

RETHINKING THE OPPORTUNITY OF CHESS-IN-SCHOOLS IN THE CONTEXT OF GLOBAL INNOVATION IN EDUCATION?

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ABSTRACT

We examine the potential of chess in schools programme to motivate the dialogue on equity in global education. We specifically explore the perspective of innovation in education through chess, which is feasible from a point of both scalability and sustainability across cultures. We particularly look at communication of break-through innovation around basic education that has been recognised by leading educational forums for “**what has worked in transformation in education**”. From the lessons learned of how such innovation in education is transforming the primary school education, we articulate the robustness of the chess-in-schools programme in delivering equity in education. We conclude that the chess-in-schools is a potential to be the “Least Common Multiple” of the core innovation exercise that is more integrated to global thinking scenarios.

Key words:

Chess-in-schools, innovation in education, Equity in Education, intercultural pathway, Primary school education, Global education.

INTRODUCTION

We examine the potential of chess in schools programme to motivate the dialogue on equity in global education. We specifically explore the context of innovation in education, which is feasible from a point of both scalability and sustainability across cultures.

The benefits of chess has been long sold to governments for clearly articulating the educational benefits as with Frank (1981)[5], Ferguson (undated)[4], as described in Gobet & campellt [8], social capital and cultural capital Dod Forrest (2006) [3], for improving the scholastic chess access and facilitation of chess in education to achieve a base line for organic development of chess and its benefits to children pursuing chess outside the professional mainstream. However, it was fairly recent, that a government has taken the responsibility drive curriculum approach, and own the outcome of the programme in the case of Cuba (1967), Armenia(2011), in the case of Tamil Nadu(2013), and Education Endowment Fund testing(2012) and recent ERASMUS plus outcomes of Italy(2014) [23].

Comment [a1]: Yet the Russians, at least in the past, seemed to be significantly better than everyone else due to their culture.

Chess clearly is understood as State's top priority Global Futures for Chess in schools [25] are becoming visible proof of the strong alliance of "chess in schools" in gaining the "political will" to facilitate how children can now access educational resources, people for crafting a cultural cooperation.

Our approach is to lay the foundation for "chess in schools" to engage a strong basis of a value creation exercise for education mainstream. However, we need to first motivate whether the heritage of chess alone is fully sufficient to facilitate novel application for the innovation around global education? Or are we promoting a confirmation bias to ourselves to increasingly prove how chess has been the confounding reason for the holistic development in children? These two questions are now leading the conversation to reason out for right culture to be engaged with chess-in-schools to open pathways for global access.

Comment [a2]: Good point.

Further, we hope to push ourselves away from fundamental flaws in "claiming" no values that could potentially maximise global impact". Are we limiting the key scenario of innovation in an access to global education? Further, are we looking deep into the opportunity of chess for marginalising the applications of chess-in-schools? Or are we looking towards creating an innovation landscape for global education development?

RESEARCH METHOD

A quasi-qualitative research method was used in this context to gather the perspective on motivation of Chess in education and motivation for seeing chess-in-schools as an innovation from across coarse life-cycle of transitions. (a) High-aspirant administrators in the centre of innovation in the mainstream education who are willing to facilitate reach to the schools.

Comment [a3]: This term should be clarified for the benefit of the audience.

(b) Education Innovators, who have developed striking innovation in education (c) Leading innovation champion in education. (d) Educationalist, who have made larger than life contribution to education.

Further, we targeted our data collection, around the premier international events for both chess and education to access leading innovators. In chess, we gathered perspective around FIDE World Chess Championship Match 2013, in Chennai and World Chess Championship for Disabled, 2013 Dresden, Germany, education. Whereas in Educational events, we gathered short interviews during World Innovation Summit for education (WISE), at Qatar October 2013, and two international conferences, on "Language and intercultural communication", Hongkong, December 2013 and "Did anyone say Power?": Rethinking Domination and Hegemony in Translation, Bangor, Wales, September 2013, around the

surprise element of how chess-in-schools can be perceived as an innovation in education as championed across large number of countries.

We had short conversations with over 100 participants in the International events. The conversation was based on how to reflect the chess-in-schools as an innovation in the global context. We gathered, insights into the Local (Institution level) and National context, if they seem to know about the available programme and how the participants relate to their own programme. During the conversations, we have not motivated the context of programmes that were available in the various regions, either by government or as part of charity or the national federation to prevent any bias in the discussion.

We further carried out short face-to-face discussion with all the 3 WISE Laureate around the topic (Dr. Fazle Hasan Abed, Dr. Madhav Chavan and Dr. Vicky Corbett), who shared general insight. We spoke with several principal innovators, key note speakers and continued through email based consulting interviews, around the innovation context of chess and chess-in-schools. Further, we probed the interest and the resistance to accept chess in schools in the context of value creation for children. Based on the instantaneous response, we also studied their context of innovation, and carefully verified from some of their context of innovation.

Further, with **people who had honestly reflected their disinterest with chess**, we also looked into their innovation portfolio and made few direct comparisons to reflect a stronger case for problems that they were handling and perspective they considered for motivating the innovation. We cross compared with WISE Speeches, who have made larger than life contribution to the global innovation in education, as “what worked” in their opinion, for the problem that they invested their life to champion the change. We have adapted the framework of Reimers (2012) [13], as a framework organise the global context that can be applied as borrowed best practices across projects nominated for WISE Awards [26]. We also compared (by means of Internet search) on Chess in Schools developments, in the relative countries, to understand the “as is” position of chess-in-schools project.

In the chess world, we do have equal amount of charities, created global initiatives with chess-in-schools, however, the current research is addressing a perspective of top-down communication of “chess-in-schools” than a bottom up communication by charities projecting the benefits, impacts and outcomes.

Comment [a4]: Why might this be so? Worth elaborating a bit.

RESULTS

The results are consolidated across the data that we gathered around the world events to capture strong cultural communication of the innovators in a forum which helps to maximise ~~their~~ communication.

Table 1 show the participant's consolidated view of values agreed from the benefit of chess, and consolidate the participants who acknowledged that chess and chess-in-schools could be integrated to schools. On probing the value creation in the context of innovation, the opinion varied significantly across global context, local and national context considerably. We had 65% of people, who had not significant background in chess, surprised by the scale of reach to children. We observed that participants reflected on diminishing returns of chess, as they did not place chess in a context of educating children. 49% presented local and national interest in chess, whereas 32% presented strong opportunity for building international access for young children. Further, we had 19% reflecting on diminishing returns of chess, as they did not place chess in a context of educating children. They were uncertain that game can bring more people under one roof, as there was strong entry barrier to teach and learn chess and there were lot of alternatives.

Row Labels	Emerge in Future	From the Past	No Concerns	On going	Grand Total
Education Innovator(EI)	4	4	9	1	18
Diminishing returns		1	3		4
International	3	2	1	1	7
Local	1		1		2
National		1	4		5
High Aspirants(HA)	29	5	22	9	65
Diminishing returns	4	2	4	1	11
International	9	1	7	1	18
Local	10	1	8	4	23
National	6	1	3	3	13
Grand Achievers(IA)	1		2		3
International			1		1
Local	1				1
National			1		1
Lead Innovators (LI)	8	1	5		14
Diminishing returns	2		2		4
International	3	1	2		6
Local	3		1		4
Grand Total	42	10	38	10	100

Table 1: Population on Context of Chess-in-Schools as an Innovation in Education

The table 2 represents the 50% of the population, who are closer to the change in basic education, through motivating policies, processes, practices that have constituted the change.

Only 26% have referred to knowledge of the influence of chess-in-schools, whether they are ongoing or have had strong influence in the past with the school's children. However, across the population, the strong feeling that the discussion is not relevant to the context of innovation, while equally the context is seen as futuristic than what they have seen as working in the present. These results consolidate perspectives of what seems to have worked in the education from the perspective of innovators, who have brought step change in the perspective of reaching out to schools.

Table 2: Population “who are stronger agents of change” in basic education

Row Labels	Emerge in Future	From the Past	No Concerns	On going	Grand Total
Education Innovator(EI)	4	2	9	1	16
Diminishing returns			3		3
International	3	1	1	1	6
Local	1		1		2
National		1	4		5
High Aspirants(HA)	6	4	2	5	17
Diminishing returns		2		1	3
International				1	1
Local	5	1			6
National	1	1	2	3	7
Grand Achievers(IA)	1		2		3
International			1		1
Local	1				1
National			1		1
Lead Innovators (LI)	8	1	5		14
Diminishing returns	2		2		4
International	3	1	2		6
Local	3		1		4
Grand Total	19	7	18	6	50

Table 3 reflects the discussion from which the value creation in the context of chess in schools across the context of local, national and international perspectives and also consolidates the discussion on the diminishing returns from implementing the chess in schools. The reflection was favoured the local and international perspective and less representative of national perspective. There were stronger arguments against a global perspective of innovation with chess in schools.

Table 3: Summary of Value Creation for chess-in-schools across innovators

Row Labels	EI	HA	IA	LI	Grand Total
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Diminishing returns	4	11	4	19
In the future		4	2	6
From the past	1	2		3
Not concerned	3	4	2	9
On Going		1		1
International	7	18	1	6
In the future	3	9	3	15
From the past	2	1	1	4
Not concerned	1	7	1	11
On Going	1	1		2
Local	2	23	1	4
In the future	1	10	1	3
From the past		1		1
Not concerned	1	8	1	10
On Going		4		4
National	5	13	1	19
In the future		6		6
From the past	1	1		2
Not concerned	4	3	1	8
On Going		3		3
Grand Total	18	65	3	14
				100

Table 4 represents first drill down of the 23% population who strongly believe that chess brings a strong equity. However, only 7% believed that it would bring equity in an international perspective, whereas 15% believed that the innovation around chess can bring stronger equity in both regional and national perspective.

Table 4: Reflection of Equity from the Perspective of Agents of change

Row Labels	No	Yes	Grand Total
Education			
Innovator(EI)	14	4	18
In the future	2	2	4
From the past	3	1	4
Not concerned	9		9
On Going		1	1
High-Aspirants (HA)	53	12	65
In the future	23	6	29
From the past	5		5
Not concerned	18	4	22
On Going	7	2	9
Grand Achievers(IA)		3	3
In the future		1	1
Not concerned		2	2
Lead Innovators(LI)	10	4	14
In the future	5	3	8
From the past		1	1
Not Interested	5		5
Grand Total	77	23	100

Further drill down, had been performed, to consolidate the perspective of from the agents of change. We observed out of the 77% who did not consider chess-in-schools to bring a strong dialogue in equity, significant reflection came from a perspective that 33% were really not concerned and the percentage of reflection was far too low from the ongoing or past influence of chess. Further, we probed the context of chess as available in the schools and communities of our participants to further understand the negative bias towards chess.

Table 5 consolidates the perspective on the Equity and opportunity for a strong value creation, based on the context that they were strongly aware of chess in schools or potentially access such contextual environment for facilitating studies. 11% were in the context of “Yes” vote to chess, whereas the only 26% were from the “No” vote to favouring the equity compared to massive difference 77% who strongly did think a equity in education could not be achieved with chess without the context of chess.

Table 5: Population with strong context of chess in their region

Ongoing Context for Chess	Yes		
Row Labels	No	Yes	Grand Total
Education Innovators (EI)	2	2	4
In the future		1	1
Not Concerned	2		2
On Going		1	1
High-Aspirants (HA)	24	9	33
In the future	11	4	15
From the past	3		3
Not Interested	7	3	10
On Going	3	2	5
Grand Total	26	11	37

Table 6 summarises the context of not having access to chess-in-schools environment, and have held a stronger bias against chess-in-schools promoting equity in education. It was surprising that despite extremely low votes on equity, there is a larger spread around the population. Strong bias has been observed across educational Innovators, and it is not evenly distributed from the past to the future.

Table 6: Population who have no access to context of chess in schools

Ongoing Context for Chess	No		
Row Labels	No	Yes	Grand Total
Education Innovator(EI)	12	2	14
In the future	2	1	3
From the past	3	1	4
Not Concerned	7		7
High-Aspirants (HA)	29	3	32
In the future	12	2	14
Not Concerned	11	1	12
On Going	4		4
Grand Achievers(IA)		3	3
In the future		1	1
Not Concerned		2	2
Lead Innovators(LI)	10	4	14
In the future	5	3	8
From the past		1	1
Not Concerned	5		5
Grand Total	51	12	63

Table 7 finally consolidates potential candidates as champion of change for the chess in schools and the direction that they choose to drive the value creation process. This has interestingly contributing to less than 6% and focus strongly to local development.

Table 7: Population believing Chess provides a Strong Equity, with no ongoing context

Ongoing Context for Chess	No				Grand Total
Equity	Yes				
Value Claimed	In the future				
Row Labels	Diminishing returns	International	Local	National	Grand Total
Education Innovator(EI)		1			1
Administrators		1			1
High-Aspirant(HA)				2	2
Principal				1	1
Teachers				1	1
Grand Achievers(IA)			1		1
Administrators			1		1
Lead Innovators(LI)	1		2		3
Academia	1		2		3
Grand Total	1	1	3	2	7

DISCUSSION

The results consolidate two strong perspectives around innovation in school education that is presented in a global context. First we have appreciable difference in attitude around the set of values that the organisations thrive on addressing the innovation at the grassroots level. Second, we identify the equity in education that the chess-in-schools is facilitating, is considerably marginalised in the context of schools by the champions of change.

Further, we are surprised by the results consolidated in the Table 7, indicates a possible case that the value that chess-in-schools brings is more profound at the local level than at the National or International level. This may be due to the perspective of chess “still as an outsider” to the mainstream education, or lack of ownership of the outcomes of the promoting the programmes within the schools at a global context inside educational mainstream.

However, looking back in the recent chess-in-schools outcomes from several countries, the impact seems to be stigmatised around innovation. Further, the context of chess may have been invisible in these entire contexts as the discussions were not around explaining what the World chess federation or charities facilitated as an outreach programme in chess in schools in general. Whilst, the perspective of heritage aspect of the game offered a greater awareness to parents as explained by teachers, who felt chess was significant in the context of primary school education. We mainly saw the influence of competitions to facilitate mushroomed growth for chess outside K-3 school children. This was clearly reflected during World championship Match 2013, where 1.12 Million children from all around Tamil Nadu, who had no formal introduction to chess, [23], had managed to learn the game on their own and participate in the selection event that consolidated School winners from over 32,000 schools clubs across Tamil Nadu.

Equity in education clearly exists from these concentre examples. However, we motivate a perspective that the communication has been more central towards local and has not claimed value in national and international arena significantly where wider equity gaps exist. This is precisely where the chess-in-schools campaign despite “*political will*” has been unable to make strong value creation in a global arena beyond reinforcing the benefits of chess.

We motivate another perspective around innovative products that address specified market segments that motivate gaps in particular services to aid classroom participation seem to bring stronger evidence base for driving values through positive change in societal impact of innovation. Further, we observed that our data was less represented from the context of chess world and the comparison of chess to a potential gamification process in education. Yet it could have been a stronger influence during the World Innovation Summit for Education, where the placement of chess could be alongside of video games, or gamified learning aids.

Comment [a5]: Perhaps an elaboration on this point would be useful.

Further, chess has also offers a lesser scope for claiming value creation through the promotion of original ideas that *seem to work* when comparable with other gamification based tools that are widely being developed for pedagogy in the K-6 section. However, the limitation of the “what works” is still in the inability to compare the process of gamification and process of learning chess. Further, research has to be motivated to cover grounds on experiential learning theories that facilitate learning through gaming, which is complementary side of gamification process. Our constant dilemma was to discount most of these projects to be objectively compared with chess-in-schools initiative, as none of the WISE projects were focussed on core non-governmental organisation initiatives, which is an important factor that cannot be ignored from how the value claiming worked for them in International press. Our discussions have all been based on experts communicating from the access to innovation and limited to the lobbying route for chess, which is another function outside current scope of research.

However, in all these dialogue the chess in schools as an innovation was not immediately obvious, as a strong case for innovation in a global context, as some of the gamification tools claimed to be more generic and motivate stronger the evidence of explaining “how the children have been nailed to the attention than how well they have transformed their opportunity”. The lack of big data around chess-in-school has served as a severe bottle neck in motivating innovative products and services that have been internalised into schools to address gaps in classroom learning. This was emphasised by Gobet at London Chess and education conference, 2013. Further, we understand that the heritage of chess sets an ambiguous position in the minds of institutions that thrive on claiming values for original contribution and hence we would need to strengthen the communication around application of chess-in-school to address cultural integration, which motivates the pathway for intercultural communication among primary children, who are getting a strong access even to ~~the~~ professional chess.

Moving into a more central concept around equity, in the particular context motivated by Reimers [13], the “contextual transfers” is more emphasised on education emerging from the overall system’s effect instead of impact of the impact of individual intervention policy. This is very interesting when comparing the motivation of two chess in schools, across Armenia and England, where Armenia has facilitated a compulsory chess-in-schools programme, while England has made it optional and specifically tested around the impact that deprived children are making, who are risk of being identified as NEETS (Not in Education, Employment or Training). This brings a strong opportunity to drive lessons learned in a global context across the two programmes.

Comment [a6]: Why have they seen fit to do this?

On a contrary, the very case study motivated by Reimers [13, page 365] in the same context of addressing the gaps through a chess-in-schools programme, without borrowing the context of outside researches. We need to strongly reflect that Armenia has strong role models to whole chess world like Tigran Petrosian, former World Chess champion and Lev Aronian, **World number 2**. Chess also being a male dominated sport in Armenia, it still gives a very strong case for integration. Further, to our observation in Tamil nadu, the engagement of children into chess was mainly fuelled in the context of participating in a state event alongside of Vishwanathan Anand competing for the coveted world title [25]. The perspective that is missed in both the context is the self-organisation communication around elite, is not seen as strong resonance for children into remain in classroom. Rightly, Armenian methods of forcing Chess-in-schools has yield a significant innovation addressing the same gaps Reimer's have pointed as best practices to be incorporated as heuristics to looking at adaptations from innovation in a global context. Further, the World chess elite are followed internationally, and there is much stronger case for the innovation, to scale on a global context than limit to the regional context. We observe that these best practices constitute to the core of innovation that have been adapted to meet the equity in education in Armenian case study. However, these were also the core facilitation in the realising the chess in schools programme. Fortunately, the region that Reimers (2012) [13] refer to in the case study that clearly motivates boys' engagement has been selected as the control group of the Armenian trial described Aram (2012) in the London Chess and education Conference [19]. We emphasise here that the direction of communication of a strong value creation should bring the traceability from a national context to address a gap in the local context. Thus, the traceability clearly forms a basis to maximise the communication in the global context of bringing equity in education by strengthening the overall educational output, to look into specific contextual transfers across the teaching and learning practice. This clearly corroborates with the observation that champions of innovation are missing out to account local details. This further exacerbates, when we perceive a diminishing returns in bringing more original ideas to forefront, than just implementing the chess-in-schools, which engages children from a proactive side to strengthen the integrative experience of children in a modern classroom.

Comment [a7]: Not anymore. Should update.

We now need to strongly reassess our situation whether the chess in schools programme is designed to address the gaps, in the education system. This effectively harnesses the strength of cultural communication around the heritage of chess.

On the other end, we are equally failing to motivate the context of why we need innovation to motivate an integration of the chess in schools programme across several countries. We

already have a miniature platform for student integration, and World Youth championship, which integrate young children from 7 to 19 years. These streams look as integration to the mainstream sport and cast as pathways in finding and nurturing raw talents. We have been consistently finding both abundant talents and **extreme** genius around 12-14 years, who demonstrate by becoming grandmasters around 13 years by strongly assimilating the knowledge in chess and building a practice.

These cases force a perspective that chess forms the greatest common divisor among educational developments, whereas the rest of the innovation forms the least common multiple to simplify the perils in classroom teaching-learning process. We feel that this is typically, where we need stronger application for chess, and more effective mechanism to consume and recycle the data that is getting generated are strongly needed to be motivated.

CONCLUSION

The central question of this article is around the facilitation that what could innovation in education means in strong favour for chess in schools dialogue, to scale up and address the context of global education innovation paradigm. Our global education has a strong alignment to the fundamental ways of how the basic education is facilitated for children to meet the 21st Century skill demand. On one end we need to strengthen the system's orientation to drive strong value creation around innovation landscape in local education. On the other end, We need a value claiming in the global arena to strongly encourage the self-organisation of leaders to motivate intercultural pathways through chess that will allow an optimal socio-cultural capital regeneration through large scale integration of chess in schools programme. We conclude that the chess-in-schools is a potential to be the "Least Common Multiple" of the core innovation exercise for education to organically scale the classroom opportunity to a global audience. We will hope chess-in-schools facilitate strong development of the 21st century skills that are believed to bring a greater mobility and belief in direction of building more independent, inclusive and integrative thinking in children.

ACKNOWLEDGMENTS

This work would not have been possible without partial assistance of the FIDE chess in schools commission for visiting the World Innovation Summit for Education and subsequent visits to particular conferences in Bangor and Hong Kong, which helped us gather perspective on latest trends in language and intercultural communication around Global Education, for which the value creation proposition and equity in education are centrally motivated.

NOTES

1. The **WISE Awards 6 projects** nominated each year for outstanding innovation in education. The selection criteria have not been published last two years, as a panel of experts vote for the award. WISE Award 2010 Criteria (1) Overall extent to which the educational activity has transformed an aspect of education that has also had societal impact. (2) How the activity is funded in a sustainable way to ensure its continuing viability. (3) How the activity is innovative in design and / or practice, thereby transforming traditional means of educational delivery. (4) How the activity includes a diversity of beneficiaries and has enhanced equality of access to education. (5) How the transformation has improved the quality of learning. (6) Evidence that the activity has the potential to be scaled up effectively or has already replicated at a larger scale than original piloted. (7) How the activity has established effective partnerships and includes participation from beneficences and stakeholders.(8) Evidence of the effective ongoing enhancement of the programme through regular monitoring and evidence of formal internal or external evaluation procedures.(9) How the activity is disseminating and sharing educational practices with other practitioners. Source: WISE 2010 Application.
2. Millennium Development plan - Goals. There are eight millennium development goals: (1) Eradicate extreme poverty and hunger;(2) achieve universal primary education; (3) promote gender equality and empower women; (4) reduce child mortality; (5) improve maternal health; (6) combat HIV/AIDS, malaria and other diseases; (7) ensure environmental sustainability; and (8) develop a global partnership for development. www.developmentgoals.org accessed November 24, 2005.
3. Reimers Fernando's Contextualised transfers framework (1) Clear Identification of needs translated into a tractable problem. (2) A thorough analysis of the context in which the problem exist. (3) Taking stock of existing research on the determinants of the problem at hand and on the best practices to address it in other contexts. (4) Analysis of gaps within extant research and the context, and (5) the design of innovation or transfer of practices to address the gap.
4. Open letter on the Rob Mitchell's Benefits of Chess and Education to George W Bush (2006) and Michelle Obama (2014).
 - a. Emphasis on deploying the chess in schools, as opposed to other pedagogy tools which has not given time tested benefits.
5. Further, the recommendation that Reimer's framework showcase in the Armenian case-study, the generation of best practices, and innovation transfers include

- Attraction of Male teachers, Males teaching assistants, and male mentors to expose young boys to positive male role models in society, to facilitate male enrolments.
- Improve current teacher training programmes to minimise gender stereotyping in education and to better engage boys learning
- Emphasise cooperation, confidence building, and conflict resolution in teaching pedagogy to improve the boy's academic performance.
- Monitor the boys, who become absentees or join work, to develop intervention to help boys to return to schools
- Make Specialisation part of school: education, specialisation, and work can be combined so that students can relate to their line of work

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