PARTNERSHIP TO STRENGTHEN INNOVATION AND PRACTICE IN SECONDARY EDUCATION (PSIPSE)

GYAN SHALA AND INSAAN GROUP
YEAR 2 EVALUATION REPORT
We often have an exaggerated sense of what nonprofits and governments are doing to help the poor, but the really inspiring thing is how much the poor are doing to help themselves.

Katherine Boo
This is where it all began...
I. Evaluation Parameters

The following report is based on field visits conducted in early July 2017 in Ahmedabad, Gujarat where the secondary PSIPSE intervention is active. Students, parents, teachers, curriculum designers and supervisors were interviewed and filmed. Some of the photographs and films are included in this report.

The report, on the school year 2016-2017, builds on the database provided by Gyan Shala, and the brief narrative reports shared by Gyan Shala with PSIPSE.

The report aims to present: a balance between quantitative and qualitative analysis, a human focus on the end-users, the students, as well as the various stakeholders’ perspectives in making secondary education a success.

The report also aims to highlight Gyan Shala’s capacity to adjust to the multiplicity of challenges encountered in providing quality secondary education, and to begin to reflect on lessons to be learned as the program unfolds, with a view to inform a wider policy discourse.

The Gyan Shala high school program covers children in slum communities of Ahmedabad, from Grade 8 to 10. The parents of these children are mostly casual laborers and have not completed a secondary education. As the pictures and video clips attest, the educational context is particularly challenging.

Furthermore, two streams of students are enrolled into Gyan Shala’s high school program: (i) those who are completing grade 7 in Gyan Shala’s middle school program, and (ii) those completing grade 7 in other government or low cost private schools, where slum children study. As the data from year 1 showed, while the first stream students naturally transitioned to Gyan Shala's high school program, the children from other schools did not agree to shift in grade 8, as other recognized schools give a certificate of completion of grade 8, which has statutory value. The second stream, however, is open to joining Gyan Shala’s program in grade 9, but that poses the challenge of ensuring a high success rate in the grade 10 examination, with only two years of input, when the grounding up to grade 8 has remained very poor. To address this issue, in the year 2016-17, Gyan Shala team has designed supportive coaching daily for one and a half hours in Grade 9, and two hours in Grade 8, by teachers and senior teachers.
Individual work in class
A. Student Population Analysis

1. Planned and actual number of students

The above table and graph show the planned and actual number of students in grade 8, 9 and 10 in the years 2015-2016, 2016-2017 and 2017-2018. Whereas on average the planned number of students in higher than the actual number of students, the actual number of students does increase over the years (i.e. the actual number of students in grade 8 and 9 in 2016-2017 is almost twice as high as in 2015-2016).
Afrin: Grade 8
2. Gender

The total number of students is highest in grade 6 (237 students) followed by a decrease over the years to 120 students in grade 10.

Except for grade 7, the number of girls is slightly higher than the number of boys in each class.
Grade 9 in Bombay hotel, a predominantly Muslim area
3. Locality

Splitting the number of students by locality, results in the highest number from Vasna followed by Amraivadi and Khodiyarnagar.

Note that only in grade 8, 9 and 10 there are students from Khodiyarnagar.

The attendance analysis, further below in the report, revealed that the average attendance tends to be slightly higher in Amraivadi (79.4%) than in Vasna (74.0%) and Khodiyarnagar (74.1%).
2016 Grade 10 graduates
4. Age

As expected, the average age increases from grade 6 (11.1 years) to grade 10 (14.1 years).

On average boys are older than girls in grade 6 and 7 whereas girls are slightly older than boys in grade 8, 9 and 10.
Writing practice: a key challenge still...
B. Educational Performance Analysis

1. Attendance

Gyan Shala makes a tremendous effort to make their students attend classes, which includes an emphasis on parental engagement.

The data show that a higher attendance (in % of the total number of days) is now indeed associated with a higher average performance. This effect is significant ($p < 0.01$).
2. Subject

The graph includes data for STD 6 2013, STD 7 2014, STD 8 2015 and STD 9 2016. STD 10 has been analyzed separately at the end of the report. The average performance is calculated by taking the average of the first exam and the annual exam in %.

The graph shows an average performance of girls and boys. On all subjects, girls outperform boys. The difference is highest for Sanskrit (16.9%) and lowest for mathematics (7.3%).

As the next table demonstrates, the averages somehow drown actual student performance which range from a maximum of 98% to a low of 1% - a wide disparity which is not unusual in the socio-economic context of Gyan Shala students.
Above is the maximum and minimum scores per grades in all subjects.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Max (%)</th>
<th>Min (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hindi</td>
<td>96</td>
<td>2</td>
</tr>
<tr>
<td>Gujarati</td>
<td>96</td>
<td>1</td>
</tr>
<tr>
<td>Sanskrit</td>
<td>91</td>
<td>1</td>
</tr>
<tr>
<td>English</td>
<td>95</td>
<td>2</td>
</tr>
<tr>
<td>Social science</td>
<td>95</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics</td>
<td>98</td>
<td>1</td>
</tr>
<tr>
<td>Science</td>
<td>98</td>
<td>2</td>
</tr>
</tbody>
</table>

Above is the maximum and minimum scores per grades in all subjects.

<table>
<thead>
<tr>
<th>Subject</th>
<th>F</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hindi</td>
<td>27.74</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Gujarati</td>
<td>72.67</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Sanskrit</td>
<td>45.07</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>English</td>
<td>30.33</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Social science</td>
<td>34.06</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Mathematics</td>
<td>24.00</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Science</td>
<td>53.71</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

The F-test above shows that there is a statistically significant difference between boys and girls if taking the average performance of all courses together ($F = 79.36$, $p < 0.01$), but also for all the individual courses.

In other word, girls significantly outperform boys although the average performance tends to be lower for the natural sciences (mathematics and science) than for social science and various languages (Hindi, Gujarati, Sanskrit and English).
3. Caste

Looking at the two most common castes, as defined by the Indian government, namely Scheduled Castes (SC) and Other Backward Classes (OBC), the average performance of children from a SC background (43.7%) is higher than the average performance of children with an OBC background (38.0%).

In line with these results, average attendance also tends to be higher for children with an SC background (78.1%) than the average attendance of children with an OBC background (73.9%).

Gyan Shala treats both groups equally. It should be noted that the results may not be entirely reliable because students often associate themselves with either group, erroneously.

<table>
<thead>
<tr>
<th>Average performance %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STD 6 2013</strong></td>
</tr>
<tr>
<td>SC</td>
</tr>
<tr>
<td>OBC</td>
</tr>
<tr>
<td><strong>STD 7 2014</strong></td>
</tr>
<tr>
<td>SC</td>
</tr>
<tr>
<td>OBC</td>
</tr>
<tr>
<td><strong>STD 8 2015</strong></td>
</tr>
<tr>
<td>SC</td>
</tr>
<tr>
<td>OBC</td>
</tr>
<tr>
<td><strong>STD 9 2016</strong></td>
</tr>
<tr>
<td>SC</td>
</tr>
<tr>
<td>OBC</td>
</tr>
</tbody>
</table>

The difference occurs in all grades but is most pronounced in grade 8 with an average performance score of 45.8% for SC and 37.9% for OBC, creating a difference of 7.9%.

Followed by grade 6 with a 7.1% difference and grade 9 with a 6.3% difference. The difference between SC and OBC is smallest in grade 7 with only 3.5%.
Additionally, the difference in average performance between castes among boys is 6.4% whereas the difference between girls is only 2.1%.

Thus, caste seems to affect average performance of boys more than it is associated with average performance of girls.
From grade 6 to grade 7 the average performance slightly increases (from 39.9% to 44.5%) after which it starts to decrease and finally reaches 35.8% in grade 9.

Again, girls outperform boys. This effect is significant across all grades.
She did not drop out...
According to the data, dropouts only occur in grade 8 and 9.

The dropouts concern 53 students in grade 8, of which 29 girls and 24 boys. In grade 9, 47 students drop out and thus leave Gyan Shala, of which 17 girls and 30 boys.

These are also the grades in which the average performance starts to decrease as before-mentioned.
6. Gyan Shala students vs. new students

An important question was to analyze the performance of new students as compared to Gyan Shala students.

Only in grade 8 and 9 did new students arrive at Gyan Shala according to the data. This was analyzed by looking at unique student IDs and comparing the student IDs in time \( t \) with the student IDs in time \( t-1 \) (meaning one year ago).

In grade 9 Gyan Shala students outperformed new students (36.0% versus 32.9%). Whereas in grade 8 Gyan Shala students scored slightly lower than new students (41.8% versus 42.8%).
To dive deeper into the relationship between performance and the time a student has been at Gyan Shala, the number of years a student has been at Gyan Shala has been set out against the average performance.

There is no clear pattern linking time at Gyan Shala (in years) and average performance per grade.

But there does seem to be one batch of students that outperforms all others in every grade. These are five students that started Gyan Shala in grade 3 in 2010.
Gyan Shala’s model revisited and strengthened

In The Learning Challenge: How to to ensure that by 2020 every child learns (April 2014), Fenton Whelan discusses the “features of the effective low-cost school systems”, based on the experience of Gyan Shala, BRAC and others, which include:

1. Excellent teaching materials
2. Intensive coaching and support
3. More time on task
4. Mother tongue instruction in early grades
5. Good basic facilities
6. Strong accountability and management

Pankaj Jain, Gyan Shala's highly respected founder, points out that “even the best teachers available in that context, unsupported, will not be good enough, and instead focuses on making the teachers who are available as effective as possible.”

As Gyan Shala explains, “intensive coaching and support” means a diligent focus on on-going training, all Gyan Shala teachers are given training intermittently as detailed below:

i) 6 to 8 days of training at the time of joining,
ii) 4-6 days of conceptual refresher trainings during Diwali Break
iii) 4-6 days of conceptual refresher trainings during summer breaks
iv) one day training-meeting every fortnight by design team members (approx. 15-17 days).
Thus, on average high school teachers are being supported through various meetings-trainings for 27 -34 days a year with design-management teams or Indian/international subject experts.

While “excellent teaching materials” has been one of Gyan Shala’s comparative advantage, the materials and pedagogy have needed an adjustment in high school.

In Grade 10, Design team members were using textbooks, note books and assignments and question paper sets, but from the year 2016-17, in addition to this, the design team has prepared workbooks for Grade 10 also.

Furthermore, as discussed by Gyan Shala in an earlier report, additional coaching has been planned for each student as part of the class day, in Grades 8 and 9. In Grade 8, in newer areas, senior teachers have been deployed to take additional coaching classes for two hours with the help of teachers, so as to make children’ foundation strong in their weak areas. Also in Grade 9, teachers have been provided time options either 8-30 a.m. to 1-30 p.m. or 10-30 a.m. to 3-30 p.m., so as to provide additional coaching for one and a half hours to students every day.

In sum, rather than focusing on the after-school program, as in the previous year, this year, extra hours have been added to the normal school day.
7. Focus on Grade 10

This paragraph will provide additional and more in-depth information on the performance of students in grade 10.

Although the number of data points is limited, there does seem to be a positive correlation between the average attendance (%) and the average performance (%) of students in grade 10. This means that a higher attendance is associated with a higher performance. This holds true for both girls and boys. The effect is not significant ($p = 0.12$) but is going in the right direction.

Since there seems to be a clear link between attendance and performance in both the grade 10 data and the aggregated data for all grades, it is suggested to increase the number of schooling hours for all students and to put in extra effort to get non-attending students to come to class.
This chart shows the average performance (%) per subject. The total number of students included in this analysis is 61 in 2017 of which 36 students passed and 25 failed. The average performance across both exams and all subjects is 39.7% for girls and a very similar average of 39.1% for boys.

The above charts used aggregated data for both the first and annual exams. Splitting the results out per exam results in an average score of 37.9% for the first exam and slightly higher score of 40.8% for the annual exam.

To compare these results to the students’ performance the year before, the results of grade 9 per subject have been added based on a total of 157 students in 2016. Across all subjects the average performance in grade 9 was 35.8% whereas in grade 10 the overall score is 39.4%. This means that on average students are doing better in grade 10 than in grade 9.

In contrast to grade 9, the performance in grade 10 on Gujarati and Sanskrit seems to be much higher than for the other subjects whereas in grade 9 the scores are more consistent across all subjects.

Furthermore, the gender differences seem to be more pronounced in grade 9 than in grade 10 resulting in relatively higher scores for girls across all subjects in grade 9 than in grade 10. Worth mentioning is the fact that the percentage of girls significantly dropped from 50% of girls in grade 9 to only 35% of girls in grade 10. This might be something to keep an eye on for future strategy development.
I AM DARNEST
MY DREAM IS
TO BE A DOCTOR
III. Qualitative Analysis: The Multiple Impacts of Gyan Shala on its Communities

A. End-user focus: Dharmesh and Mumta

Interviewed for the past three years, Gyan Shala and Insaan wanted to follow through the lives of some its students as they move from Grade 8 to 10, and beyond. This is an attempt to capture not just their performance, but their dreams.
MY NAME IS
NANU MA
I AM RENTING
A CLASSROOM
TO GYANSHALA
B. Gyan Shala rentals’ beneficiaries

The impact of Gyan Shala on the students continues to be documented. Another type of beneficiary, however, are the elderly tenants, who rent classrooms during the day for Gyan Shala. This brings added income to local communities, and cements communities with a sense of pride and connectedness.
C. Teachers and supervisors as beneficiaries

Field visits confirm an astonishing fact: teachers and supervisors have an-depth knowledge of each child/student at Gyan Shala, not just their academic performance but the varied and many domestic challenges they may be facing. It is incredibly inspiring to see such a natural bond, and empathy. Gyan Shala schools are more than schools: they are also a place of evasion, emotional support, encouragement and consistent, engaged caring.

The teachers and supervisors, themselves, are often belong to the community, and are additional beneficiaries of Gyan Shala. Their respected occupation, monetized employment, balanced with a schedule that does not conflict with their own family/domestic responsibilities, their on-going training and sense of growth as well as the feeling of being supported by their peers, add to their commitment.
My name is Vaibhavi.
I studied at Gyan Shala
from Grade 1 to 10.
I am now a Gyan Shala
Teacher!

I am Roshan.
I studied at Gyan Shala
from Grade 1 to 10.
I am now a Gyan Shala
Teacher!
D. Gyan Shala graduates

While Gyan Shala’s high school program still needs time to adjust to the various lessons learned, and to consistently demonstrate superior results than its counterparts, as it does from Grade 1 to 3, the narratives of students who have succeeded are incredibly moving. Girls or young women who graduated and decided to come back to Gyan Shala and teach post-Grade 12, in their own communities, or those who decided to pursue higher studies are truly impressive, given the modest background they emerged from.
IV. Lessons Learned and Moving Forward

A. Challenges encountered

1. Poor learning at the time of entrance in grade 8 or 9 in the program, remains a challenge for all students - the exception are some classes of Grade 3 students from Gyan Shala who fare better than others.

2. Gyan Shala middle school children are not trained to write descriptive answers, and are used to answer multiple choice question types only. Enabling them to deal with standard high school examination requires changing the middle school curriculum and program, which has been initiated. In fact, changes in earlier stages have to start with grade 3 itself, if not earlier.

3. Unwillingness of students in Government schools to join Gyan Shala's classes in parallel to their 8th grade class.

4. Unwillingness of students in grade 10 to attend a longer class day.

5. Low aspiration and commitment of Gyan Shala students to try their best in high school.

6. Limited competence of average graduate students of Indian college/ university system, who then become teachers in the high school program.

B. Actions taken for improving results in the Grade 10 Board Examination

1. Worksheets have been prepared with more weight for questions which had been asked in the Board Examination, so students can prepare for the same from the beginning of the year, while working on different chapters in all the subjects. Previously, the design members and Grade 10 teachers were working with textbooks, while this year, in addition to the textbooks, worksheets for math, English, Sanskrit and Social Science have been introduced. The Gyan Shala team plans to introduce worksheets for Science and Gujarati in the coming year.

2. In 2016-17, supportive tuition for each Grade 10 student started in the month of July. In the previous years, it was done after completion of the first term.

3. Annual syllabi of all subjects have been completed at least two months prior to March 2017, with a view that the students get enough time to revise all the content covered for all subjects.

4. In 2015-16, the Gyan Shala team had found that Subject teachers had challenges in identifying students’ actual learning problems in many cases, and they were treating all the students equally. Although the teachers were working very hard with all the students, it still left some weak students not getting required attention. This year, from the beginning, Gyan Shala hired special Design team members who have been given responsibility to observe the students and support them wherever they need. In the subjects such as Science, Mathematics and English, Design team members are involved in direct teaching of the students - thus supplementing the work of regular teachers.
5. Grade 10 students have been divided into separate sections as per their conceptual understanding and capabilities. Because of these separate sections, the chapters have been taught as per the students' requirements, in major subjects such as Math, Science and English.

6. In the personal tuition time also, the students have been divided in smaller groups as per their requirements so that more individual attention can be provided. As a result, design team members were able to solidify their conceptual understanding of the previous academic years. For instance in Math, concepts like equations, fractions, integers, etc. have been taught again. In Science, the students were given tips to prepare for long answers and how to write them. In English, how to comprehend the given paragraph has been taught again. Also, the formats of letters and essays have been clarified with the students, so that they can get marks for their structure.

7. The Gyan Shala team observed that many students, and parents, did not pay enough attention to their career or future. They were not aware of the importance of passing the Grade 10 Board Examination. This has been addressed through Counseling sessions with all the students, in class as well as in smaller groups of three. Two Design team members have volunteered for this important task, based on their previous counseling experience.

C. Future plans

1. Strengthen middle school program to eliminate observed weaknesses of (i) children not being able to write narrative answers, (ii) improve middle school attendance (iii) reduce the % of children with sub-optimal learning to 10%.

2. Further improve worksheets modules in the high school program.

3. Strengthen training-capability of high school teachers so class level intervention by design team members is no longer necessary.

4. Improve teacher training to help modestly qualified teachers to meet the need of effective teaching to achieve 100% pass results.

5. Ensure the active engagement of Pankaj Jain, the founder, to understand how to “crack the code” of higher performance at the high school level.
We are all different. There is no such thing as a standard or run-of-the-mill human being, but we share the same human spirit.

Stephen Hawking
Insaan is registered as a 501(c)(3) charity in the United States, as well as a foundation in the European Union, in the Netherlands. Insaan Group Foundation (IGF) is also registered in India.

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