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

GYAN SHALA AND INSAAN GROUP
YEAR 1 EVALUATION REPORT

Insaan

The aim of education must be the training of independently acting and thinking individuals who, however, see in the service to the community their highest life problem.

Albert Einstein


HIRA

On their way to secondary school

I. Evaluation Parameters

The following report is based on field visits conducted in early July 2016 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 and others will be presented shortly in the Year 2 evaluation, as a comparative between both years.

The report, on the school year 2015-2016, builds on the database provided by Gyan Shala, and the brief narrative reports shared by Gyan Shala with PSIPSE. The Year 1 evaluation was ambitious in scope and encountered some delays due to loss of key staff in both organizations and the need to find new talent, and new ways of working. The database itself provided some challenges to ensure that some codes are more consistent, that some data is collected in a single language and that the database is more readily available for analysis, to minimize the time and effort in cleaning up the layout and being able to generate useful data. As such, we do not anticipate any delay in producing the Year 2 evaluation.

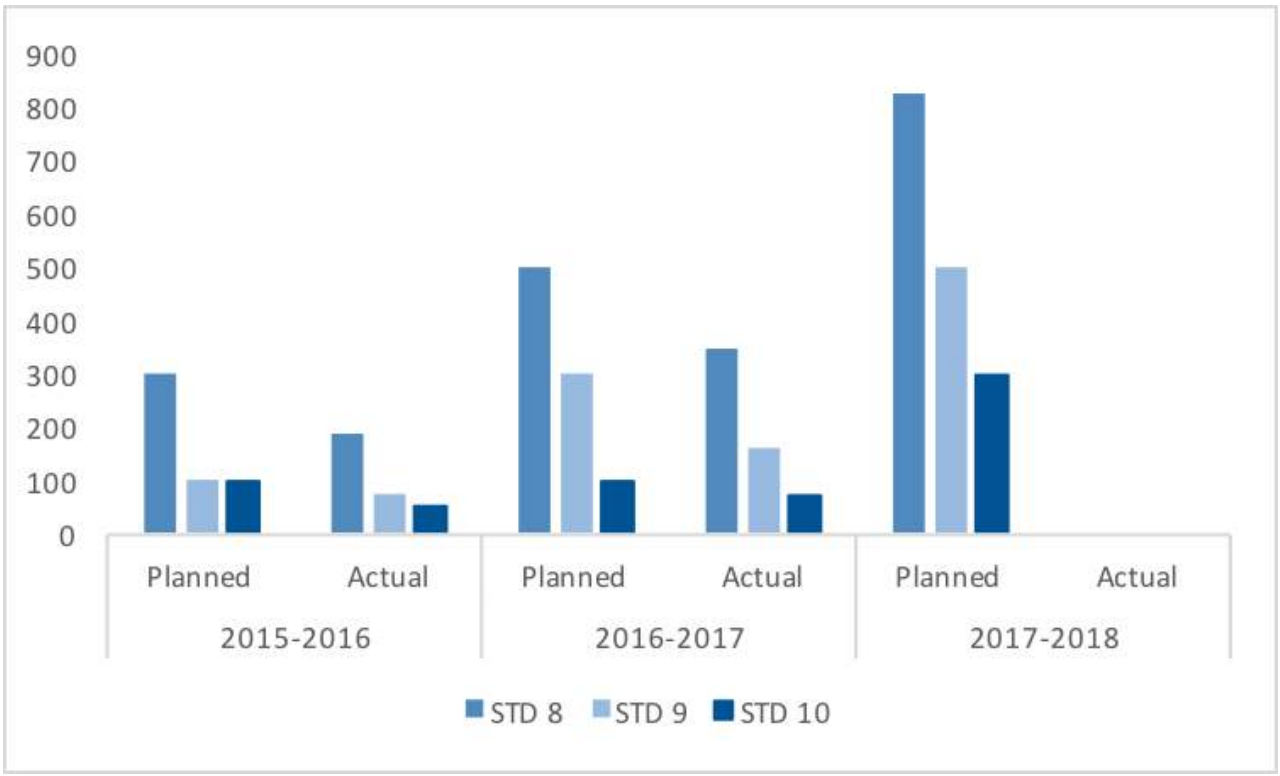
The report aims to present: a balance between quantitative and qualitative analysis, a human focus on the end-users, the students, as well as the various stakeholders' perspectives in making secondary education a success. The report also aims to highlight Gyan Shala's capacity to adjust to the multiplicity of challenges encountered in providing quality secondary education, and to begin to reflect on lessons that can be learnt as the program unfolds, with a view to inform a wider policy discourse.

II. Gyan Shala Year 1 Performance

The following graphs are based partly on cohort data in which the same students were tracked earlier from grade one up to grade seven (i.e. the unique student IDs are consistent in grade one to seven), and snapshot data in which students are shown in 2015 and 2016 in grade eight, nine and ten (i.e. data from 2015 is combined with data from 2016 in which unique student IDs are not consistent between grade eight, nine and ten). A year labelled, for instance, as 2015 refers to the academic year 2015/2016.

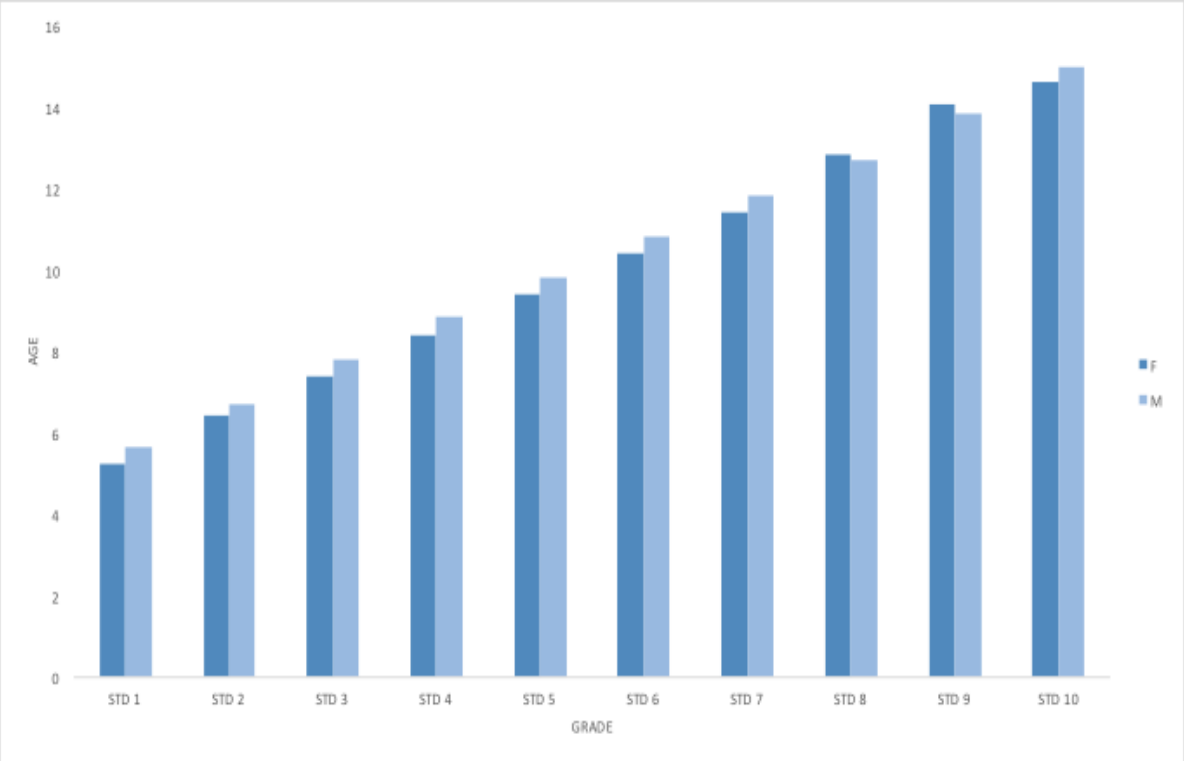
A. Student Population Analysis

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).

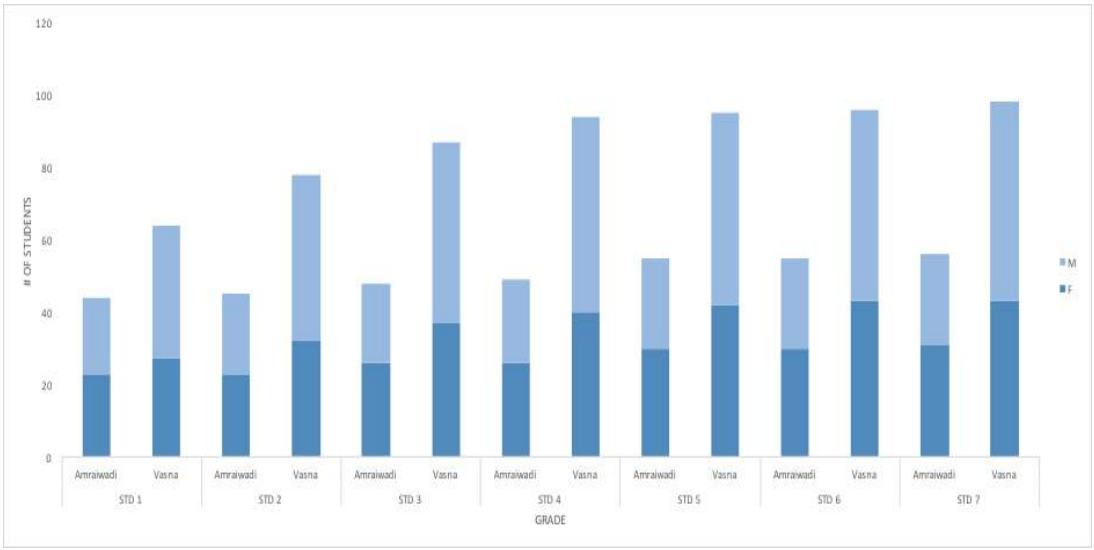
2. Average age by grade and gender



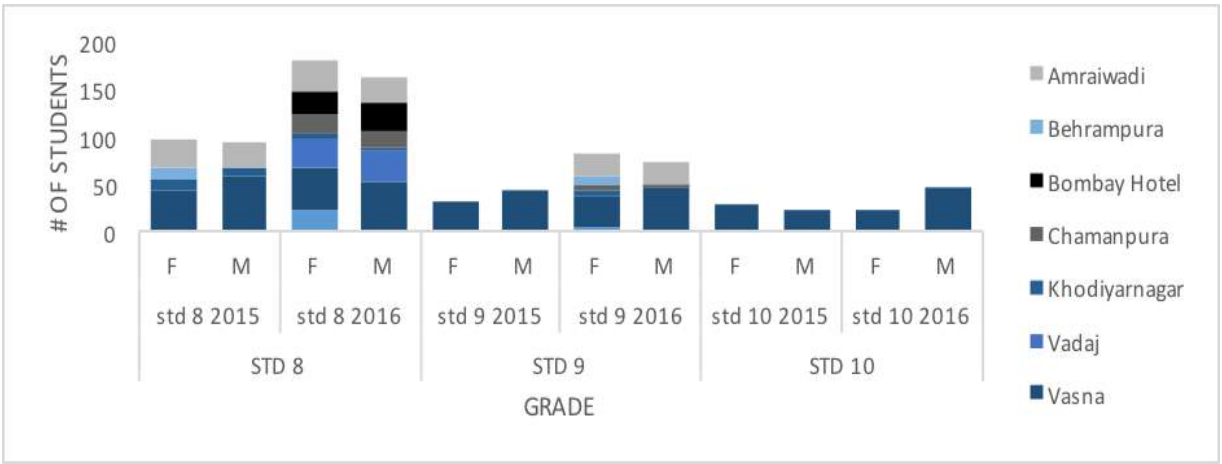
The average age in grade one of these students was 5.4 years increasing on average with one year per grade to reach 15 years in grade 10. In most grades boys are/were slightly older than girls, except for grade eight and nine where girls are older. For boys, the standard deviation increases slightly from grade 8 onwards, whereas for girls the standard deviation doubles from grade 8 onwards. In other words, from grade 8 onwards, there is much more variation in age among, especially, the girls.

A grade 8 class in Vasna: the joy of learning

3. Breakdown of students by grade and locality



The data suggests that most of the students earlier went to school in Vasna rather than in Amraiwadi (from grade one to seven). In Vasna, the boys outnumbered the girls whereas in Amraiwadi the opposite was true.

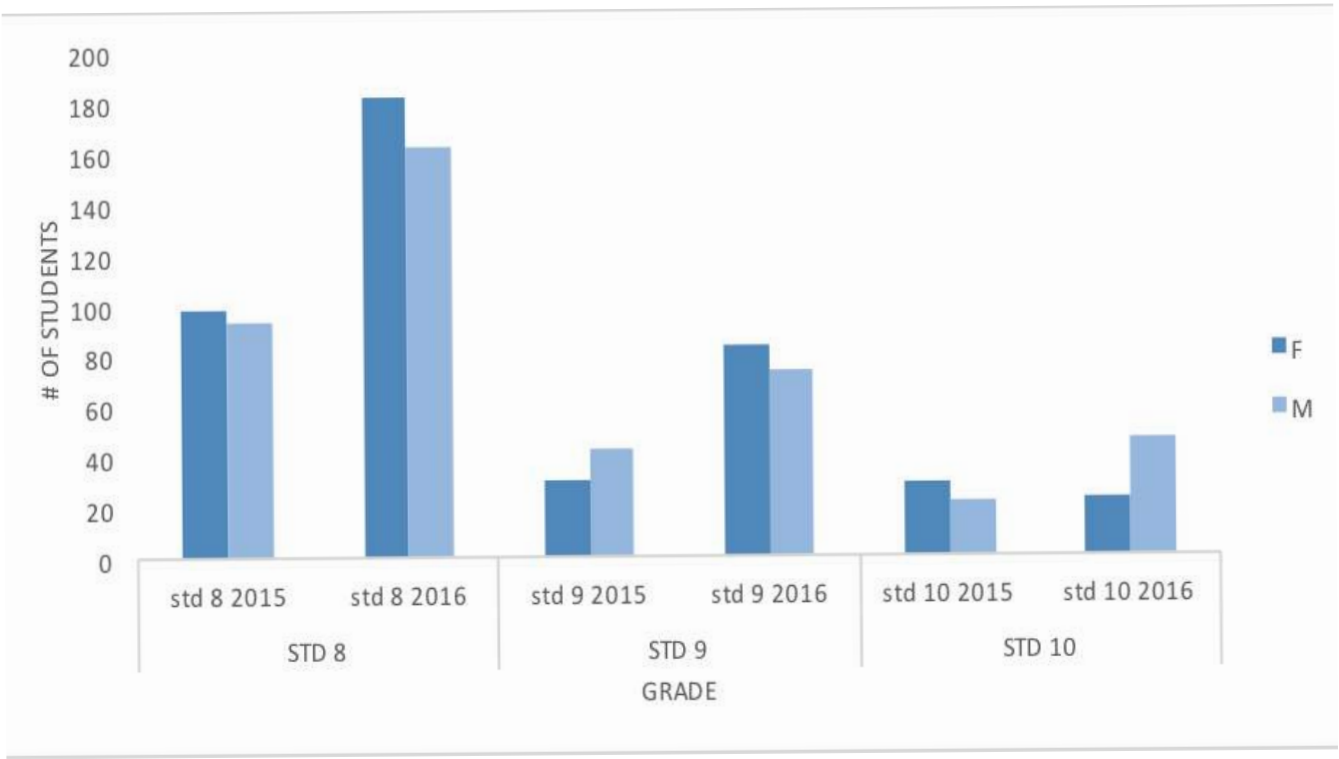


The largest number of current students are in Vasna (53% from the data is coming from Vasna, 19% from Amraiwadi, and between 2-7% from the other localities). It seems that there are only girls in Behrampura in grade eight (2015) and nine (2016).

The graph is based on the count of attendance rather than the count of unique student IDs to reflect the actual presence of a student in class. Only if the attendance is zero for a particular year, the student is omitted from the count.

Dharmesh working on the Gyan Shala workbook

4. Breakdown of students by grade and gender

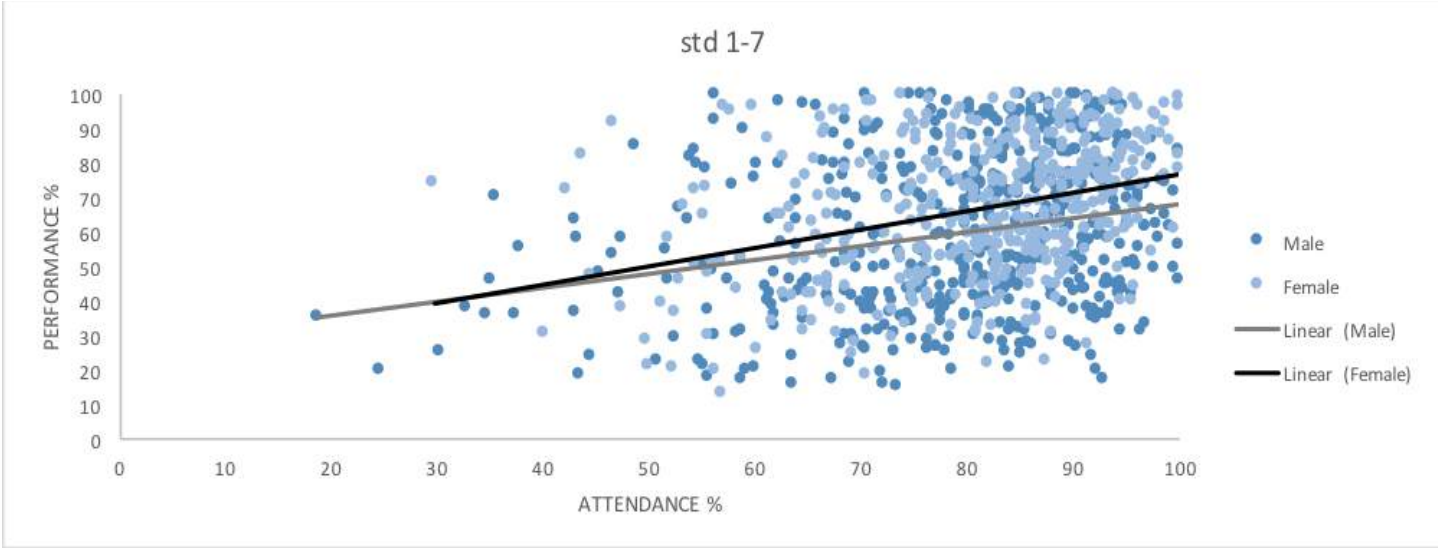


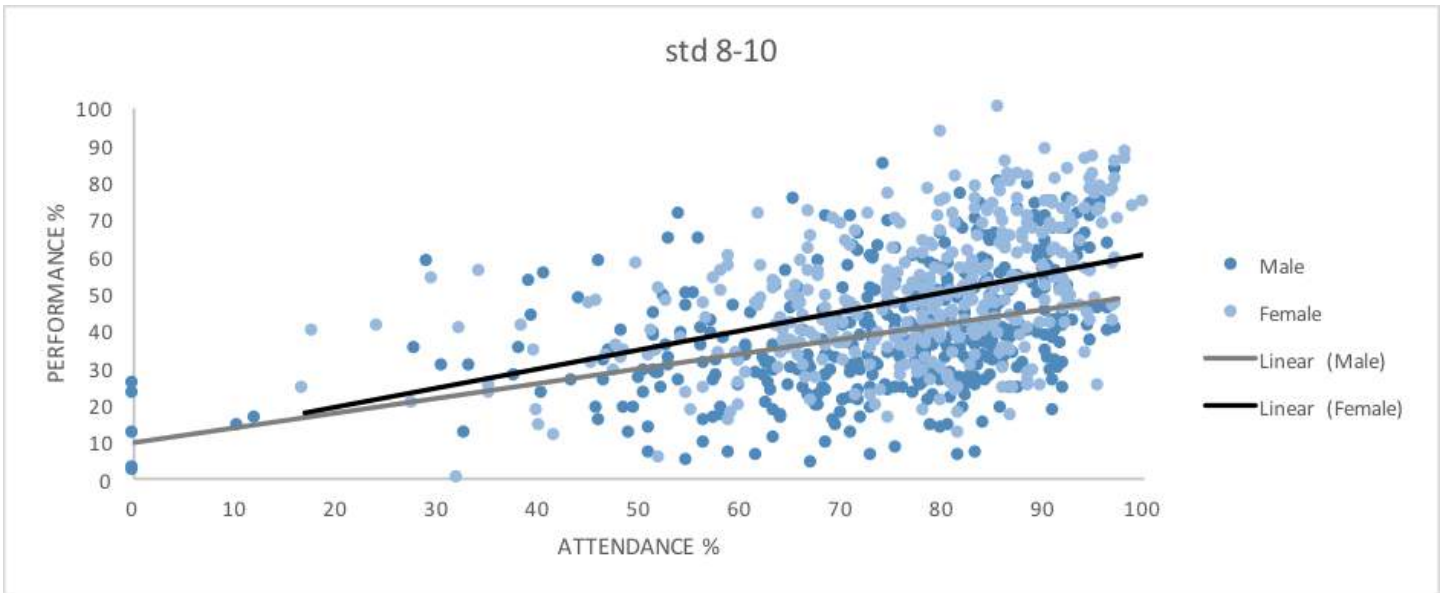
The high number of students in grade eight in 2016 is striking, and illustrates Gyan Shala's adjustment to lessons learnt from Year 1 enrollment. Furthermore, in grade eight and partially in grade nine and ten the number of girls is higher than the number of boys. A 2% increase in the number of girls can be seen between grade eight (2015) and grade nine (2016). However, the number of girls decreased by 9% from grade nine (2015) to grade ten (2016). The graph uses attendance data as opposed to unique student ID numbers to measure the actual number of students.

This is where it all begins...

B. Educational Performance Analysis

1. Linking attendance and performance





The power of focus

Each dot in the above graphs represents a unique student. For a few students, the attendance is 100%. That's because in that case no maximum/required number of attendance days was given and thus the highest scoring student in that particular class has been set as a benchmark at 100%.

We estimated the relationship between attendance and performance (grades) for the current program, separately for boys and girls. For reasons of comparison, using historic data on the students, we also estimated the same relationship for when they were in grade 1-7.

For all grades, on average, a higher attendance score is associated with a higher performance score – and girls seem to be outperforming boys in this respect. In both grades one to seven, and in grades eight to ten, the attendance coefficient for girls is higher than for boys.

For boys in grade one to seven, an increase in attendance by 1% is associated with a 0.40% increase in performance ($p<0.001$). For girls in grade one to seven, an increase in attendance by 1% is associated with a 0.53% increase in performance ($p<0.001$).

For boys in grade eight to ten, an increase in attendance by 1% is associated with a 0.39% increase in performance ($p<0.001$). For girls in grade eight to ten, an increase in attendance by 1% is associated with a 0.50% increase in performance ($p<0.001$). So if attendance increases for instance, for girls from 25% to 75% of the time, the performance in terms of grades increases by 25% -- a major increase. While – as the figure shows – the variance is quite high, indicating that other important factors contribute to performance as well, the average impact of attendance is nevertheless high.

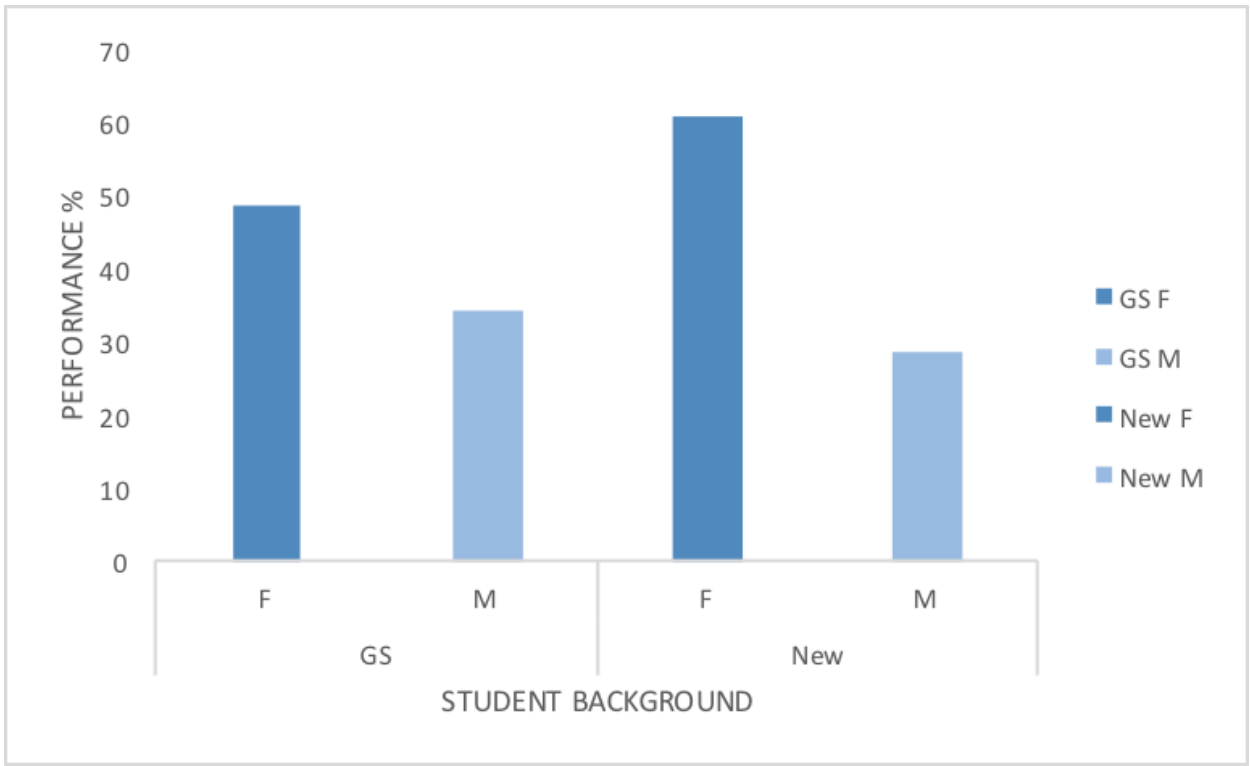
In sum, the pattern appears to be very consistent, across grades and across boys and girls, that attendance increases performance. However, it appears to be so even more for girls than for boys. It seems that they get more out of class attendance – at least as measured in terms of their grades. This is a very interesting result and suggests further exploration using qualitative research to get to the root cause of it – and perhaps to support /improve it further (or, indeed, to uncover which other factors are important for performance, in view of the high variance). Potential explanations for the relatively strong average effect of attendance are that girls pay more attention in class (and so benefit more from class participation) or that the (female) teachers serve more as a role model for girls than for boys.

The reasoning process

2. Drop-out rate

In grade 9 (as compared to grade 8) there is a dropout rate of 27.1%, and in grade 10 (as compared to grade 9) there is a dropout rate of 14.9%. Reasons for dropping out of high school altogether and a breakdown by gender, may be worth exploring in the next report.

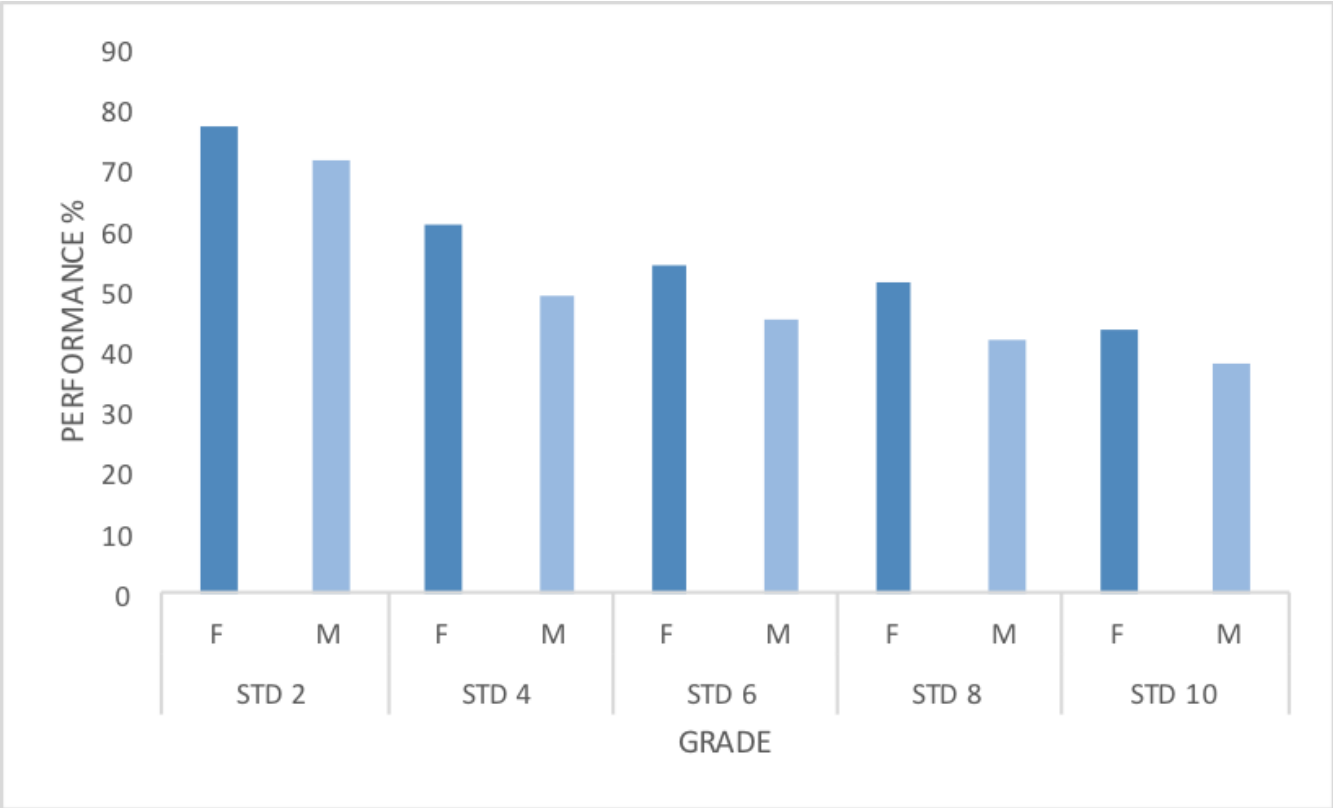
3. Analysis of test performance in grade 8 and 9 – Gyan Shala students and "new" students



Based on grade eight (2015) data, Gyan Shala boys outperform new boys whereas new girls outperform Gyan Shala girls. However, it is important to note that students with a 0% performance have been excluded from this analysis resulting in a sample of 151 Gyan Shala students versus 30 new students. This is consistent with the early estimate of Gyan Shala's mid-term report which states that roughly 80% of the students are existing Gyan Shala students, while some 20% are new students joining Gyan Shala in Grade 8. These results may have implications on after-school tuition for all students.

The beauty of writing

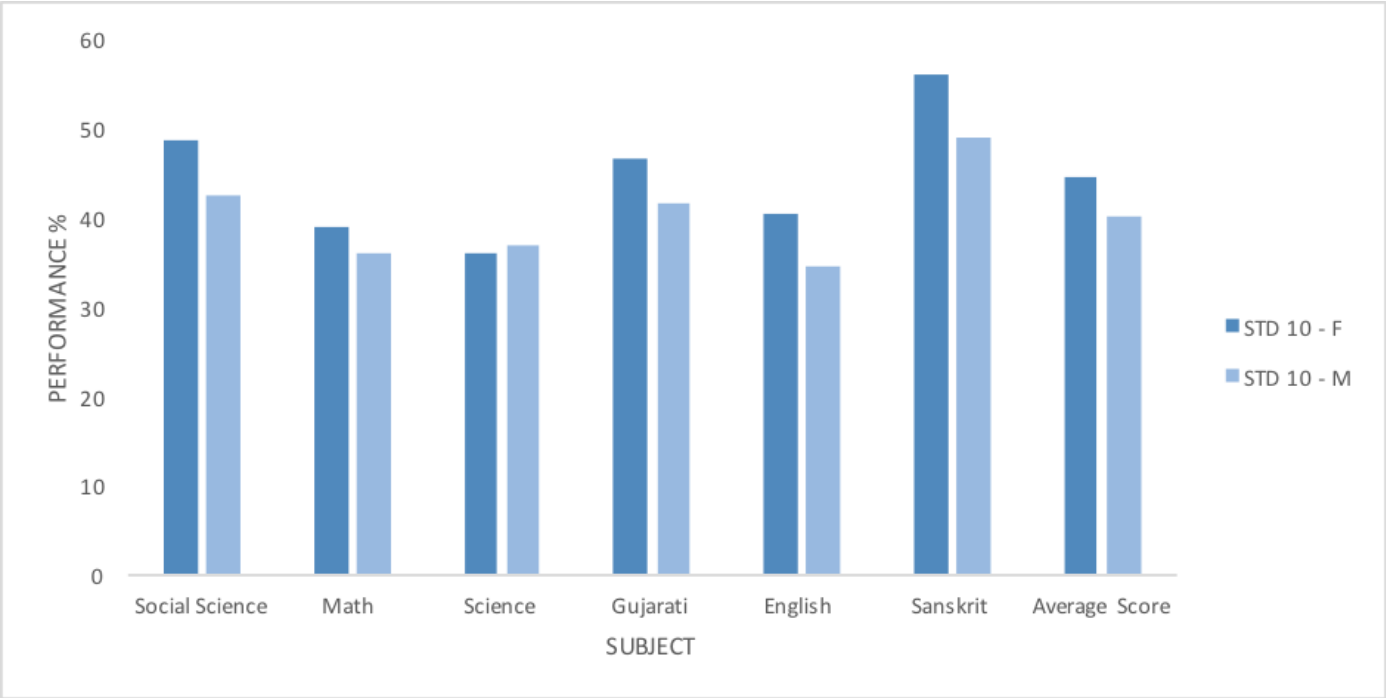
4. Historical performance of students: Grade 2, 4, 6, 8 and 10



This graph presents average performance data of grade 2, 4, 6, 8, and 10 over all subjects. Performance decreased in the higher classes. In each grade girls outperform boys, however, the difference is larger in grade 4, 6, and 8 than in grade 2 and 10 (in grade 10 the difference between boys and girls is even smallest). For this analysis all available unique student IDs have been used, irrespective of what year the students were in a particular grade. It is important to note that students with a 0% performance have been excluded from this analysis. This data is perhaps consistent with international data in terms of the lower performance as the level of difficulty of each grade increases, however, it also may have implications in terms of pedagogy and curriculum adjustments for both the Middle School and the High School Program.

Amisha scoring very high in her Grade 10 exam

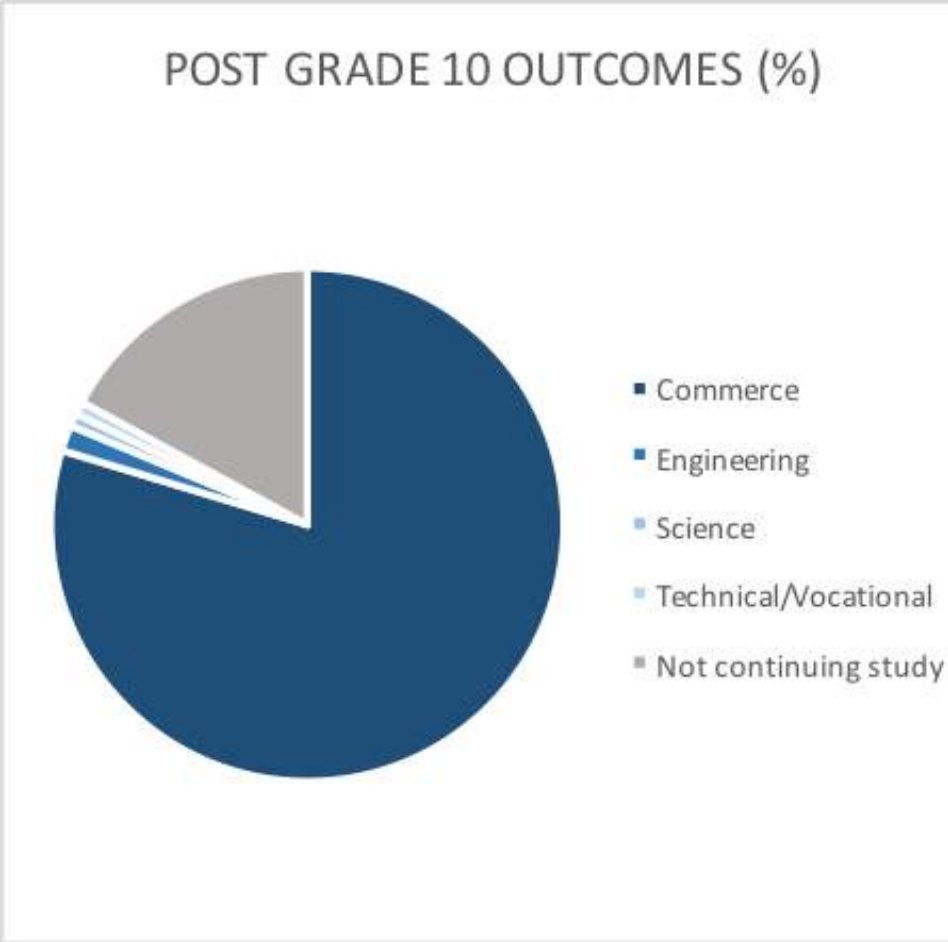
5. Breakdown of grade 10 results by subject



This graph shows performance data on different subjects for grade 10. It is interesting to see that girls' performance (on average 44.3%) is higher than boys' (on average 39.9%), except for science where boys (36.7%) slightly outperform girls (36.0%).

What is next?

6. Post-grade 10 outcomes



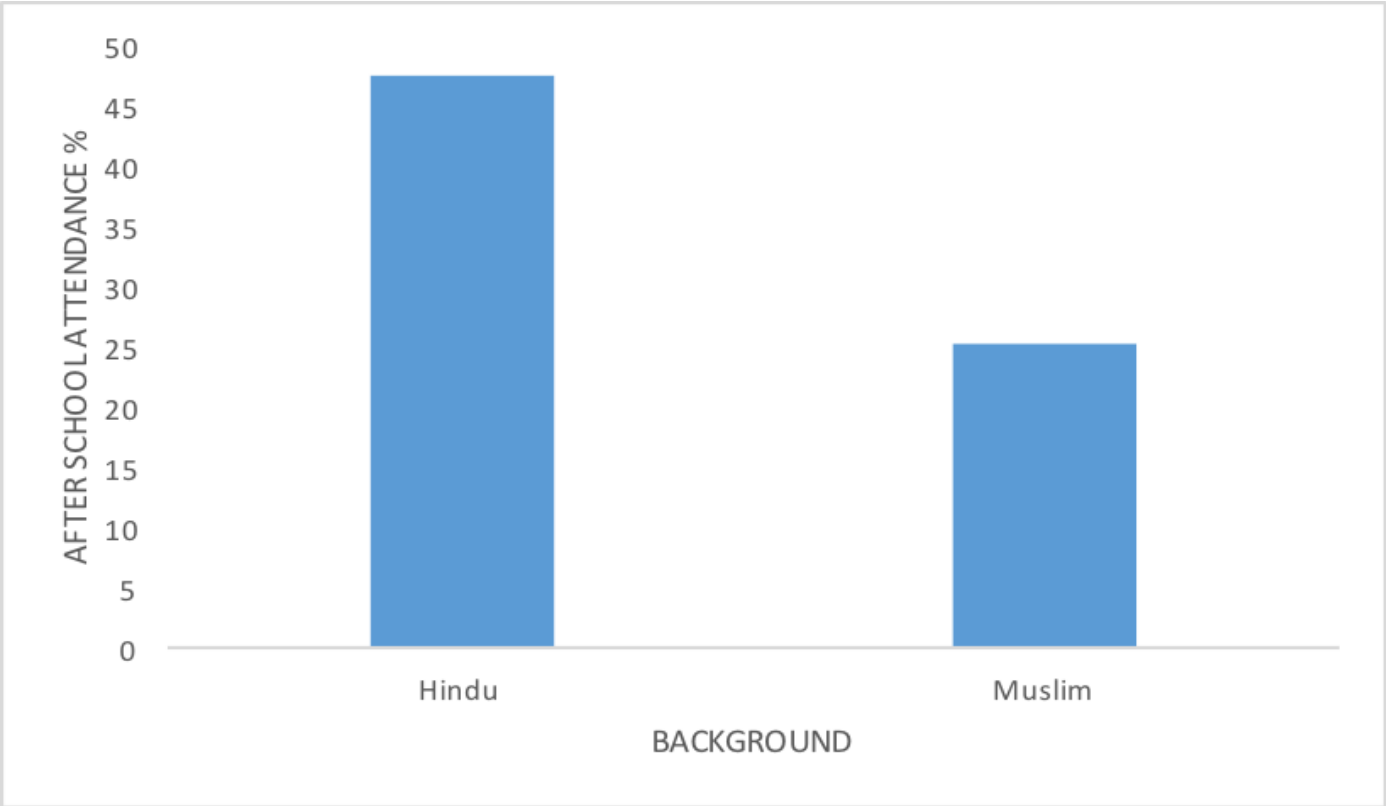
The data shows that a large majority of the students go into commerce (98 out of 123 students), and 21 students decide not to continue to study. Only two students go into engineering, one student into science and one only into technical/vocational training. The decision-making process for not continuing education may be worth exploring, by gender.

The findings of this report were shared with an independent expert, Dr. Harry Barkema, from the London School of Economics and Political Science (LSE). Preliminary research conducted by himself and his team suggests that Gyan Shala students tend to outperform their siblings who attended other schools, in terms of employment and income, possibly due to the role of teachers as role models (more important for female students) and Gyan Shala's pedagogy and in particular the role of “projects" that foster critical thinking and presentation skills. These initial findings merit continued attention to fully understand the transformative role of Gyan Shala in human lives.

Post-grade 10 for girls: an uncertain future

C. Gyan Shala: A Learning Organization

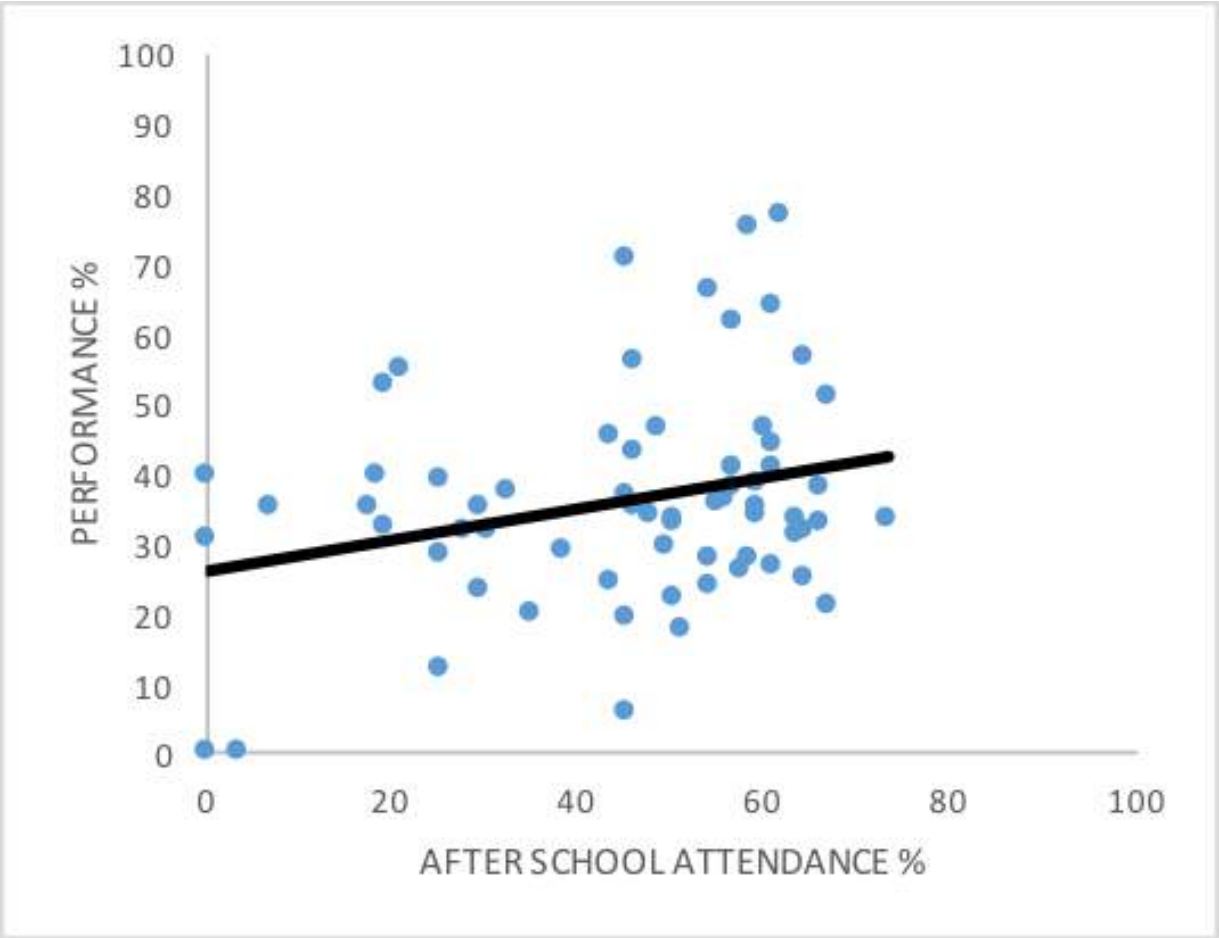
1. Attendance of after-school tuition



In mid-year, Gyan Shala adjusted quickly to the challenges of secondary education by reinforcing the program with after-school tuition. The above graph suggests that after-school attendance, based on Vasna data for unique student IDs, is higher for students with a Hindu background (47.6% average presence per student) than a Muslim background (25.2% average presence per student). But even more interesting is the fact that the data suggests 62 Hindu are present, based on after-school attendance, versus only 1 Muslim student. This could potentially relate to Madrassa attendance in the afternoon. Nevertheless, given the positive relationship between after-school attendance and performance (see the next analysis/graph), this could nevertheless be explored, in terms of whether it's possible to increase after-school attendance and how, for, especially, students with a Muslim background.

Focus and hard work pay off...

2. The link between attendance of after-school tuition and performance



The data suggest a positive relationship between attendance in the after-school tuition program, and performance, with a correlation coefficient of 0.28.

Parental engagement = mothers' engagement: a mitigated engagement

III. Qualitative Analysis

A. Key Findings from Year 1

1. Middle School: the hidden key to success

If the data is showing a decrease in performance by Grade, then High School is a challenge perhaps because of the context of Gyan Shala students, the number of subjects and the additional pressure of preparing for the Grade 10 exam. So, the first lesson learnt is that the emphasis on High School requires an optimal preparation during the Middle School years. As such a review of the Middle School Program has already begun in Gyan Shala to explore adjustments that need to be made. The expansion in enrollments in Middle School is also key to ensure that students enrolled in Grade 7 continue through Grade 8. As stated in the report by Gyan Shala, students from other schools are not keen to switch to a new school in Grade 8.

2. After-school tuition: attendance and expansion

The data shows that the after-school tuition has had a positive effect on performance overall. As such, Gyan Shala's quick response to support students, engage families and set-up an extra educational infrastructure for a couple more hours of tuition at the high school level, was indeed a good measure. It now has to make sure that the after-school tuition starts early on, in Grade 8 and is sustained until the Grade 10 exam, and that all students can attend. A particular challenge will be to adjust the timings of the sessions to accommodate students from Muslim areas, who are otherwise unavailable, as they attend Madrassa classes. This data has been confirmed in interviews with both students and parents of Muslim areas who explain their daily routine as such. Not attending after-class tuition can adversely impact the performance of Muslim students. Moreover, the qualitative aspect of the after-tuition may need to be revisited to include not just a revision of concepts learnt in class but practice tests to model and replicate the test-taking formats of the Grade 10 exam. Learning, learning to learn and learning to take tests may all be different skills at play here, which need to be unpacked, both in after-class tuition, as well as in the development of the pedagogical materials and the delivery of each lesson.

3. Beyond parental engagement: society, family and self

As discussed in the following section, the challenge of student motivation came as a surprise to Gyan Shala teachers and supervisors. Where does motivation come from? Societal values and role models, parental engagement and support (or lack of) or an inner self-drive? In meetings with parents and tens of students, we learnt that in fact very few students are lucky to have engaged and supportive parents. The majority of parents, i.e. mothers, shared candidly that they have no capacity (referring to their own lack of schooling) to support their children and that they trust that they were doing well and are in the right educational institution. Some female students candidly shared that continuing their studies beyond Grade 10 was not encouraged by their families. While the role of parental engagement is key in theory, in reality, in the rare occurrence of that positive factor, perhaps we need to explore other factors of motivation which focus on the self. As shown in the two contrasting videos below, parental support for high school is still a challenge for many girls, and yet their results exceed that of their male counterparts, as the data shows.

Maturing in Gyan Shala

B. Some Emerging Policy Challenges

1. On motivation

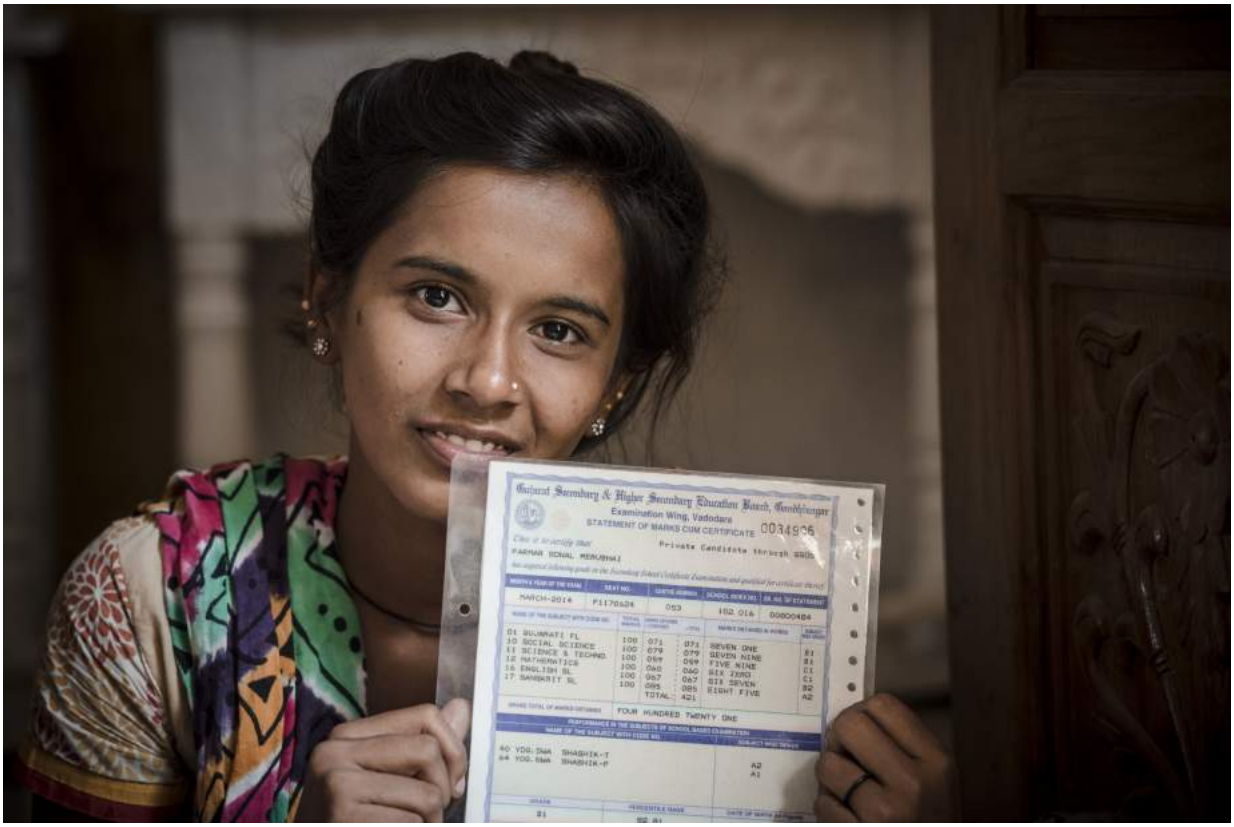
In preliminary interviews with teachers and supervisors of Gyan Shala, the most important challenge identified is the lack of motivation of students. The need to constantly push and motivate students to study, read, attend, perform, prepare for the grade 10 exam is a challenge, particularly in slum-like settings where demands placed on teenagers range from schooling to household work, and often paid work in addition – as the interviews attest. Days are long and exhausting. Television can distract in India, just as video games and apps distract in wealthier contexts. "Motivation" of students is an unaddressed issue that needs further research and emphasis – it is a global issue, a global challenge. It begs the question: is the traditional educational model becoming outdated and perceived as irrelevant?

In such a challenging educational context, the after-school classes could provide a time and space for teachers to work with students in smaller groups - as an additional opportunity to work on their motivation/coaching etc. Girls in particular seem to be influenced by female role models. As such, this is a step to consider: to increase the interaction between students and teachers to motivate and inspire students in a slightly more informal setting.

2. Is Grade 10 success?

Regardless of how much data is collected and analyzed, the High School program cannot be deemed entirely successful if it is somehow not piloted until Grade 12. This begs the following question: to what extent can a non-profit grow further with the constant and imminent fear of shortage of sustainable funding? What shift of organizational strategy is required from the institution? Or what adjustments can donors collectively make to sustain funding for a longer period and imagine not just educational outcomes, but educational impact over the longer-run? Failure to do so will inevitably favor for-profit models who are perceived to be more sustainable. This is debatable. However, a deeper reflection on educational impact, together with organizational consequences, seems called for.

Although the conundrum of growth in a non-profit merits a critical reflection, as we are suggesting, it is equally important to be reminded that given the socio-economic context of Gyan Shala's students, they would in essence be left with worse or no educational options, ranging from weak government schools to no schools in their neighborhoods without a program such as PSIPSE. The impact would be more severe for girls whose ability to commute away from the vicinity is generally limited. In sum, supporting Gyan Shala with a longer-term view, and sustainable funding, is imperative to invest in segments of society that are generally under-served.



The satisfaction of achievement

C. Voices from the Field

1. Two different views on gender

Amisha - Grade 10

Shweta - Grade 10

2. The organizational depth and reach of Gyan Shala

Gyan Shala: Pankaj Jain's vision

3. Following the lives of Mumta, Umisha, Setal and Dharmesh

IIn the previous video, filmed in 2015, a few students were interviewed about their life, dreams and aspirations. In 2016, we continued to track them (only one was not found, as her family moved out of Ahmedabad). We will continue to interview them every year to understand their personal narratives and choices. Their voices, their stories, their words, their language, their dreams, their reality.

Setal - Grade 8

Umisha - Grade 8

Mumta - Grade 9

Dharmesh - Grade 9

D. Areas of Possible Exploration for the Year 2 Evaluation

In the year 2 evaluation, we will add a focus on the teachers, curriculum designers and supervisors so that their thoughts and learning can also be captured as Gyan Shala evolves and adjusts to deliver high educational outcomes, as it always does.

In addition, the following ideas are being discussed and assessed for inclusion in the next report, based on the data available:

- Data on drop outs - during and after Grade 10;
- Comparative data on Grade 10 exam results – from year 1 to year 2;
- Comparative data on Grade 10 exam results – with a comparable institution;
- Curriculum, pedagogical and after-class tuition adjustments;
- Exploring potential tech-savvy survey tools to get feedback from students and teachers;
- Analyzing the educational and socio-economic background of parents on attendance and scores, as well as continuation up to and beyond Grade 10;
- Examining any other relevant data that seems worth analyzing, based on available data collection systems, with a cautionary note that data collected over a year or two may not or should not enable premature inferences or conclusions.

Preferences of all stakeholders, including donors, will also be taken into account in an effort to continue to offer meaningful and informative data, for program adjustments, policy-making and for high quality service delivery to students, the end-users, the future generations of India.

Look up at the stars and not down at your feet. Try to make sense of what you see, and wonder about what makes the universe exist. Be curious.

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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