netherlands
51.	Paraguay
52.	Philippines
53.	Poland
54.	Portugal
55.	Puerto Rico
56.	Qatar
57.	Romania
58.	Russian
59.	Rwanda
60.	Serbia
61.	Sierra Leone
62.	Singapore
63.	Slovakia
64.	Slovenia
65.	South Africa
66.	Spain
67.	Sri Lanka
68.	Switzerland
69.	Syria
70.	Tunisia
71.	Turkey
72.	Turkmenistan
73.	United States of America
74.	Uruguay
75.	Venezuela
76.	Vietnam

77.	Yemen
78.	Zambia

Only half of the respondents list any qualifications for chess teachers in their countries. This is an issue that needs to be addressed.



Graph 5. Qualifications for Teaching Chess in Schools

Countries Using Software

The countries that do have teacher qualifications use different software compared to those countries that have no qualification systems for chess teachers. According to the answers of the majority of respondents, special programs have been created mainly for chess training and do not cover the total educational, pedagogical area of chess teaching.

We recommend creating a special chess teaching software taking into account pedagogical objectives, educational needs of learners, and professional needs of teachers.

The most frequently used software for chess trainers:

ChessBase
Lichess
Fritz
Chess.com

(See the extended list of software used in different countries in Table 5.)

Table 4: List of Countries Using Software

№	List of Countries Using Software
1.	Andorra
2.	Argentina
3.	Armenia
4.	Aruba
5.	Australia
6.	Azerbaijan
7.	Bahamas
8.	Bahrain
9.	Bangladesh
10.	Barbados
11.	Belgium
12.	Bolivia
13.	Bosnia and Herzegovina
14.	Brazil
15.	Brunei
16.	Bulgaria
17.	Cape Verde
18.	Canada
19.	China
20.	Colombia
21.	Costa Rica
22.	Croatia
23.	Cuba

24.	Cyprus
25.	Czech Republic
26.	Denmark
27.	Ecuador
28.	El Salvador
29.	Estonia
30.	Finland
31.	France
32.	Georgia
33.	Germany
34.	Guatemala
35.	Guyana
36.	Hong Kong
37.	Hungary
38.	Iceland
39.	India
40.	Indonesia
41.	Iran
42.	Iraq
43.	Israel
44.	Italy
45.	Jamaica
46.	Jersey
47.	Kazakhstan
48.	Kenya
49.	Korea, South
50.	Kyrgyzstan
51.	Laos
52.	Latvia
53.	Lebanon
54.	Liechtenstein
55.	Lithuania
56.	Luxembourg
57.	Malaysia
58.	Maldives
59.	Mauritania
60.	Mexico
61.	Moldova
62.	Morocco
63.	Nepal
64.	Netherlands
65.	New Zealand
66.	Norway
67.	Oman
68.	Panama

69.	Paraguay
70.	Peru
71.	Philippines
72.	Poland
73.	Portugal
74.	Puerto Rico
75.	Qatar
76.	Romania
77.	Russian
78.	Serbia
79.	Singapore
80.	Slovakia
81.	Slovenia
82.	South Africa
83.	Spain
84.	Sri Lanka
85.	Sweden
86.	Switzerland
87.	Tajikistan
88.	Tunisia
89.	Turkey
90.	Turkmenistan
91.	Uganda
92.	United Arab Emirates
93.	United States of America
94.	Uruguay
95.	Uzbekistan
96.	Vietnam
97.	Yemen
98.	Zambia

Software Used by Countries

Table 5: List of Software Used by Countries

№	List of Software Used by Countries	Number of Responses
1.	ChessBase	9
2.	Lichess	7
3.	Fritz	4
4.	Chess.com	4
5.	Zoom	3
6.	PowerPoint	2
7.	Tactics Trainer	2
8.	Learning Chess	2
9.	Chessmaster	1
10.	Houdini	1
11.	Chesster	1
12.	Rybka	1
13.	Lucas Chess	1
14.	Chess Assistant	1
15.	Chess Tactics for Intermediate Players	1
16.	Chess Tempo	1
17.	Chess Strategy	1
18.	Middlegame	1
19.	Chess Endgame	1
20.	Tactics in the endgame	1
21.	Endgame Turbo	1
22.	Swiss Manager	1
23.	School For Chess	1
24.	Tatedrez	1
25.	Kahoot	1
26.	ChessKid.com	1
27.	ChessMatec	1
28.	Chess24	1
29.	Chess School	1
30.	Kasparov Chess Foundation Europe	1
31.	Onlinechess.kz	1
32.	Youtube	1
33.	Skybe	1
34.	There is a special program written by the Ministry of Education of Tajikistan.	1

Countries with More Than 10000 Children Included in Some Form of Chess Activity in a School Setting

Table 6: List of Countries with More Than 10,000 Children in Chess Activities

№	List of Countries with More Than 10,000 Children Included in Some Form of Chess Activity in a School Setting
1.	Algeria
2.	Argentina
3.	Armenia
4.	Australia
5.	Azerbaijan
6.	Bangladesh
7.	Bolivia
8.	Canada
9.	Chile
10.	China
11.	Colombia
12.	Cuba
13.	Denmark
14.	Germany
15.	Greece
16.	Hungary
17.	Israel
18.	Jordan
19.	Kazakhstan
20.	Malaysia
21.	Moldova
22.	Mongolia
23.	Netherlands
24.	Norway
25.	Peru
26.	Poland
27.	Portugal
28.	Romania
29.	Russian
30.	Spain
31.	Sri Lanka
32.	Sweden
33.	Turkey
34.	Turkmenistan
35.	Uganda
36.	Ukraine
37.	Vietnam

Follow-up Interviews: Models for Chess Education

Source of Information

Members of the FIDE-ECU Survey Group conducted follow-up interviews with selected countries where contacts had been established.

Problems and Drawbacks to Research

- In some cases, findings cannot be generalized for the entire country as the information is received from one key informant.
- Some interviews were recorded (in Zoom) in other languages not familiar to the analysts. In those cases, analysts were limited to the written summary of the interview.
- Sampling problems occurred due to the limits of the quantitative research conducted prior to the qualitative research.

Therefore, the following analysis does not claim to be complete. The following is an attempt to summarize the information that was possible to gather.

General Characteristics of Chess Education Models

Summarizing the information received, the following paragraphs highlight the main characteristics of a Chess Education Model (CEM). Please note that within each characteristic there appears a contrasting range of features relevant to the context of the country's system of education, emphasis on competitive chess, etc. For example, the role of the federation also differs according to the model.

The Main Characteristics for All Models

- The purpose of teaching chess (sport - education)
- Form of study (compulsory - optional)
- Teaching qualifications (high-low) (number and qualifications of teachers)
- Availability of teaching material base (sufficient - insufficient)
- Funding (sufficient - insufficient)
- Management (centralized - decentralized)

Analyzing all the cases, as well as taking into account the comments of the researchers who identified the selection criteria for certain cases, we can divide the studied CEM's into three models according to the level of institutionalization.

- Institutionalized Model
- Diversity Model
- Less Institutionalized Model

Another way of determining a model could be based on the criteria of whether the person giving chess instruction is a teacher or an outside chess instructor. This impacts how programs are financed and whether instruction focuses on chess skills or social and intellectual development. This differentiation then also impacts training needs for teachers and chess

instructors. Teachers may need more training in chess skills. Chess instructors may need training in pedagogy. This distinction (a model based on the criteria of who delivers instruction) also has implications for FIDE's support role.

A fourth category could also be considered—that of “no model” due to the lack of data from countries that did not respond to the survey. The lack of data may indicate that nothing is happening in regard to Chess in Education.

List of Characteristics of Models Determined by Level of Institutionalization

The characterization of these models is descriptive rather than prescriptive. That is to say, the models are provided as a way of recognizing the local or regional context and are not intended as value judgements as to which provides the better goal for the development of Chess in Education.

The following models include the most common criteria. Most countries will not meet every criterion but will have several of these features. The goal is to match countries where they have the most in common with the criteria listed.

Institutionalized Model

- Government support
- Centralized management
- Public funding
- Often compulsory during the school day
- Systematized training of teachers
- A national curriculum and base resource educational material
- Organized tournament structure
- Chess skill development often an important factor

Diversity Model

- Less connection between teachers and chess trainers (which sometimes means less focus on chess development and more focus on social and intellectual development)
- Diversity of how chess is used in schools
- Diversity on who gives chess instruction
- Less centralized teacher training
- Inadequate funding
- Inadequate recognition from the education community (chess rarely established on a national level as an educational tool)
- Increased difficulty in acquiring comprehensive information

Less Institutionalized Model

- Lack of government involvement
- No developed curriculum
- No training practice standards
- No training of instructors and teachers
- Limited chess federation involvement

Other Variations of Characteristics within These Models

- Centralized vs. decentralized system of education
- Use of classroom teachers vs. outside instructors
- Focus on chess skills vs. chess for social and/or cognitive development
- Instruction within the school day as part of the curriculum vs. an after-school activity

Discussion of Characteristics of Models Determined by Level of Institutionalization

The Institutionalized Model can be described as having a government-supported curriculum, which is often optional, but which is nonetheless accepted by most public and private schools. For most highly institutionalized models, chess in schools takes precedence over electives. In many cases, it is considered desirable to keep optional learning to a minimum. (Santa Fe, Catalonia, and others). A vivid example of government-supported curriculum occurs in Armenia where chess is a compulsory subject in all public schools of the country.

This model is also characterized by special attention to the interdisciplinary teaching of chess, establishing links to other school subjects. There is also a desire to link sports and educational chess. The management of programs is most often centralized, mainly run by the government, the federation and, in some cases, some national universities. An Institutionalized Model is characterized by public funding; sometimes additional funding sources are added.

There is a mechanism established for the education and training of teachers for both general education schools and instructors of optional classes. An Institutionalized Model is also characterized by the availability of a base resource of educational materials. There is an understanding of the functions and role of chess in society. Programs for teaching chess in this model are often provided for persons with special needs and socialization difficulties. Tournaments and competitions are regularly held and funded.

The Diversity Model is characterized by less connection between teachers at public schools and chess trainers. There are separate schools where chess is included in the curriculum. Nevertheless, there is usually an inclusion of chess in schools' teaching programs. There are some schools where the chess teaching program is implemented successfully. Teacher training is less centralized, with less emphasis on the educational and pedagogical side. The intermediate model is also characterized by not always having sufficient funding, as well as not always having a sufficient training base. There is less connection between educational and sport chess. The Diversity Model includes cases characterized by some inconsistency or lack of information (for example, China).

The Less Institutionalized Model is characterized by a lack of centralization of the management of chess programs, heterogeneous mechanisms for teaching chess, uneven distribution of chess teaching, lack of constant and sufficient funding, lack of government involvement in chess education, and inconsistency in approaches to teaching chess. There are no developed curricula and approaches. There are no training practice standards. There are no developed mechanisms for training both schoolteachers and trainers. Often, teaching is carried out by inadequately qualified teachers. The federation usually does not have a significant contribution to chess programs in such cases.

We suggest that FIDE EDU offer support to countries which fit within each model based on the needs implied within that category.

Table 7: Model of Chess Education in Countries That Participated in Follow-up Interviews

institutionalized Model	Diversity Model	Less Institutionalized Model*
Andalusia (Spain)	Buenos Aires, (Argentina)	Finland
Aragon (Spain)	San Luis (Argentina)	France
Armenia	Andorra	England
Catalonia (Spain)	India	USA
Santa Fe (Argentina)	China	Zambia
Uruguay	Singapore	
	Iceland	
	Sweden	

The table above provides generalized information about the model of chess education for each of the countries that participated in the follow-up interviews.

* In the Less Institutionalized Model, at least two types of countries may be identified. One type includes those countries struggling to develop any kind of chess in schools program. The other type includes countries where chess in schools may have significant development already but the federation has less involvement, may be more focused on classical chess, and may encourage chess in schools (chess in education) to be developed by charities, private organizations, and/or for-profit companies.

Gender Characteristics of Chess Learners by Models Based on Level of Institutionalization

According to the study, the gender characteristics of chess learners for the Institutionalized Model for whom information was obtained are characterized by parity for boys and girls. In particular, the survey showed that for Andalusia, Catalonia, Santa Fe and Uruguay, the number of boys and girls is balanced: 50% to 50%.

For the Diversity Model, the situation is not uniform: In Iceland and Sweden, the number of girls and boys is equal. In Buenos Aires, there is parity in general education schools, but in sports chess, the male gender prevails. Boys prevail in Singapore and Andorra; girls are often not interested in chess.

As for the Less Institutionalized Model, the male gender prevails where it was possible to obtain information: In Finland there is a 70% to 30% percentage in favor of boys. In Zambia 60% to 40%.

Positive aspects of Chess Education Models Based on Level of Institutionalization

For the Institutionalized Model of chess education, the government's **support** for the massive introduction of chess in schools, including financial support, is mentioned as an important component of success. In this regard, the fact of the existence and implementation of the developed chess education program is important.

An important characteristic of the Institutionalized and Diversity models is the **optionality** of the developed and implemented chess program. According to the respondents, a flexible program with a range of opportunities for each school is the key to the success of chess education.

The **inclusiveness** of chess education, namely special attention to children with disabilities, is also one of the characteristics of a successful model of chess education. **Expanding the inclusiveness** of the chess education model can serve as a locomotive for further success.

The introduction of chess into society, as an **integral part of culture**, is also an important component of the success of chess education. The population's acceptance of the need for chess education (understanding the role of chess, creating a special atmosphere in society in relation to chess, raising the reputation of chess in society) creates the conditions for the model to become successful in the future. Therefore, special emphasis is placed on the creation and implementation of **the motivation** of chess education in society, as well as on the special **motivating role of the teacher**, as a person who creates motivation for students.

Several respondent comments emphasized the importance of **the training of a teacher** (whether a schoolteacher or a chess coach), both as a professional and as a person. The respondents also mentioned the importance for both teachers and students of introducing chess from childhood, for example, organizing chess instruction, starting from kindergarten, when a child begins to develop his/her abilities.

Follow-up Interviews: Identifying the Main Problems of Chess Education

Respondents mentioned a number of problems that need to be solved in order for a model of chess education to be successful. All the problems mentioned by our respondents can be roughly divided into three groups: **political, material, and situational**.

The **political** problems include the lack of governmental programs for teaching chess in schools. With regard to the success of a particular model, this is perhaps one of the most important success factors. In the absence of support from government and other official bodies, it is difficult for chess education to develop in any country. An important factor is also the interaction of national federations and institutions involved in chess education. The lack of this interaction, and sometimes even conflicting relations, as well as the lack of a common vision of the mission of chess education, can seriously undermine the possibilities for the success of one or another model of chess education.

The **material** problems are most often characteristic of models where there is no government funding for programs. The lack of funding influences the teachers' salaries, reduces motivation, and reduces the possibilities of technically equipping the chess education process (for example, providing internet connections, creating a training base, etc.). It also reduces the possibility of wider distribution of chess across the school population.

The main **situational** problems, according to the research results, are as follows:

- Insufficient attention to the needs of teachers, because it is the teachers who are the main link that ensures the success of the introduction of chess in society
- Lack of attention to the training of teachers, taking into account their needs
- Insufficient attention to creating motivation among school administrators, students, and teachers, especially in countries where chess is not initially part of the national culture (for example, in the case of China)
- Lack of coordination between schools and chess education outside the school
- Lack of linkage between sports chess and educational chess
- Lack of attention to advanced and talented students, problems of producing new chess players in the model

Follow-up Interviews: The Role of FIDE

Based on the data obtained, the respondents consider FIDE as the main sponsor for development of the chess education model. This applies to all three models.

For Institutionalized and Diversity models, FIDE's potential for helping with the development of chess education is considered in the area of the development of support for teachers' training.

This help may include the following:

- Provision of feedback to teachers
- Identification of teachers' needs and suggestions, for example, organizing a forum for the exchange of ideas between schoolteachers
- Promotion of outstanding teachers of the world and their involvement in the process of introducing educational chess
- Introduction of preschool chess education
- Identification of reference schools with good chess teaching practices and disseminating their experience
- Distribution of training materials, advertising brochures, videos in different languages

Respondents pointed out the need to work with national governments to spread chess education and sponsor teacher training as well as to build bridges between educational and sports chess.

The issue of the necessity for certification was perceived ambiguously by different respondents. The issue of certification, in the opinion of some respondents, should be assigned to the national Ministries of Education.

In some cases, there was a proposal of the necessity for additional interaction between FIDE and local state bodies in order to avoid conflicts that could hinder the development of chess education (Singapore). The Diversity Model was characterized by an emphasis on material assistance, for example, in sponsoring technical means to conduct online classes with outstanding teachers (India). Helping disadvantaged Asian and African countries, as well as a desire for help in transferring educational excellence, was noted in China.

For the Less Institutionalized Model, the following suggestions were more relevant:

- Lobbying the government to recognize chess as a school subject (including at the European Union level)
- Accreditation of training courses
- Development of publicly available training programs
- Provision of training courses online
- Help in popularizing chess, advertising for teachers, schools, politicians
- Holding a conference with UNESCO for politicians, educators' organizations and others
- Financial support.

The United Kingdom respondent was somewhat skeptical about the possible role of FIDE in helping to promote chess education.

Recommendations and Factors for Success

Survey Group Recommendations

The Strategy Group is currently working on a plan for FIDE EDU for 2021-2024 based in part on the findings in this survey. The survey group offers the following recommendations to this EDU group:

- **Fund additional research.** The Survey provides a foundation for future research and investigation. Here are some **possible projects** to investigate:
 - India: how has chess in schools become such an important activity?
 - China: how has chess in schools become such an important activity?
 - To conduct a survey among different key informants in the context of the same research questions
 - To have an opportunity to find the right key informants for the survey
 - To have access to the documents, laws, handbooks, programs related to chess teaching and to conduct document analyses
 - To have some video lessons, recorded classes, and conduct content analysis.

Here are some **questions to try to answer** with more thorough studies:

- How have countries reached success?
 - How can successful models be replicated in other countries?
 - Why are some countries failing?
 - How can we support countries with no or less developed CIS?
- **Define the needs for the different categories/models** in the survey by making a SWOT-analysis of each and after that creating a priority list of projects.
 - **Define the role of FIDE** according to CIS.
 - **Analyse successful CIS projects** so they can be presented and replicated.
 - **Find partners of high credibility** in the education community for an expansion of CIE.
 - **Explore how FIDE can bring in money to CIS** around the world and identify what is needed to make this search for funding successful.

Reflection: Key Factors for Success

The more successful Chess in Schools countries can be divided in to two categories:

- **Sportive-Educational chess in schools**, but more sportive than educational.
- **Pure educational chess** (although in some cases connected with competitive chess).

The sportive- educational method involves many chess instructors and few schoolteachers. The pure educational method features more regular teachers.

As many CIS movements in The Diversity Model and The Less Institutionalized Model are struggling with recognition from the government, we believe that category B) is the one to develop and give more attention. Beside the advantage of getting recognition, it is also easier to attract sponsors when the goals are social integration and cognitive development, rather than chess strength.

In the interviews, the following key factors for success were identified:

- **Good communication**, addressed to the citizens in general, to correct misconceptions about chess.
- Success in **convincing the authorities** of the great power of chess as a pedagogical tool to improve the quality of educational service.
- **Celebrities and/or influencers** outside the chess community who serve as ambassadors for chess in education.
- **High level of satisfaction of the first teachers and school principals** involved who act as advocates to other colleagues.
- **A larger national event as the driving force** of the CIS movement. This can be a chess tournament, festival, chess day at the school, or another type of chess-related project.
- **Chess instruction that is transversal/interdisciplinary**, as the project then grows faster because it does not require specific hours for chess. Many of the schools that start this way then add a specific hour of chess, with pedagogical objectives such as reasoning, memory, decision making, expression of reasoning, etc., through the learning of the game. Moreover, there is nothing compulsory about this method. After a common training for all, each teacher or school can use chess as he/she prefers: in mathematics, language, emotional intelligence, creativity, physical education, foreign language, technology...
- Continuous, **annual training** organized by a coordinating group.
- **Good contact with those in Departments of Education responsible for innovation** as in many countries educational chess programs depends on their support. This is important because when there are economic cuts, they do not usually affect innovation, which is considered a priority.
- A **web page and forum to exchange materials, experiences, and opinions** accessible by the teachers involved.
- **Inter-school events** based on chess are frequent, and events with the families of the youngest children.
- **Competent and convinced people as project managers**. People who are passionate about the project!

Appendices

Appendix 1: Structure and Working Groups

The survey is part of a project that also includes two other working groups, one that analysed a possible worldwide certification system for Chess in Schools, and another group that analysed possible digital platforms to use for Chess in Schools.

The overall project was led by a supervisory council that includes:

Arkady Dvorkovich - FIDE President

Bachar Kouatly - FIDE Deputy President

Judit Polgar - FIDE Honorary Vice President

Smbat Lputian - Chairman of the FIDE Education Commission

Leontxo Garcia – FIDE Educational Advisor

Dana Reizniece-Ozola – ECU Vice President and Project Supervisor

Jesper Hall - Chairman of ECU Education Commission and Survey Project Manager

John Foley – Certification Group Manager

The overall project manager was Dana Reizniece-Ozola.

The survey working group included:

Jesper Hall (Leader) SWE

Jerry Nash (Secretary) USA

Leontxo Garcia ESP

Dijana Dengler B&H

Serob Khachatryan ARM

Maria Zaslavskaya ARM

Kristine Tanajyan ARM

Nune Gevorgyan ARM

Survey Website - <https://cissurvey.com/>

Appendix 2: List of Survey Questions in Survey Monkey

Welcome to the FIDE-ECU Chess in Schools Survey

Thank you for participating in this survey. Your feedback is important. Your insight will help us to gather reliable information on the current state of chess in schools as a basis for future development strategies.

If a question should be answered only by someone representing a federation, the word "Federation" will appear at the start of that question. If a question should be answered only by someone representing a Chess in Schools Organization, "CiSO's" will appear at the start of that question.

*1. Respondent is -

First and Last Name

City/Town

State/Province

Country

Email Address

*2. You are completing the survey on behalf of which of the following?

The National Federation

A Public or Private School

A Chess in Schools (CiSO's) Organization or Club

Other (please specify)

3. (Federation) How many children participate in some form of chess activity in a school setting in your country? (See Estimate Guide)

4. (Federation) How many children participate in some form of chess instruction in a school setting in your country? (See Estimate Guide)

5. (CiSO's) If you feel that you are able to do so, please estimate how many children participate in some form of chess instruction in a school setting in your country. (See Estimate Guide)

6. (CiSO's) How many children participate in some form of chess activity in a school setting connected to your organization?

7. (CiSO's) How many children participate in some form of chess instruction in a school setting connected to your organization?

8. (CiSO's) Of these students (in Question 7), how many are in the age group 2-6? You may enter a percentage or answer "I do not know."

9. (CiSO's) Of these students (in Question 7), how many are in the age group 7-12? You may enter a percentage or answer "I do not know."

10. (CiSO's) Of these students (in Question 7), how many are in the age group 13-18? You may enter a percentage or answer "I do not know."

11. (Federation) How many classroom teachers teach chess in your country?

12. (CiSO's) How many classroom teachers teach chess in your organization/school?

13. (Federation) How many chess coaches/tutors teach chess in your country?

14. (CiSO's) How many chess coaches/tutors teach chess in your organization/school?

15. Please describe how you estimated the facts you provided in this survey.

I used official data.

I used data from research (specify below).

I have made my own estimates based on the data I have.

My estimates are subjective, I am not sure if they are correct.

Other (please specify) or Source of Research used (answer #2).

*16. Is software being used in teaching chess in your schools?

Yes

No

Comments (optional)

*17. Are there any qualifications for teaching chess in schools?

Yes

No

18. If yes, please describe the nature/system of the qualification. (Who sets the requirements? What are the requirements? What is the process to fulfill the requirements?)

19. List some important chess organizations or other sources in your country/region that could also provide accurate information about chess in schools. also provide accurate information about chess in schools. (They might be invited to participate in the survey.)

20. Is there a person that you would recommend for a follow-up interview about chess in schools in your country? If yes, please provide their name and contact information.

Appendix 3: Follow-up Interview Questions

Dear Participant,

Your opinions about chess in schools in your country, as well as about world chess school activities, are very important to us. Please feel free to provide as much detail as possible.

1. Please describe the place of chess in the schools in your country (is it a sport, a component of compulsory or voluntary education).
2. How is chess education generally organized in your country (in educational institutions, through part-time training, in sports clubs, private initiatives)? What financial sources do they use, are they sufficient for organizing these activities (please interpret/ justify your opinion)?
3. What features of your country's chess in schools can you mention? Please pay attention to the question of which age group students are most involved in this process. Please describe their gender, social and economic situation, and place of residence. Describe everything that you consider important in terms of the characteristics of students' participation in chess in schools. In your opinion, what are the motivations of students to learn to play chess?
4. How do you assess chess in schools in your country - what are the main achievements, strengths and weaknesses, omissions? And what are the main steps you need to take to develop chess in schools in your country? Are there any prerequisites that contribute to this process, and what is the most challenging obstacle in this process? What role does FIDE play today, and what could be the role of FIDE in this process in the future (more details, please)?
5. If possible, identify organizations, schools, and individuals providing chess in schools in your country that could share their teaching experiences and methods.
6. What parts of your chess school activities do you consider important for the world to know about? Could you describe the pedagogic idea, the pedagogical tools, methods, and teaching materials that are currently used in chess in schools programs in your country, organization, or school? If you do not have such information, could you specify/ indicate electronic, documentary sources where we can get acquainted with the most widely distributed educational materials and chess tools used in your country?

Appendix 4: Overview of Comments from Follow-up Interviews

Respondents' Comments on Various Aspects of Chess Programming.

“Compulsory introduction of chess in school is not widespread.”
(Director of the Study Program, Andalusia)

“Our program includes students from all social and economic levels, and we give priority to the most vulnerable people. Four years ago, starting from the scratch, we achieved a very high level of satisfaction in the educational community. Many schoolteachers are implementing their own initiatives to complement our guidelines. We have created a chess research group.” (Uruguay)

“The evolution of our chess school is very striking: at first it was intended only for bright young talents, but then we realized that this could be very good solutions for boys (and some girls) that were excluded from the mainstream school, because the educational system did not cope with them. A typical example is a 15-year-old poor boy who cannot read. Chess gives them a social and emotional context in which they feel happy and boost their self-esteem. Chess changes their lives.” (Director of the Educational Chess Program, San Luis, Argentina)

“Chess is a huge force for social transformations, as a tool for coexistence, decision-making in normal life.” (Director of the training program, Andalusia)

“Educational chess is very attractive to the vast majority of students when the teachers are well trained. Many students say that chess teaches them how to think ... about 10% of students studying chess have also become chess players.” (Curriculum Director, Aragon)

“Our chess instructors are pedagogically trained (as are music teachers) and many of our schoolteachers are taught the basics of chess. When our chess instructors discover any cognitive or emotional problems through the chess exercises, they report it to the schoolteachers.” (Santa Fe)

“Our main pedagogical principle is that chess is a game, and games are a very important pedagogical resource, at least since the 19th century. Educational games are also a very important element of innovative education in various fields: cognitive / cognitive, emotional, creative.” (Uruguay)

“Many cases of dramatic positive changes in the lives of many people have been due to chess.” (San Luis)

“The K2-Kindergarten program is a good way to introduce children to chess.” (Singapore)

Respondents' Ideas on the Further Development of Chess Education in Their Countries.

We are starting to introduce interdisciplinary chess with mathematics also for children 6–8 years old. We are launching a special program to promote healthy nutrition for children through chess.

We are trying to introduce chess as an optional subject into university pedagogical training. (Argentina)

Our trend is a system where schoolteachers will give chess lessons and chess instructors will support and supervise. Our goal is to make chess a part of university pedagogical training. (Uruguay)

Establish contacts with schools from other countries to share and learn from them, local authorities in China to organize more chess events to promote this opportunity, and chess clubs to cooperate with them. (China)

The idea of the Indian Chess Federation is to introduce all students to chess. (India)

We will make a kind of "chess passport". We have not decided if it will be badges or other things (since judo has belts, archery has arrows, and so on), we are still thinking about the best product for children. (France)

Appendix 5: Summary of Follow-up Interviews by Country/Region

Andorra – Primarily focused on chess as a sport. Teachers have limited connections with the chess program at school. Educational chess has been introduced in almost all schools, without an emphasis on chess ratings. For sportive chess – classes are held in clubs - additional training is conducted by the Federation. There is a well-known old international tournament that receives funding from Monobr, from FIDE, and a private school. The region has chess books and a website.

Argentina (Buenos Aires) – Primarily focused on chess as a sport. There is no official program for the introduction of chess in general schools throughout the country, but in Buenos Aires chess is included as part of the compulsory curriculum. The Buenos Aires program includes 90 schools plus 10 extracurricular programs. There is no interdisciplinary chess, In addition to the official program are many private schools and associations and, of course, chess clubs. The region has several initiatives related to educational chess and a lot of teaching materials about the game. There is a website, but problems exist with internet connections. The salaries of chess instructors and schoolteachers are equivalent.

Argentina (San Luis) – Sports, education, and culture, are supported by the Sports Committee and the Ministry of Education. But the educational chess program is organized and funded by the Universidad de La Punta. Chess is compulsory in education, and as a sport chess can be played in many associations and clubs at any age. There are social applications for people with special needs, such as the blind or prisoners, and a special school for young chess talents.

Argentina (Santa Fe) – Educational and sport chess have been part of the curriculum in the state schools for the past two years. Chess is integrated with mathematics. Private schools have optional chess programs with special seminars. This whole system is associated with educational competitions, weekly in big cities, weekly or monthly in other places. Talented chess players are selected in special programs. Preliminary chess (pre-chess) programs exist for children 6-8 years old. Many programs feature interdisciplinary chess. Chess programs are government funded but also receive some private investments. Many schoolteachers use chess additionally with interdisciplinary methods. Information and teaching materials exist on the official website. Chess instructors have pedagogical training and many of the schoolteachers are taught the basics of chess. About 90% of educational chess activities are included in the curriculum.

Armenia – Educational and sport chess are part of the culture. Chess is a compulsory educational subject. It is part of the curriculum in all state schools and there are defined specific and disciplinary competencies directly related to the procedures and knowledge of chess as a school subject. The whole system of chess instruction is associated with educational competitions. Chess in schools is supported by the Ministry of Education and the Armenian State Pedagogical University (ASPU). The educational chess program, teaching materials (handbooks, guidelines for teachers and children) are created by the “Chess” Scientific Research Institute (CSRI) and Chess Academy. The goal of the institute is to highlight the educational value of chess subjects in chess education in public schools, the cognitive abilities of the child through chess, and the impact of chess education on the formation of the most important competencies of the 21st-century student. Pedagogical methods and teaching materials are on the official CSRI website. Chess pedagogical training and certification qualification events are held annually. The main advantages of Armenian

chess in schools are its systematization, high level of control, and permanent feedback from all stakeholders: teachers, learners, experts, parents, headmasters.

UK – The English federations does not focus on chess in schools. Instead, they have 4 main organizations: Chess in Schools and Communities (CSC, a charitable organization), UK Chess Challenge, EPSCA (Chess Association of English Primary Schools), and Chess for Schools. The former is in charge of issuing chess instruction. The second one organizes large tournaments. There are about 300 private chess instructors with their own companies that work with schools. Every organization has a different approach. CSC works with poorer socio-economic areas, while private teachers tend to work with private schools or more affluent socio-economic areas. Every organization and individual tries to raise money from a variety of sources. CSC has a curriculum, prepared lessons, instructor courses, and a digital setup with Chesskid. Private instructors have their own style of work and their own material.

Zambia – Chess is primarily a sport activity. Tournaments are infrequent, dependent on sponsorship. Zambia Schools Chess organizes an annual series of tournaments starting at the zone level and going through districts, sectors, provinces and ending with a national tournament for teams from each province. Chess training exists primarily to develop chess skills and in preparation for tournaments.

All chess activities are done after school or on weekends. All chess is optional. All the lessons are taught by teachers or other school staff using chessboards / sets and occasionally YouTube videos. the family is the main source of funding for all local chess events. Sometimes a wealthy person or a business sponsors an event. The national federation will fund its teams' travel to international tournaments, but they often lobby for government assistance.

India – Chess is primarily a sport activity. After-school lessons are available for additional fees. Many chess academies, with secondary educated chess coaches, cooperate with schools. There is no desire for chess as an educational tool. There are no chess textbooks readily available to students; they use publicly available ones. Chess has a high reputation and there are advanced chess schools.

Iceland – The majority of schools have chess as part of the school system. Chess videos are made available by the federation. Many high schools have chess. The chess teacher is paid by the school. The government finances tournaments and teacher training. More regular schoolteachers are needed to be able to expand chess to other schools. Many tournaments are scheduled for students.

Spain (Andalusia) – Chess is primarily a sport activity. It is supported by the government with an official non-compulsory chess program. 60% of scholastic chess is an interdisciplinary type of teaching. 15% of chess is as a compulsory subject and 15% is as an optional subject. Schoolteachers are trained, mainly for interdisciplinary chess, with state funding. Chess is very inclusive, it covers all social and economic levels, public and private schools, special needs. There are Internet materials and websites.

Spain (Aragon) – Chess is a government-supported sport with an official optional chess program in schools. Chess is viewed as a transversal and interdisciplinary instrument. About 100 schools

have chess with their own teaching hours. Teachers are prepared by an educational program. The chess federation and clubs are in charge of chess instructors (optional chess). Funds are insufficient but there are successes. The educational chess program is viewed by the regional government as "innovative education." Teachers can share their experiences and there are websites.

Spain (Catalonia) – Sport and educational chess are included in the curriculum as an optional educational tool. The official program is implemented by the Government of Catalonia, the Universities of Girona, Lleida and Tarragona, as well as the Catalan Chess Federation. The training of schoolteachers is carried out by the Catalan Chess Federation at four levels. Extracurricular chess instructors come from some private chess clubs or from the five private companies involved in extracurricular chess. Educational chess is viewed as universal: if a school uses it as an educational tool, then it is for all students. A website is available for information.

Singapore – Chess is rather an educational tool than a sport. Chess is part of the primary and kindergarten curriculum. In schools, chess is usually offered as a collaborative learning activity. There are several very well-established chess schools and each school must find a niche for itself in which it can succeed and win medals in inter-school tournaments. The Singapore Federation is the official body of chess in Singapore. It organizes championships for primary and secondary schools and national championships for men and women. They offer courses all year round as well as during holidays and organize other chess tournaments from one-day blitz and rapids to one-week tournaments with classic time. There are several clubs in the chess community. One adult league was played thanks to a sponsor who paid attractive prizes. There are about two to three private chess "academies," and different levels of chess schools.

USA – The United States has a decentralized structure of education and a decentralized organization for the federation. Chess is generally not included in the daily school curriculum. It is most widespread in private schools and in individual state districts, where there is a local champion in such programs. Most chess programs are optional, after-school chess clubs. The inclusion of chess in the school curriculum is up to the local school district. Most of the activities of the chess club are financed from private sources through grants (non-profit organizations) or contributions from participants. Each program is individual. There are no standard practices, curricula, or approaches.

China – In large cities, chess is connected to education. In other schools, chess is an extracurricular activity. The Ministry of Education and the local authorities provide financing. Chess is emphasized in kindergarten. There is a high level of satisfaction among kindergarten teachers. In other grades, chess clubs provide instruction. Chess is recognized as a sport by the Chinese Olympic Committee.

Uruguay – Chess is popular as a sport. Programs exist outside of school for children with special needs or in difficult areas, for the elderly, for people with disabilities, or for those in prisons. In schools, chess is always included in the program. Chess education is considered a universal right and is funded by different branches of government. The competency-based education is divided into five levels: a) Knowledge of the basic rules b) Forecasting ability c) Recognition of patterns d) Recognition of procedures for applying what has been learned in the stage of pattern recognition e) Heuristic design, automation and holistic analysis. They promote a historical view of chess

because it helps children understand the evolution of chess. Preference is given to the game element over the academic and sports, which allows the adaptation of the chess program to prioritize interdisciplinary values.

Finland – Chess tournaments are organized at a variety of levels: student championships, school team championships, and local tournaments for private chess teachers. The generally agreed main goal is teaching chess to develop academic skills and skills of the 21st century. This is approached in different ways, with different methodologies. A book with 10 lessons is available. The current level of grant funding is insufficient.

France – The national federation does not organize scholastic chess. This is carried out by companies working in schools, individual entrepreneurs, associations that implement cultural and recreational programs, private or public schools with their own educational programs, and national associations. Sports in schools and secondary schools are managed by the Ministry of Education. Some chess programs are implemented by teachers' associations, including school tournaments.

Sweden – A system of tournaments, including online tournaments, exists. 75% of chess instruction occurs during school time and 25% of programming is after school. Programs are a mixture of Optional, Compulsory and Extracurricular Clubs. The primary goal for instruction is teaching chess to develop academic skills and 21st century skills. Chess is not usually combined with other subjects. There are prepared materials for lessons, exercises, and clubs along with a web page with lessons and exercises. Chess programs are funded by the state. The federation fully controls the training of chess instructors.

Appendix 6: List of Countries Responding

Nº	List of Countries Responding
1.	Afghanistan
2.	Albania
3.	Algeria
4.	Andorra
5.	Angola
6.	Antigua and Barbuda
7.	Argentina
8.	Armenia
9.	Aruba
10.	Australia
11.	Austria
12.	Azerbaijan
13.	Bahamas
14.	Bahrain
15.	Bangladesh
16.	Barbados
17.	Belarus
18.	Belgium
19.	Bolivia
20.	Bosnia and Herzegovina
21.	Botswana
22.	Brazil
23.	British Virgin Islands
24.	Brunei
25.	Bulgaria
26.	Cape Verde
27.	Canada
28.	Cayman Islands
29.	Chile
30.	China
31.	Chinese Taipei
32.	Colombia
33.	Costa Rica
34.	Cote d'Ivoire
35.	Croatia
36.	Cuba
37.	Curacao
38.	Cyprus
39.	Czech Republic
40.	Denmark
41.	Dominican Republic
42.	Ecuador

43.	El Salvador
44.	Equatorial Guinea
45.	Estonia
46.	Eswatini
47.	Faroe Islands
48.	Fiji
49.	Finland
50.	France
51.	Gabon
52.	Georgia
53.	Germany
54.	Greece
55.	Guatemala
56.	Guyana
57.	Honduras
58.	Hong Kong
59.	Hungary
60.	Iceland
61.	India
62.	Indonesia
63.	Iran
64.	Iraq
65.	Ireland
66.	Israel
67.	Italy
68.	Jamaica
69.	Japan
70.	Jersey
71.	Jordan
72.	Kazakhstan
73.	Kenya
74.	Korea, South
75.	Kyrgyzstan
76.	Laos
77.	Latvia
78.	Lebanon
79.	Lesotho
80.	Liechtenstein
81.	Lithuania
82.	Luxembourg
83.	Malawi
84.	Malaysia
85.	Maldives
86.	Malta
87.	Mauritania

88.	Mauritius
89.	Mexico
90.	Moldova
91.	Monaco
92.	Mongolia
93.	Montenegro
94.	Morocco
95.	Mozambique
96.	Myanmar
97.	Nauru
98.	Nepal
99.	Netherlands
100.	New Zealand
101.	Nicaragua
102.	Norway
103.	Oman
104.	Pakistan
105.	Palau
106.	Palestine
107.	Panama
108.	Papua New Guinea
109.	Paraguay
110.	Peru
111.	Philippines
112.	Poland
113.	Portugal
114.	Puerto Rico
115.	Qatar
116.	Romania
117.	Russian
118.	Rwanda
119.	San Marino
120.	Saudi Arabia
121.	Senegal
122.	Serbia
123.	Sierra Leone
124.	Singapore
125.	Slovakia
126.	Slovenia
127.	Solomon Islands
128.	South Africa
129.	Spain
130.	Sri Lanka
131.	Sweden
132.	Switzerland

133.	Syria
134.	Tajikistan
135.	Thailand
136.	Timor-Leste
137.	Trinidad & Tobago
138.	Tunisia
139.	Turkey
140.	Turkmenistan
141.	Uganda
142.	Ukraine
143.	United Arab Emirates
144.	United States of America
145.	Uruguay
146.	Uzbekistan
147.	Venezuela
148.	Vietnam
149.	Yemen
150.	Zambia

Appendix 7: List of Countries with No Federation Response

Aruba	1
Bermuda	1
Bhutan	1
Bosnia and Herzegovina	1
Brazil	1
Burkina Faso	1
Burundi	1
Cambodia	1
Cameroon	1
Central African Republic	1
Chad	1
Comoros	1
Congo, Democratic Republic of the	1
Djibouti	1
Dominican Republic	1
Egypt	1
England	1
Eritrea	1
Ethiopia	1
France	1
Ghana	1
Grenada	1
Guernsey	1
Haiti	1
India	1
Iran	1
Ireland	1
Italy	1
Kosovo	1
Kuwait	1
Liberia	1
Libya	1
Macedonia, North	1
Madagascar	1
Mali	1
Morocco	1
Mozambique	1
Namibia	1
Nepal	1

Netherlands Antilles	1
Nigeria	1
Philippines	1
Poland	1
Saint Kitts and Nevis	1
Saint Lucia	1
San Marino	1
Sao Tome and Principe	1
Scotland	1
Serbia	1
Seychelles	1
Somalia	1
South Africa	1
South Sudan	1
Suriname	1
Tanzania	1
The Gambia	1
Togo	1
Ukraine	1
United States of America	1
Wales	1
Zimbabwe	1
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Appendix 8: List of Federations/Countries Not Responding

№	List of Federation/Countries Not Responding
1.	Bermuda
2.	Bhutan
3.	Burkina Faso
4.	Burundi
5.	Cambodia
6.	Cameroon
7.	Central African Republic
8.	Chad
9.	Comoros
10.	Congo, Democratic Republic of the
11.	Djibouti
12.	Egypt
13.	England
14.	Eritrea
15.	Ethiopia
16.	Ghana
17.	Grenada
18.	Guernsey
19.	Haiti
20.	Kosovo
21.	Kuwait
22.	Liberia
23.	Libya
24.	Macedonia, North
25.	Madagascar
26.	Mali
27.	Namibia
28.	Netherlands Antilles
29.	Nigeria
30.	Saint Kitts and Nevis
31.	Saint Lucia
32.	Sao Tome and Principe
33.	Scotland
34.	Seychelles
35.	Somalia
36.	South Sudan
37.	Suriname
38.	Tanzania
39.	The Gambia
40.	Togo
41.	Wales
42.	Zimbabwe

